NVIDIA Performance Primitives (NPP)

Version 5.5

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Contents

Chapter 1

NVIDIA Performance Primitives

IMPORTANT SPECIAL NOTICE IMPORTANT SPECIAL NOTICE IMPORTANT SPECIAL NOTICE As of NPP version 5.0 and beyond a few parameters for a few pre-5.0 existing image LUT functions have changed from host memory pointers to device memory pointers. Your application will fail (crash or report an error) if you use these functions with host memory pointers. The functions are the nppiLUT_Linear_8u_xxx functions.

Also, pre-5.0 function nppiMeanStdDev8uC1RGetBufferHostSize has been renamed nppiMeanStdDevGetBufferHostSize_8u_C1R.

1.1 What is NPP?

NVIDIA NPP is a library of functions for performing CUDA accelerated processing. The initial set of functionality in the library focuses on imaging and video processing and is widely applicable for developers in these areas. NPP will evolve over time to encompass more of the compute heavy tasks in a variety of problem domains. The NPP library is written to maximize flexibility, while maintaining high performance.

NPP can be used in one of two ways:

- A stand-alone library for adding GPU acceleration to an application with minimal effort. Using this route allows developers to add GPU acceleration to their applications in a matter of hours.
- A cooperative library for interoperating with a developer's GPU code efficiently.

Either route allows developers to harness the massive compute resources of NVIDIA GPUs, while simultaneously reducing development times.

1.2 Documentation

- General API Conventions
- Signal-Processing Specific API Conventions
- Imaging-Processing Specific API Conventions

1.3 Technical Specifications

Supported Platforms:

- Microsoft Windows 7 (64-bit and 32-bit)
- Microsoft Windows Vista (64-bit and 32-bit)
- Microsoft Windows XP (64-bit and 32-bit)
- Linux (Centos & Ubuntu) (64-bit and 32-bit)
- Mac OS X

1.4 Files

NPP is comprises the following files:

1.4.1 Header Files

- nppdefs.h
- nppcore.h
- nppi.h
- npps.h
- nppversion.h
- npp.h

All those header files are located in the CUDA Toolkit's

```
/include/
```

directory.

1.4.2 Library Files

Starting with Version 5.5 NPP's functionality is now split up into 3 distinct libraries:

- A core library (NPPC) containing basic functionality from the npp.h header files as well as functionality shared by the other two libraries.
- The image processing library NPPI. Any functions from the nppi.h header file (or the various header files named "nppi_xxx.h" are bundled into the NPPI library.
- The signal processing library NPPS. Any function from the npps.h header file (or the various header files named "npps_xxx.h" are bundled into the NPPS library.

On the Windows platform the NPP stub libraries are found in the CUDA Toolkit's library directory:

```
/lib/nppc.lib

/lib/nppi.lib

/lib/npps.lib
```

The matching DLLs are located in the CUDA Toolkit's binary directory. Example

```
/bin/nppi64_55_<build_no>.dll      // Dynamic image-processing library for 64-bit Windows.
```

On Linux and Mac platforms the dynamic libraries are located in the lib directory

```
/lib/libnppc32.so.5.5.<build_no>   // NPP 32-bit dynamic core library for Linux

/lib/libnpps32.5.5.dylib  // NPP 32-bit dynamic signal processing library for Mac
```

1.5 Supported NVIDIA Hardware

NPP runs on all CUDA capable NVIDIA hardware. For details please see http://www.nvidia.com/object/cuda_learn_products.html

Chapter 2

General API Conventions

2.1 Memory Management

The design of all the NPP functions follows the same guidelines as other NVIDIA CUDA libraries like cuFFT and cuBLAS. That is that all pointer arguments in those APIs are device pointers.

This convention enables the individual developer to make smart choices about memory management that minimize the number of memory transfers. It also allows the user the maximum flexibility regarding which of the various memory transfer mechanisms offered by the CUDA runtime is used, e.g. synchronous or asynchronous memory transfers, zero-copy and pinned memory, etc.

The most basic steps involved in using NPP for processing data is as follows:

1. Transfer input data from the host to device using

   ```
   cudaMemCpy(...)
   ```

2. Process data using one or several NPP functions or custom CUDA kernels
3. Transfer the result data from the device to the host using

   ```
   cudaMemCpy(...)
   ```

2.1.1 Scratch Buffer and Host Pointer

Some primitives of NPP require additional device memory buffers (scratch buffers) for calculations, e.g. signal and image reductions (Sum, Max, Min, MinMax, etc.). In order to give the NPP user maximum control regarding memory allocations and performance, it is the user's responsibility to allocate and delete those temporary buffers. For one this has the benefit that the library will not allocate memory unbeknownst to the user. It also allows developers who invoke the same primitive repeatedly to allocate the scratch only once, improving performance and potential device-memory fragmentation .

Scratch-buffer memory is unstructured and may be passed to the primitive in uninitialized form. This allows for reuse of the same scratch buffers with any primitive require scratch memory, as long as it is sufficiently sized.

The minimum scratch-buffer size for a given primitive (e.g. nppsSum_32f()) can be obtained by a companion function (e.g. nppsSumGetBufferSize_32f()). The buffer size is returned via a host pointer as allocation of the scratch-buffer is performed via CUDA runtime host code.

An example to invoke signal sum primitive and allocate and free the necessary scratch memory:

```
// pSrc, pSum, pDeviceBuffer are all device pointers.
Npp32f * pSrc;
Npp32f * pSum;
Npp8u * pDeviceBuffer;
int nLength = 1024;

// Allocate the device memroy.
cudaMalloc((void **)(&pSrc), sizeof(Npp32f) * nLength);
nppsSet_32f(1.0f, pSrc, nLength);
cudaMalloc((void **)(&pSum), sizeof(Npp32f) * 1);

// Compute the appropriate size of the scratch-memory buffer
int nBufferSize;
nppsSumGetBufferSize_32f(nLength, &nBufferSize);
// Allocate the scratch buffer
cudaMalloc((void **)(&pDeviceBuffer), nBufferSize);

// Call the primitive with the scratch buffer
```

```
nppsSum_32f(pSrc, nLength, pSum, pDeviceBuffer);
Npp32f nSumHost;
cudaMemcpy(&nSumHost, pSum, sizeof(Npp32f) * 1, cudaMemcpyDeviceToHost);
printf("sum = %f\n", nSumHost); // nSumHost = 1024.0f;

// Free the device memory
cudaFree(pSrc);
cudaFree(pDeviceBuffer);
cudaFree(pSum);
```

2.2 Function Naming

Since NPP is a C API and therefore does not allow for function overloading for different data-types the NPP naming convention addresses the need to differentiate between different flavors of the same algorithm or primitive function but for various data types. This disambiguation of different flavors of a primitive is done via a suffix containing data type and other disambiguating information.

In addition to the flavor suffix, all NPP functions are prefixed with by the letters "npp". Primitives belonging to NPP's image-processing module add the letter "i" to the npp prefix, i.e. are prefixed by "nppi". Similarly signal-processing primitives are prefixed with "npps".

The general naming scheme is:

npp<module info><PrimitiveName>_<data-type info>[_<additional flavor info>](<parameter list>)

The data-type information uses the same names as the Basic NPP Data Types. For example the data-type information "8u" would imply that the primitive operates on Npp8u data.

If a primitive consumes different type data from what it produces, both types will be listed in the order of consumed to produced data type.

Details about the "additional flavor information" is provided for each of the NPP modules, since each problem domain uses different flavor information suffixes.

2.3 Integer Result Scaling

NPP signal processing and imaging primitives often operate on integer data. This integer data is usually a fixed point fractional representation of some physical magnitue (e.g. luminance). Because of this fixed-point nature of the representation many numerical operations (e.g. addition or multiplication) tend to produce results exceeding the original fixed-point range if treated as regular integers.

In cases where the results exceed the original range, these functions clamp the result values back to the valid range. E.g. the maximum positive value for a 16-bit unsigned integer is 32767. A multiplication operation of 4 $*$ 10000 = 40000 would exceed this range. The result would be clamped to be 32767.

To avoid the level of lost information due to clamping most integer primitives allow for result scaling. Primitives with result scaling have the "Sfs" suffix in their name and provide a parameter "nScaleFactor" that controls the amount of scaling. Before the results of an operation are clamped to the valid output-data range by multiplying them with $2^{\text{-nScaleFactor}}$.

Example: The primitive nppsSqr_8u_Sfs() computes the square of 8-bit unsigned sample values in a signal (1D array of values). The maximum value of a 8-bit value is 255. The square of $255^2 = 65025$ which would be clamped to 255 if no result scaling is performed. In order to map the maximum value of 255 to 255 in the result, one would specify an integer result scaling factor of 8, i.e. multiply each result with $2^{-8} = \frac{1}{2^8} = \frac{1}{256}$. The final result for a signal value of 255 being squared and scaled would be:

$$255^2 \cdot 2^{-8} = 254.00390625$$

which would be rounded to a final result of 254.

A medium gray value of 128 would result in

$$128^2 * 2^{-8} = 64$$

2.4 Rounding Modes

Many NPP functions require converting floating-point values to integers. The NppRoundMode enum lists NPP's supported rounding modes. Not all primitives in NPP that perform rounding as part of their functionality allow the user to specify the round-mode used. Instead they use NPP's default rounding mode, which is NPP_RND_FINANCIAL.

2.4.1 Rounding Mode Parameter

A subset of NPP functions performing rounding as part of their functionality do allow the user to specify which rounding mode is used through a parameter of the NppRoundMode type.

Chapter 3

Signal-Processing Specific API Conventions

3.1 Signal Data

Signal data is passed to and from NPPS primitives via a pointer to the signal's data type.

The general idea behind this fairly low-level way of passing signal data is ease-of-adoption into existing software projects:

- Passing the data pointer rather than a higher- level signal struct allows for easy adoption by not requiring a specific signal representation (that could include total signal size offset, or other additional information). This avoids awkward packing and unpacking of signal data from the host application to an NPP specific signal representation.

3.1.1 Parameter Names for Signal Data

There are three general cases of image-data passing throughout NPP detailed in the following sections.

Those are signals consumed by the algorithm.

3.1.1.1 Source Signal Pointer

The source signal data is generally passed via a pointer named

```
pSrc
```

The source signal pointer is generally defined constant, enforcing that the primitive does not change any image data pointed to by that pointer. E.g.

```
nppsPrimitive_32s(const Npp32s * pSrc, ...)
```

In case the primitive consumes multiple signals as inputs the source pointers are numbered like this:

```
pSrc1, pScr2, ...
```

3.1.1.2 Destination Signal Pointer

The destination signal data is generally passed via a pointer named

```
pDst
```

In case the primitive consumes multiple signals as inputs the source pointers are numbered like this:

```
pDst1, pDst2, ...
```

3.1.1.3 In-Place Signal Pointer

In the case of in-place processing, source and destination are served by the same pointer and thus pointers to in-place signal data are called:

```
pSrcDst
```

3.1.2 Signal Data Alignment Requirements

NPP requires signal sample data to be naturally aligned, i.e. any pointer

```
NppType * p;
```

to a sample in a signal needs to fulfill:

```
assert(p % sizeof(p) == 0);
```

3.1.3 Signal Data Related Error Codes

All NPPI primitives operating on signal data validate the signal-data pointer for proper alignment and test that the point is not null.

Failed validation results in one of the following error codes being returned and the primitive not being executed:

- NPP_NULL_POINTER_ERROR is returned if the image-data pointer is 0 (NULL).
- NPP_ALIGNMENT_ERROR if the signal-data pointer address is not a multiple of the signal's data-type size.

3.2 Signal Length

The vast majority of NPPS functions take a

```
nLength
```

parameter that tells the primitive how many of the signal's samples starting from the given data pointer are to be processed.

3.2.1 Length Related Error Codes

All NPPS primitives taking a length parameter validate this input.

Failed validation results in the following error code being returned and the primitive not being executed:

- NPP_SIZE_ERROR is returned if the length is negative.

Chapter 4

Imaging-Processing Specific API Conventions

4.1 Function Naming

Image processing related functions use a number of suffixes to indicate various different flavors of a primitive beyond just different data types. The flavor suffix uses the following abbreviations:

- "A" if the image is a 4 channel image this indicates the result alpha channel is not affected by the primitive.
- "Cn" the image consists of n channel packed pixels, where n can be 1, 2, 3 or 4.
- "Pn" the image consists of n separate image planes, where n can be 1, 2, 3 or 4.
- "C" (following the channel information) indicates that the primitive only operates on one of the color channels, the "channel-of-interest". All other output channels are not affected by the primitive.
- "I" indicates that the primitive works "in-place". In this case the image-data pointer is usually named "pSrcDst" to indicate that the image data serves as source and destination at the same time.
- "M" indicates "masked operation". These types of primitives have an additional "mask image" as as input. Each pixel in the destination image corresponds to a pixel in the mask image. Only pixels with a corresponding non-zero mask pixel are being processed.
- "R" indicates the primitive operates only on a rectangular "region-of-interest" or "ROI". All ROI primitives take an additional input parameter of type NppiSize, which specifies the width and height of the rectangular region that the primitive should process. For details on how primitives operate on ROIs see: Region-of-Interest (ROI).
- "Sfs" indicates the result values are processed by fixed scaling and saturation before they're written out.

The suffixes above always appear in alphabetical order. E.g. a 4 channel primitive not affecting the alpha channel with masked operation, in place and with scaling/saturation and ROI would have the postfix: "AC4IMRSfs".

4.2 Image Data

Image data is passed to and from NPPI primitives via a pair of parameters:

1. A pointer to the image's underlying data type.
2. A line step in bytes (also sometimes called line stride).

The general idea behind this fairly low-level way of passing image data is ease-of-adoption into existing software projects:

- Passing a raw pointer to the underlying pixel data type, rather than structured (by color) channel pixel data allows usage of the function in a wide variety of situations avoiding risky type cast or expensive image data copies.
- Passing the data pointer and line step individually rather than a higher- level image struct again allows for easy adoption by not requiring a specific image representation and thus avoiding awkward packing and unpacking of image data from the host application to an NPP specific image representation.

4.2.1 Line Step

The line step (also called "line stride" or "row step") allows lines of oddly sized images to start on well-aligned addresses by adding a number of unused bytes at the ends of the lines. This type of line padding has been common practice in digital image processing for a long time and is not particular to GPU image processing.

The line step is the number of bytes in a line **including the padding.** An other way to interpret this number is to say that it is the number of bytes between the first pixel of successive rows in the image, or generally the number of bytes between two neighboring pixels in any column of pixels.

The general reason for the existence of the line step it is that uniformly aligned rows of pixel enable optimizations of memory-access patterns.

Even though all functions in NPP will work with arbitrarily aligned images, best performance can only be achieved with well aligned image data. Any image data allocated with the NPP image allocators or the 2D memory allocators in the CUDA runtime, is well aligned.

Particularly on older CUDA capable GPUs it is likely that the performance decrease for misaligned data is substantial (orders of magnitude).

All image data passed to NPPI primitives requires a line step to be provided. It is important to keep in mind that this line step is always specified in terms of bytes, not pixels.

4.2.2 Parameter Names for Image Data

There are three general cases of image-data passing throughout NPP detailed in the following sections.

4.2.2.1 Passing Source-Image Data

Those are images consumed by the algorithm.

4.2.2.1.1 Source-Image Pointer

The source image data is generally passed via a pointer named

```
pSrc
```

The source image pointer is generally defined constant, enforcing that the primitive does not change any image data pointed to by that pointer. E.g.

```
nppiPrimitive_32s_C1R(const Npp32s * pSrc, ...)
```

In case the primitive consumes multiple images as inputs the source pointers are numbered like this:

```
pSrc1, pScr2, ...
```

4.2.2.1.2 Source-Planar-Image Pointer Array

The planar source image data is generally passed via an array of pointers named

```
pSrc[]
```

The planar source image pointer array is generally defined a constant array of constant pointers, enforcing that the primitive does not change any image data pointed to by those pointers. E.g.

```
nppiPrimitive_8u_P3R(const Npp8u * const pSrc[3], ...)
```

Each pointer in the array points to a different image plane.

4.2.2.1.3 Source-Planar-Image Pointer

The multiple plane source image data is passed via a set of pointers named

```
pSrc1, pSrc2, ...
```

The planar source image pointer is generally defined as one of a set of constant pointers with each pointer pointing to a different input image plane.

4.2.2.1.4 Source-Image Line Step

The source image line step is the number of bytes between successive rows in the image. The source image line step parameter is

```
nSrcStep
```

or in the case of multiple source images

```
nSrcStep1, nSrcStep2, ...
```

4.2.2.1.5 Source-Planar-Image Line Step Array

The source planar image line step array is an array where each element of the array contains the number of bytes between successive rows for a particular plane in the input image. The source planar image line step array parameter is

```
rSrcStep[]
```

4.2.2.1.6 Source-Planar-Image Line Step

The source planar image line step is the number of bytes between successive rows in a particular plane of the multiplane input image. The source planar image line step parameter is

```
nSrcStep1, nSrcStep2, ...
```

4.2.2.2 Passing Destination-Image Data

Those are images produced by the algorithm.

4.2.2.2.1 Destination-Image Pointer

The destination image data is generally passed via a pointer named

```
pDst
```

In case the primitive generates multiple images as outputs the destination pointers are numbered like this:

```
pDst1, pDst2, ...
```

4.2.2.2.2 Destination-Planar-Image Pointer Array

The planar destination image data pointers are generally passed via an array of pointers named

```
pDst[]
```

Each pointer in the array points to a different image plane.

4.2.2.2.3 Destination-Planar-Image Pointer

The destination planar image data is generally passed via a pointer to each plane of a multiplane output image named

```
pDst1, pDst2, ...
```

4.2.2.2.4 Destination-Image Line Step

The destination image line step parameter is

```
nDstStep
```

or in the case of multiple destination images

```
nDstStep1, nDstStep2, ...
```

4.2.2.2.5 Destination-Planar-Image Line Step Array

The destination planar image line step array is an array where each element of the array contains the number of bytes between successive rows for a particular plane in the output image. The destination planar image line step array parameter is

```
rDstStep[]
```

4.2.2.2.6 Destination-Planar-Image Line Step

The destination planar image line step is the number of bytes between successive rows for a particular plane in a multiplane output image. The destination planar image line step parameter is

```
nDstStep1, nDstStep2, ...
```

4.2.2.3 Passing In-Place Image Data

4.2.2.3.1 In-Place Image Pointer

In the case of in-place processing, source and destination are served by the same pointer and thus pointers to in-place image data are called:

```
pSrcDst
```

4.2.2.3.2 In-Place-Image Line Step

The in-place line step parameter is

```
nSrcDstStep
```

4.2.2.4 Passing Mask-Image Data

Some image processing primitives have variants supporting Masked Operation.

4.2.2.4.1 Mask-Image Pointer

The mask-image data is generally passed via a pointer named

```
pMask
```

4.2.2.4.2 Mask-Image Line Step

The mask-image line step parameter is

```
nMaskStep
```

4.2.2.5 Passing Channel-of-Interest Data

Some image processing primitives support Channel-of-Interest API.

4.2.2.5.1 Channel_of_Interest Number

The channel-of-interest data is generally an integer (either 1, 2, or 3):

```
nCOI
```

4.2.3 Image Data Alignment Requirements

NPP requires pixel data to adhere to certain alignment constraints: For 2 and 4 channel images the following alignment requirement holds: data_pointer % (#channels $*$ sizeof(channel type)) == 0. E.g. a 4 channel image with underlying type Npp8u (8-bit unsigned) would require all pixels to fall on addresses that are multiples of 4 (4 channels $*$ 1 byte size).

As a logical consequence of all pixels being aligned to their natural size the image line steps of 2 and 4 channel images also need to be multiples of the pixel size.

1 and 3 channel images only require that pixel pointers are aligned to the underlying data type, i.e. pData % sizof(data type) == 0. And consequentially line steps are also held to this requirement.

4.2.4 Image Data Related Error Codes

All NPPI primitives operating on image data validate the image-data pointer for proper alignment and test that the point is not null. They also validate the line stride for proper alignment and guard against the step being less or equal to 0. Failed validation results in one of the following error codes being returnd and the primitive not being executed:

- NPP_STEP_ERROR is returned if the data step is 0 or negative.
- NPP_NOT_EVEN_STEP_ERROR is returned if the line step is not a multiple of the pixel size for 2 and 4 channel images.
- NPP_NULL_POINTER_ERROR is returned if the image-data pointer is 0 (NULL).
- NPP_ALIGNMENT_ERROR if the image-data pointer address is not a multiple of the pixel size for 2 and 4 channel images.

4.3 Region-of-Interest (ROI)

In practice processing a rectangular sub-region of an image is often more common than processing complete images. The vast majority of NPP's image-processing primitives allow for processing of such sub regions also referred to as regions-of-interest or ROIs.

All primitives supporting ROI processing are marked by a "R" in their name suffix. In most cases the ROI is passed as a single NppiSize struct, which provides the with and height of the ROI. This raises the question how the primitive knows where in the image this rectangle of (width, height) is located. The "start pixel" of the ROI is implicitly given by the image-data pointer. I.e. instead of explicitly passing a pixel coordinate for the upper-right corner, the user simply offsets the image-data pointers to point to the first pixel of the ROI.

In practice this means that for an image (pSrc, nSrcStep) and the start-pixel of the ROI being at location (xROI, yROI), one would pass

pSrcOffset = pSrc + yROI ∗ nSrcStep + xROI ∗ PixelSize;

as the image-data source to the primitive. PixelSize is typically computed as

PixelSize = NumberOfColorChannels ∗ sizeof(PixelDataType).

E.g. for a pimitive like nppiSet_16s_C4R() we would have

- NumberOfColorChannels == 4;
- sizeof(Npp16s) == 2;
- and thus PixelSize = 4 ∗ 2 = 8;

4.3.1 ROI Related Error Codes

All NPPI primitives operating on ROIs of image data validate the ROI size and image's step size. Failed validation results in one of the following error codes being returned and the primitive not being executed:

- NPP_SIZE_ERROR is returned if either the ROI width or ROI height are negative.
- NPP_STEP_ERROR is returned if the ROI width exceeds the image's line step. In mathematical terms $(\text{widthROI} * \text{PixelSize}) > \text{nLinStep}$ indicates an error.

4.4 Masked Operation

Some primitive support masked operation. An "M" in the suffix of those variants indicates masked operation. Primitives supporting masked operation consume an additional input image provided via a Mask-Image Pointer and Mask-Image Line Step. The mask image is interpreted by these primitives as a boolean image. The values of type Npp8u are interpreted as boolean values where a values of 0 indicates false, any non-zero values true.

Unless otherwise indicated the operation is only performed on pixels where its spatially corresponding mask pixel is true (non-zero). E.g. a masked copy operation would only copy those pixels in the ROI that have corresponding non-zero mask pixels.

4.5 Channel-of-Interest API

Some primitives allow restricting operations to a single channel of interest within a multi-channel image. These primitives are suffixed with the letter "C" (after the channel information, e.g. nppiCopy_8u_C3CR(...). The channel-of-interest is generally selected by offsetting the image-data pointer to point directly to the channel- of-interest rather than the base of the first pixel in the ROI. Some primitives also explicitly specify the selected channel number and pass it via an integer, e.g. nppiMean_StdDev_8u_C3CR(...).

4.5.1 Select-Channel Source-Image Pointer

This is a pointer to the channel-of-interest within the first pixel of the source image. E.g. if pSrc is the pointer to the first pixel inside the ROI of a three channel image. Using the appropriate select-channel copy primitive one could copy the second channel of this source image into the first channel of a destination image given by pDst by offsetting the pointer by one:

```
nppiCopy_8u_C3CR(pSrc + 1, nSrcStep, pDst, nDstStep, oSizeROI);
```

4.5.2 Select-Channel Source-Image

Some primitives allow the user to select the channel-of-interest by specifying the channle number (nCOI). This approach is typically used in the image statistical functions. For example,

```
nppiMean_StdDev_8u_C3CR(pSrc, nSrcStep, oSizeROI, nCOI, pDeviceBuffer, pMean, pStdDev );
```

The channel-of-interest number can be either 1, 2, or 3.

4.5.3 Select-Channel Destination-Image Pointer

This is a pointer to the channel-of-interest within the first pixel of the destination image. E.g. if pDst is the pointer to the first pixel inside the ROI of a three channel image. Using the appropriate select-channel copy primitive one could copy data into the second channel of this destination image from the first channel of a source image given by pSrc by offseting the destination pointer by one:

```
nppiCopy_8u_C3CR(pSrc, nSrcStep, pDst + 1, nDstStep, oSizeROI);
```

4.6 Source-Image Sampling

A large number of NPP image-processing functions consume at least one source image and produce an output image (e.g. nppiAddC_8u_C1RSfs() or nppiFilterBox_8u_C1R()). All NPP functions falling into this category also operate on ROIs (see Region-of-Interest (ROI)) which for these functions should be considered to describe the destination ROI. In other words the ROI describes a rectangular region in the destination image and all pixels inside of this region are being written by the function in question.

In order to use such functions successfully it is important to understand how the user defined destination ROI affects which pixels in the input image(s) are being read by the algorithms. To simplify the discussion of ROI propagation (i.e. given a destination ROI, what are the ROIs in in the source(s)), it makes sense to distinguish two major cases:

1. Point-Wise Operations: These are primitives like nppiAddC_8u_C1RSfs(). Each output pixel requires exaclty one input pixel to be read.

2. Neighborhood Operations: These are primitives like nppiFilterBox_8u_C1R(), which require a group of pixels from the source image(s) to be read in order to produce a single output.

4.6.1 Point-Wise Operations

As mentioned above, point-wise operations consume a single pixel from the input image (or a single pixel from each input image, if the operation in question has more than one input image) in order to produce a single output pixel.

4.6.2 Neighborhood Operations

In the case of neightborhood operations a number of input pixels (a "neighborhood" of pixels) is read in the input image (or images) in order to compute a single output pixel. All of the functions for Filtering Functions and Morphological Operations are neigborhood operations.

Most of these functions have parameters that affect the size and relative location of the neighborhood: a mask-size structure and an achor-point structure. Both parameters are described in more detail in the next subsections.

4.6.2.1 Mask-Size Parameter

Many NPP neighborhood operations allow the user to specify the size of the neightborhood via a parameter usually named oMaskSize of type NppiSize. In those cases the neighborhood of pixels read from the source(s) is exactly the size of the mask. Assuming the mask is anchored at location (0, 0) (see Anchor-Point Parameter below) and has a size of (w, h), i.e.

```
assert(oMaskSize.w == w);
assert(oMaskSize.h == h);
assert(oAnchor.x == 0);
assert(oAnchor.y == 0);
```

a neighborhood operation would read the following source pixels in order to compute destiation pixel $D_{i,j}$:

$$\begin{array}{llll}
S_{i,j} & S_{i,j+1} & \ldots & S_{i,j+w-1} \\
S_{i+1,j} & S_{i+1,j+1} & \ldots & S_{i+1,j+w-1} \\
\vdots & \vdots & \ddots & \vdots \\
S_{i+h-1,j} & S_{i+h-1,j+1} & \ldots & S_{i+h-1,j+w-1}
\end{array}$$

4.6.2.2 Anchor-Point Parameter

Many NPP primitives perforing neighborhood operations allow the user to specify the relative location of the neighborhood via a parameter usually named oAnchor of type NppiPoint. Using the anchor a developer can chose the position of the mask (see Mask-Size Parameter) relative to current pixel index.

Using the same example as in Mask-Size Parameter, but this time with an anchor position of (a, b):

```
assert(oMaskSize.w == w);
assert(oMaskSize.h == h);
assert(oAnchor.x == a);
assert(oAnchor.y == b);
```

the following pixels from the source image would be read:

$$\begin{array}{llll}
S_{i-a,j-b} & S_{i-a,j-b+1} & \ldots & S_{i-a,j-b+w-1} \\
S_{i-a+1,j-b} & S_{i-a+1,j-b+1} & \ldots & S_{i-a+1,j-b+w-1} \\
\vdots & \vdots & \ddots & \vdots \\
S_{i-a+h-1,j-b} & S_{i-a+h-1,j-b+1} & \ldots & S_{i-a+h-1,j-b+w-1}
\end{array}$$

4.6.2.3 Sampling Beyond Image Boundaries

NPP primitives in general and NPP neighborhood operations in particular require that all pixel locations read and written are valid and within the boundaries of the respective images. Sampling outside of the defined image data regions results in undefined behavior and may lead to system instabilty.

This poses a problem in practice: when processing full-size images one cannot choose the destination ROI to be the same size as the source image. Because neigborhood operations read pixels from an enlarged source ROI, the destination ROI must be shrunk so that the expanded source ROI does not exceed the source image's size.

For cases where this "shrinking" of the destination image size is unacceptable, NPP provides a set of border-expanding Copy primitives. E.g. nppiCopyConstBorder_8u_C1R(), nppiCopyReplicateBorder_8u_C1R() and nppiCopyWrapBorder_8u_C1R(). The user can use these primitives to "expand" the source image's size using one of the three expansion modes. The expanded image can then be safely passed to a neighborhood operation producing a full-size result.

Chapter 5

Module Index

5.1 Modules

Here is a list of all modules:

Chapter 6

Data Structure Index

6.1 Data Structures

Here are the data structures with brief descriptions:

Chapter 7

Module Documentation

7.1 NPP Core

Basic functions for library management, in particular library version and device property query functions.

Functions

- const NppLibraryVersion ∗ nppGetLibVersion (void)

  Get the NPP library version.

- NppGpuComputeCapability nppGetGpuComputeCapability (void)

  What CUDA compute model is supported by the active CUDA device?

- int nppGetGpuNumSMs (void)

  Get the number of Streaming Multiprocessors (SM) on the active CUDA device.

- int nppGetMaxThreadsPerBlock (void)

  Get the maximum number of threads per block on the active CUDA device.

- int nppGetMaxThreadsPerSM (void)

  Get the maximum number of threads per SM for the active GPU.

- const char ∗ nppGetGpuName (void)

  Get the name of the active CUDA device.

- cudaStream_t nppGetStream (void)

  Get the NPP CUDA stream.

- void nppSetStream (cudaStream_t hStream)

  Set the NPP CUDA stream.

7.1.1 Detailed Description

Basic functions for library management, in particular library version and device property query functions.

7.1.2 Function Documentation

7.1.2.1 NppGpuComputeCapability nppGetGpuComputeCapability (void)

What CUDA compute model is supported by the active CUDA device?

Before trying to call any NPP functions, the user should make a call this function to ensure that the current machine has a CUDA capable device.

Returns:

An enum value representing if a CUDA capable device was found and what level of compute capabilities it supports.

7.1.2.2 const char∗ nppGetGpuName (void)

Get the name of the active CUDA device.

Returns:

Name string of the active graphics-card/compute device in a system.

7.1.2.3 int nppGetGpuNumSMs (void)

Get the number of Streaming Multiprocessors (SM) on the active CUDA device.

Returns:

Number of SMs of the default CUDA device.

7.1.2.4 const NppLibraryVersion∗ nppGetLibVersion (void)

Get the NPP library version.

Returns:

A struct containing separate values for major and minor revision and build number.

7.1.2.5 int nppGetMaxThreadsPerBlock (void)

Get the maximum number of threads per block on the active CUDA device.

Returns:

Maximum number of threads per block on the active CUDA device.

7.1.2.6 int nppGetMaxThreadsPerSM (void)

Get the maximum number of threads per SM for the active GPU.

Returns:

Maximum number of threads per SM for the active GPU

7.1.2.7 cudaStream_t nppGetStream (void)

Get the NPP CUDA stream.

NPP enables concurrent device tasks via a global stream state varible. The NPP stream by default is set to stream 0, i.e. non-concurrent mode. A user can set the NPP stream to any valid CUDA stream. All CUDA commands issued by NPP (e.g. kernels launched by the NPP library) are then issed to that NPP stream.

7.1.2.8 void nppSetStream (cudaStream_t *hStream*)

Set the NPP CUDA stream.

See also:

nppGetStream()

7.2 NPP Type Definitions and Constants

Data Structures

- struct NppLibraryVersion
- struct NppiPoint

  2D Point

- struct NppiSize

  2D Size This struct typically represents the size of a a rectangular region in two space.

- struct NppiRect

  2D Rectangle This struct contains position and size information of a rectangle in two space.

- struct NppiHaarClassifier_32f
- struct NppiHaarBuffer

Modules

- Basic NPP Data Types

Defines

- #define NPP_MIN_8U (0)

  Minimum 8-bit unsigned integer.

- #define NPP_MAX_8U (255)

  Maximum 8-bit unsigned integer.

- #define NPP_MIN_16U (0)

  Minimum 16-bit unsigned integer.

- #define NPP_MAX_16U (65535)

  Maximum 16-bit unsigned integer.

- #define NPP_MIN_32U (0)

  Minimum 32-bit unsigned integer.

- #define NPP_MAX_32U (4294967295U)

  Maximum 32-bit unsigned integer.

- #define NPP_MIN_64U (0)

  Minimum 64-bit unsigned integer.

- #define NPP_MAX_64U (18446744073709551615ULL)

  Maximum 64-bit unsigned integer.

- #define NPP_MIN_8S (-127 - 1)

  Minimum 8-bit signed integer.

- #define NPP_MAX_8S (127)

  Maximum 8-bit signed integer.

- #define NPP_MIN_16S (-32767 - 1)

  Minimum 16-bit signed integer.

- #define NPP_MAX_16S (32767)

  Maximum 16-bit signed integer.

- #define NPP_MIN_32S (-2147483647 - 1)

  Minimum 32-bit signed integer.

- #define NPP_MAX_32S (2147483647)

  Maximum 32-bit signed integer.

- #define NPP_MAX_64S (9223372036854775807LL)

  Maximum 64-bit signed integer.

- #define NPP_MIN_64S (-9223372036854775807LL - 1)

  Minimum 64-bit signed integer.

- #define NPP_MINABS_32F (1.175494351e-38f)

  Smallest positive 32-bit floating point value.

- #define NPP_MAXABS_32F (3.402823466e+38f)

  Largest positive 32-bit floating point value.

- #define NPP_MINABS_64F (2.2250738585072014e-308)

  Smallest positive 64-bit floating point value.

- #define NPP_MAXABS_64F (1.7976931348623158e+308)

  Largest positive 64-bit floating point value.

Enumerations

- enum NppiInterpolationMode {
  NPPI_INTER_UNDEFINED = 0,
  NPPI_INTER_NN = 1,
  NPPI_INTER_LINEAR = 2,
  NPPI_INTER_CUBIC = 4,
  NPPI_INTER_CUBIC2P_BSPLINE,
  NPPI_INTER_CUBIC2P_CATMULLROM,
  NPPI_INTER_CUBIC2P_B05C03,
  NPPI_INTER_SUPER = 8,
  NPPI_INTER_LANCZOS = 16,
  NPPI_SMOOTH_EDGE = (1 << 31) }

Filtering methods.

- enum NppiMaskSize {
  NPP_MASK_SIZE_1_X_3,
  NPP_MASK_SIZE_1_X_5,
  NPP_MASK_SIZE_3_X_1 = 100,
  NPP_MASK_SIZE_5_X_1,
  NPP_MASK_SIZE_3_X_3 = 200,
  NPP_MASK_SIZE_5_X_5 }

  Fixed filter-kernel sizes.

- enum NppStatus {
  NPP_NOT_SUPPORTED_MODE_ERROR = -9999,
  NPP_INVALID_HOST_POINTER_ERROR = -1032,
  NPP_INVALID_DEVICE_POINTER_ERROR = -1031,
  NPP_LUT_PALETTE_BITSIZE_ERROR = -1030,
  NPP_ZC_MODE_NOT_SUPPORTED_ERROR = -1028,
  NPP_NOT_SUFFICIENT_COMPUTE_CAPABILITY = -1027,
  NPP_TEXTURE_BIND_ERROR = -1024,
  NPP_WRONG_INTERSECTION_ROI_ERROR = -1020,
  NPP_HAAR_CLASSIFIER_PIXEL_MATCH_ERROR = -1006,
  NPP_MEMFREE_ERR = -1005,
  NPP_MEMSET_ERR = -1004,
  NPP_MEMCPY_ERROR = -1003,
  NPP_ALIGNMENT_ERROR = -1002,
  NPP_CUDA_KERNEL_EXECUTION_ERROR = -1000,
  NPP_ROUND_MODE_NOT_SUPPORTED_ERROR = -213,
  NPP_QUALITY_INDEX_ERROR = -210,
  NPP_RESIZE_NO_OPERATION_ERROR = -201,
  NPP_NOT_EVEN_STEP_ERROR = -108,
  NPP_HISTOGRAM_NUMBER_OF_LEVELS_ERROR = -107,
  NPP_LUT_NUMBER_OF_LEVELS_ERROR = -106,
  NPP_CHANNEL_ORDER_ERROR = -60,
  NPP_ZERO_MASK_VALUE_ERROR = -59,
  NPP_QUADRANGLE_ERROR = -58,
  NPP_RECTANGLE_ERROR = -57,
  NPP_COEFFICIENT_ERROR = -56,
  NPP_NUMBER_OF_CHANNELS_ERROR = -53,
  NPP_COI_ERROR = -52,
  NPP_DIVISOR_ERROR = -51,
  NPP_CHANNEL_ERROR = -47,
  NPP_STRIDE_ERROR = -37,

NPP_ANCHOR_ERROR = -34,
NPP_MASK_SIZE_ERROR = -33,
NPP_RESIZE_FACTOR_ERROR = -23,
NPP_INTERPOLATION_ERROR = -22,
NPP_MIRROR_FLIP_ERR = -21,
NPP_MOMENT_00_ZERO_ERROR = -20,
NPP_THRESHOLD_NEGATIVE_LEVEL_ERROR = -19,
NPP_THRESHOLD_ERROR = -18,
NPP_CONTEXT_MATCH_ERROR = -17,
NPP_FFT_FLAG_ERROR = -16,
NPP_FFT_ORDER_ERROR = -15,
NPP_STEP_ERROR = -14,
NPP_SCALE_RANGE_ERROR = -13,
NPP_DATA_TYPE_ERROR = -12,
NPP_OUT_OFF_RANGE_ERROR = -11,
NPP_DIVIDE_BY_ZERO_ERROR = -10,
NPP_MEMORY_ALLOCATION_ERR = -9,
NPP_NULL_POINTER_ERROR = -8,
NPP_RANGE_ERROR = -7,
NPP_SIZE_ERROR = -6,
NPP_BAD_ARGUMENT_ERROR = -5,
NPP_NO_MEMORY_ERROR = -4,
NPP_NOT_IMPLEMENTED_ERROR = -3,
NPP_ERROR = -2,
NPP_ERROR_RESERVED = -1,
NPP_NO_ERROR = 0,
NPP_SUCCESS = NPP_NO_ERROR,
NPP_NO_OPERATION_WARNING = 1,
NPP_DIVIDE_BY_ZERO_WARNING = 6,
NPP_AFFINE_QUAD_INCORRECT_WARNING = 28,
NPP_WRONG_INTERSECTION_ROI_WARNING = 29,
NPP_WRONG_INTERSECTION_QUAD_WARNING = 30,
NPP_DOUBLE_SIZE_WARNING = 35,
NPP_MISALIGNED_DST_ROI_WARNING = 10000 }

Error Status Codes.

- enum NppGpuComputeCapability {
NPP_CUDA_UNKNOWN_VERSION = -1,
NPP_CUDA_NOT_CAPABLE,
NPP_CUDA_1_0,
NPP_CUDA_1_1,

NPP_CUDA_1_2,
NPP_CUDA_1_3,
NPP_CUDA_2_0,
NPP_CUDA_2_1,
NPP_CUDA_3_0,
NPP_CUDA_3_5 }

- enum NppiAxis {
  NPP_HORIZONTAL_AXIS,
  NPP_VERTICAL_AXIS,
  NPP_BOTH_AXIS }
- enum NppCmpOp {
  NPP_CMP_LESS,
  NPP_CMP_LESS_EQ,
  NPP_CMP_EQ,
  NPP_CMP_GREATER_EQ,
  NPP_CMP_GREATER }
- enum NppRoundMode {
  NPP_RND_NEAR,
  NPP_ROUND_NEAREST_TIES_TO_EVEN = NPP_RND_NEAR,
  NPP_RND_FINANCIAL,
  NPP_ROUND_NEAREST_TIES_AWAY_FROM_ZERO = NPP_RND_FINANCIAL,
  NPP_RND_ZERO,
  NPP_ROUND_TOWARD_ZERO = NPP_RND_ZERO }

  Rounding Modes.
- enum NppiBorderType {
  NPP_BORDER_UNDEFINED = 0,
  NPP_BORDER_NONE = NPP_BORDER_UNDEFINED,
  NPP_BORDER_CONSTANT = 1,
  NPP_BORDER_REPLICATE = 2,
  NPP_BORDER_WRAP = 3 }
- enum NppHintAlgorithm {
  NPP_ALG_HINT_NONE,
  NPP_ALG_HINT_FAST,
  NPP_ALG_HINT_ACCURATE }
- enum NppiAlphaOp {
  NPPI_OP_ALPHA_OVER,
  NPPI_OP_ALPHA_IN,
  NPPI_OP_ALPHA_OUT,
  NPPI_OP_ALPHA_ATOP,
  NPPI_OP_ALPHA_XOR,
  NPPI_OP_ALPHA_PLUS,

NPPI_OP_ALPHA_OVER_PREMUL,
NPPI_OP_ALPHA_IN_PREMUL,
NPPI_OP_ALPHA_OUT_PREMUL,
NPPI_OP_ALPHA_ATOP_PREMUL,
NPPI_OP_ALPHA_XOR_PREMUL,
NPPI_OP_ALPHA_PLUS_PREMUL,
NPPI_OP_ALPHA_PREMUL }

- enum NppsZCType {
  nppZCR,
  nppZCXor,
  nppZCC }

7.2.1 Define Documentation

7.2.1.1 #define NPP_MAX_16S (32767)

Maximum 16-bit signed integer.

7.2.1.2 #define NPP_MAX_16U (65535)

Maximum 16-bit unsigned integer.

7.2.1.3 #define NPP_MAX_32S (2147483647)

Maximum 32-bit signed integer.

7.2.1.4 #define NPP_MAX_32U (4294967295U)

Maximum 32-bit unsigned integer.

7.2.1.5 #define NPP_MAX_64S (9223372036854775807LL)

Maximum 64-bit signed integer.

7.2.1.6 #define NPP_MAX_64U (18446744073709551615ULL)

Maximum 64-bit unsigned integer.

7.2.1.7 #define NPP_MAX_8S (127)

Maximum 8-bit signed integer.

7.2.1.8 #define NPP_MAX_8U (255)

Maximum 8-bit unsigned integer.

7.2.1.9 #define NPP_MAXABS_32F (3.402823466e+38f)

Largest positive 32-bit floating point value.

7.2.1.10 #define NPP_MAXABS_64F (1.7976931348623158e+308)

Largest positive 64-bit floating point value.

7.2.1.11 #define NPP_MIN_16S (-32767 - 1)

Minimum 16-bit signed integer.

7.2.1.12 #define NPP_MIN_16U (0)

Minimum 16-bit unsigned integer.

7.2.1.13 #define NPP_MIN_32S (-2147483647 - 1)

Minimum 32-bit signed integer.

7.2.1.14 #define NPP_MIN_32U (0)

Minimum 32-bit unsigned integer.

7.2.1.15 #define NPP_MIN_64S (-9223372036854775807LL - 1)

Minimum 64-bit signed integer.

7.2.1.16 #define NPP_MIN_64U (0)

Minimum 64-bit unsigned integer.

7.2.1.17 #define NPP_MIN_8S (-127 - 1)

Minimum 8-bit signed integer.

7.2.1.18 #define NPP_MIN_8U (0)

Minimum 8-bit unsigned integer.

7.2.1.19 #define NPP_MINABS_32F (1.175494351e-38f)

Smallest positive 32-bit floating point value.

7.2.1.20 #define NPP_MINABS_64F (2.2250738585072014e-308)

Smallest positive 64-bit floating point value.

7.2.2 Enumeration Type Documentation

7.2.2.1 enum NppCmpOp

Enumerator:

NPP_CMP_LESS

NPP_CMP_LESS_EQ

NPP_CMP_EQ

NPP_CMP_GREATER_EQ

NPP_CMP_GREATER

7.2.2.2 enum NppGpuComputeCapability

Enumerator:

NPP_CUDA_UNKNOWN_VERSION Indicates that the compute-capability query failed.

NPP_CUDA_NOT_CAPABLE Indicates that no CUDA capable device was found.

NPP_CUDA_1_0 Indicates that CUDA 1.0 capable device is machine's default device.

NPP_CUDA_1_1 Indicates that CUDA 1.1 capable device is machine's default device.

NPP_CUDA_1_2 Indicates that CUDA 1.2 capable device is machine's default device.

NPP_CUDA_1_3 Indicates that CUDA 1.3 capable device is machine's default device.

NPP_CUDA_2_0 Indicates that CUDA 2.0 capable device is machine's default device.

NPP_CUDA_2_1 Indicates that CUDA 2.1 capable device is machine's default device.

NPP_CUDA_3_0 Indicates that CUDA 3.0 capable device is machine's default device.

NPP_CUDA_3_5 Indicates that CUDA 3.5 or better is machine's default device.

7.2.2.3 enum NppHintAlgorithm

Enumerator:

NPP_ALG_HINT_NONE

NPP_ALG_HINT_FAST

NPP_ALG_HINT_ACCURATE

7.2.2.4 enum NppiAlphaOp

Enumerator:

NPPI_OP_ALPHA_OVER

NPPI_OP_ALPHA_IN

NPPI_OP_ALPHA_OUT

NPPI_OP_ALPHA_ATOP
NPPI_OP_ALPHA_XOR
NPPI_OP_ALPHA_PLUS
NPPI_OP_ALPHA_OVER_PREMUL
NPPI_OP_ALPHA_IN_PREMUL
NPPI_OP_ALPHA_OUT_PREMUL
NPPI_OP_ALPHA_ATOP_PREMUL
NPPI_OP_ALPHA_XOR_PREMUL
NPPI_OP_ALPHA_PLUS_PREMUL
NPPI_OP_ALPHA_PREMUL

7.2.2.5 enum NppiAxis

Enumerator:

NPP_HORIZONTAL_AXIS
NPP_VERTICAL_AXIS
NPP_BOTH_AXIS

7.2.2.6 enum NppiBorderType

Enumerator:

NPP_BORDER_UNDEFINED
NPP_BORDER_NONE
NPP_BORDER_CONSTANT
NPP_BORDER_REPLICATE
NPP_BORDER_WRAP

7.2.2.7 enum NppiInterpolationMode

Filtering methods.

Enumerator:

NPPI_INTER_UNDEFINED
NPPI_INTER_NN Nearest neighbor filtering.
NPPI_INTER_LINEAR Linear interpolation.
NPPI_INTER_CUBIC Cubic interpolation.
NPPI_INTER_CUBIC2P_BSPLINE Two-parameter cubic filter (B=1, C=0).
NPPI_INTER_CUBIC2P_CATMULLROM Two-parameter cubic filter (B=0, C=1/2).
NPPI_INTER_CUBIC2P_B05C03 Two-parameter cubic filter (B=1/2, C=3/10).
NPPI_INTER_SUPER Super sampling.
NPPI_INTER_LANCZOS Lanczos filtering.
NPPI_SMOOTH_EDGE Smooth edge filtering.

7.2.2.8 enum NppiMaskSize

Fixed filter-kernel sizes.

Enumerator:

NPP_MASK_SIZE_1_X_3

NPP_MASK_SIZE_1_X_5

NPP_MASK_SIZE_3_X_1

NPP_MASK_SIZE_5_X_1

NPP_MASK_SIZE_3_X_3

NPP_MASK_SIZE_5_X_5

7.2.2.9 enum NppRoundMode

Rounding Modes.

The enumerated rounding modes are used by a large number of NPP primitives to allow the user to specify the method by which fractional values are converted to integer values. Also see Rounding Modes.

For NPP release 5.5 new names for the three rounding modes are introduced that are based on the naming conventions for rounding modes set forth in the IEEE-754 floating-point standard. Developers are encouraged to use the new, longer names to be future proof as the legacy names will be deprecated in subsequent NPP releases.

Enumerator:

NPP_RND_NEAR Round to the nearest even integer.

All fractional numbers are rounded to their nearest integer. The ambiguous cases (i.e. <integer>.5) are rounded to the closest even integer. E.g.

- roundNear(0.5) = 0
- roundNear(0.6) = 1
- roundNear(1.5) = 2
- roundNear(-1.5) = -2

NPP_ROUND_NEAREST_TIES_TO_EVEN Alias name for NPP_RND_NEAR.

NPP_RND_FINANCIAL Round according to financial rule.

All fractional numbers are rounded to their nearest integer. The ambiguous cases (i.e. <integer>.5) are rounded away from zero. E.g.

- roundFinancial(0.4) = 0
- roundFinancial(0.5) = 1
- roundFinancial(-1.5) = -2

NPP_ROUND_NEAREST_TIES_AWAY_FROM_ZERO Alias name for NPP_RND_FINANCIAL.

NPP_RND_ZERO Round towards zero (truncation).

All fractional numbers of the form <integer>.<decimals> are truncated to <integer>.

- roundZero(1.5) = 1
- roundZero(1.9) = 1
- roundZero(-2.5) = -2

NPP_ROUND_TOWARD_ZERO Alias name for NPP_RND_ZERO.

7.2.2.10 enum NppStatus

Error Status Codes.

Almost all NPP function return error-status information using these return codes. Negative return codes indicate errors, positive return codes indicate warnings, a return code of 0 indicates success.

Enumerator:

NPP_NOT_SUPPORTED_MODE_ERROR

NPP_INVALID_HOST_POINTER_ERROR

NPP_INVALID_DEVICE_POINTER_ERROR

NPP_LUT_PALETTE_BITSIZE_ERROR

NPP_ZC_MODE_NOT_SUPPORTED_ERROR ZeroCrossing mode not supported.

NPP_NOT_SUFFICIENT_COMPUTE_CAPABILITY

NPP_TEXTURE_BIND_ERROR

NPP_WRONG_INTERSECTION_ROI_ERROR

NPP_HAAR_CLASSIFIER_PIXEL_MATCH_ERROR

NPP_MEMFREE_ERR

NPP_MEMSET_ERR

NPP_MEMCPY_ERROR

NPP_ALIGNMENT_ERROR

NPP_CUDA_KERNEL_EXECUTION_ERROR

NPP_ROUND_MODE_NOT_SUPPORTED_ERROR Unsupported round mode.

NPP_QUALITY_INDEX_ERROR Image pixels are constant for quality index.

NPP_RESIZE_NO_OPERATION_ERROR One of the output image dimensions is less than 1 pixel.

NPP_NOT_EVEN_STEP_ERROR Step value is not pixel multiple.

NPP_HISTOGRAM_NUMBER_OF_LEVELS_ERROR Number of levels for histogram is less than 2.

NPP_LUT_NUMBER_OF_LEVELS_ERROR Number of levels for LUT is less than 2.

NPP_CHANNEL_ORDER_ERROR Wrong order of the destination channels.

NPP_ZERO_MASK_VALUE_ERROR All values of the mask are zero.

NPP_QUADRANGLE_ERROR The quadrangle is nonconvex or degenerates into triangle, line or point.

NPP_RECTANGLE_ERROR Size of the rectangle region is less than or equal to 1.

NPP_COEFFICIENT_ERROR Unallowable values of the transformation coefficients.

NPP_NUMBER_OF_CHANNELS_ERROR Bad or unsupported number of channels.

NPP_COI_ERROR Channel of interest is not 1, 2, or 3.

NPP_DIVISOR_ERROR Divisor is equal to zero.

NPP_CHANNEL_ERROR Illegal channel index.

NPP_STRIDE_ERROR Stride is less than the row length.

NPP_ANCHOR_ERROR Anchor point is outside mask.

NPP_MASK_SIZE_ERROR Lower bound is larger than upper bound.

NPP_RESIZE_FACTOR_ERROR

NPP_INTERPOLATION_ERROR

NPP_MIRROR_FLIP_ERR

NPP_MOMENT_00_ZERO_ERROR

NPP_THRESHOLD_NEGATIVE_LEVEL_ERROR

NPP_THRESHOLD_ERROR

NPP_CONTEXT_MATCH_ERROR

NPP_FFT_FLAG_ERROR

NPP_FFT_ORDER_ERROR

NPP_STEP_ERROR Step is less or equal zero.

NPP_SCALE_RANGE_ERROR

NPP_DATA_TYPE_ERROR

NPP_OUT_OFF_RANGE_ERROR

NPP_DIVIDE_BY_ZERO_ERROR

NPP_MEMORY_ALLOCATION_ERR

NPP_NULL_POINTER_ERROR

NPP_RANGE_ERROR

NPP_SIZE_ERROR

NPP_BAD_ARGUMENT_ERROR

NPP_NO_MEMORY_ERROR

NPP_NOT_IMPLEMENTED_ERROR

NPP_ERROR

NPP_ERROR_RESERVED

NPP_NO_ERROR Error free operation.

NPP_SUCCESS Successful operation (same as NPP_NO_ERROR).

NPP_NO_OPERATION_WARNING Indicates that no operation was performed.

NPP_DIVIDE_BY_ZERO_WARNING Divisor is zero however does not terminate the execution.

NPP_AFFINE_QUAD_INCORRECT_WARNING Indicates that the quadrangle passed to one of affine warping functions doesn't have necessary properties.

First 3 vertices are used, the fourth vertex discarded.

NPP_WRONG_INTERSECTION_ROI_WARNING The given ROI has no interestion with either the source or destination ROI.

Thus no operation was performed.

NPP_WRONG_INTERSECTION_QUAD_WARNING The given quadrangle has no intersection with either the source or destination ROI.

Thus no operation was performed.

NPP_DOUBLE_SIZE_WARNING Image size isn't multiple of two.

Indicates that in case of 422/411/420 sampling the ROI width/height was modified for proper processing.

NPP_MISALIGNED_DST_ROI_WARNING Speed reduction due to uncoalesced memory accesses warning.

7.2.2.11 enum NppsZCType

Enumerator:

nppZCR sign change

nppZCXor sign change XOR

nppZCC sign change count_0

7.3 Basic NPP Data Types

Data Structures

- struct NPP_ALIGN_8

  Complex Number This struct represents an unsigned int complex number.

- struct NPP_ALIGN_16

  Complex Number This struct represents a long long complex number.

Typedefs

- typedef unsigned char Npp8u

  8-bit unsigned chars

- typedef signed char Npp8s

  8-bit signed chars

- typedef unsigned short Npp16u

  16-bit unsigned integers

- typedef short Npp16s

  16-bit signed integers

- typedef unsigned int Npp32u

  32-bit unsigned integers

- typedef int Npp32s

  32-bit signed integers

- typedef unsigned long long Npp64u

  64-bit unsigned integers

- typedef long long Npp64s

  64-bit signed integers

- typedef float Npp32f

  32-bit (IEEE) floating-point numbers

- typedef double Npp64f

  64-bit floating-point numbers

- typedef struct NPP_ALIGN_8 Npp32uc

  Complex Number This struct represents an unsigned int complex number.

- typedef struct NPP_ALIGN_8 Npp32sc

  Complex Number This struct represents a signed int complex number.

- typedef struct NPP_ALIGN_8 Npp32fc

  Complex Number This struct represents a single floating-point complex number.

- typedef struct NPP_ALIGN_16 Npp64sc

  Complex Number This struct represents a long long complex number.

- typedef struct NPP_ALIGN_16 Npp64fc

  Complex Number This struct represents a double floating-point complex number.

Functions

- struct __align__ (2)

  Complex Number This struct represents an unsigned char complex number.

- struct __align__ (4)

  Complex Number This struct represents an unsigned short complex number.

Variables

- Npp8uc
- Npp16uc
- Npp16sc

7.3.1 Typedef Documentation

7.3.1.1 typedef short Npp16s

16-bit signed integers

7.3.1.2 typedef unsigned short Npp16u

16-bit unsigned integers

7.3.1.3 typedef float Npp32f

32-bit (IEEE) floating-point numbers

7.3.1.4 typedef struct NPP_ALIGN_8 Npp32fc

Complex Number This struct represents a single floating-point complex number.

7.3.1.5 typedef int Npp32s

32-bit signed integers

7.3.1.6 typedef struct NPP_ALIGN_8 Npp32sc

Complex Number This struct represents a signed int complex number.

7.3.1.7 typedef unsigned int Npp32u

32-bit unsigned integers

7.3.1.8 typedef struct NPP_ALIGN_8 Npp32uc

Complex Number This struct represents an unsigned int complex number.

7.3.1.9 typedef double Npp64f

64-bit floating-point numbers

7.3.1.10 typedef struct NPP_ALIGN_16 Npp64fc

Complex Number This struct represents a double floating-point complex number.

7.3.1.11 typedef long long Npp64s

64-bit signed integers

7.3.1.12 typedef struct NPP_ALIGN_16 Npp64sc

Complex Number This struct represents a long long complex number.

7.3.1.13 typedef unsigned long long Npp64u

64-bit unsigned integers

7.3.1.14 typedef signed char Npp8s

8-bit signed chars

7.3.1.15 typedef unsigned char Npp8u

8-bit unsigned chars

7.3.2 Function Documentation

7.3.2.1 struct __align__ (4) `[read]`

Complex Number This struct represents an unsigned short complex number.

Complex Number This struct represents a short complex number.

< Real part

< Imaginary part

< Real part

< Imaginary part

7.3.2.2 struct __align__ (2) `[read]`

Complex Number This struct represents an unsigned char complex number.

< Real part

< Imaginary part

7.3.3 Variable Documentation

7.3.3.1 Npp16sc

7.3.3.2 Npp16uc

7.3.3.3 Npp8uc

7.4 NPP Image Processing

Modules

- Arithmetic and Logical Operations
- Color and Sampling Conversion

    Routines manipulating an image's color model and sampling format.

- Compression

    Image compression primitives.

- Labeling and Segmentation

    Pixel labeling and image segementation operations.

- Data Exchange and Initialization

    Primitives for initializting, copying and converting image data.

- Filtering Functions

    Linear and non-linear image filtering functions.

- Geometry Transforms

    Routines manipulating an image's geometry.

- Linear Transforms

    Linear image transformations.

- Morphological Operations

    Morphological image operations.

- Statistical Operations

    Primitives for computing the statistical properties of an image.

- Memory Management

    Routines for allocating and deallocating pitched image storage.

- Threshold and Compare Operations

    Methods for pixel-wise threshold and compare operations.

7.5 Arithmetic and Logical Operations

Modules

- Arithmetic Operations
- Logical Operations
- Alpha Composition

7.6 Arithmetic Operations

Modules

- AddC

  Adds a constant value to each pixel of an image.

- MulC

  Multiplies each pixel of an image by a constant value.

- MulCScale

  Multiplies each pixel of an image by a constant value then scales the result by the maximum value for the data bit width.

- SubC

  Subtracts a constant value from each pixel of an image.

- DivC

  Divides each pixel of an image by a constant value.

- AbsDiffC

  Determines absolute difference between each pixel of an image and a constant value.

- Add

  Pixel by pixel addition of two images.

- AddSquare

  Pixel by pixel addition of squared pixels from source image to floating point pixel values of destination image.

- AddProduct

  Pixel by pixel addition of product of pixels from two source images to floating point pixel values of destination image.

- AddWeighted

  Pixel by pixel addition of alpha weighted pixel values from a source image to floating point pixel values of destination image.

- Mul

  Pixel by pixel multiply of two images.

- MulScale

  Pixel by pixel multiplies each pixel of two images then scales the result by the maximum value for the data bit width.

- Sub

  Pixel by pixel subtraction of two images.

- Div

  Pixel by pixel division of two images.

- Div_Round

  Pixel by pixel division of two images using result rounding modes.

- Abs

  Absolute value of each pixel value in an image.

- AbsDiff

  Pixel by pixel absolute difference between two images.

- Sqr

  Square each pixel in an image.

- Sqrt

  Pixel by pixel square root of each pixel in an image.

- Ln

  Pixel by pixel natural logarithm of each pixel in an image.

- Exp

  Exponential value of each pixel in an image.

7.7 AddC

Adds a constant value to each pixel of an image.

Functions

- NppStatus nppiAddC_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_8u_C1IRSfs (const Npp8u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_8u_C3IRSfs (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel 8-bit unsigned char in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_8u_AC4IRSfs (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_8u_C4IRSfs (const Npp8u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16u_C1IRSfs (const Npp16u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

Three 16-bit unsigned short channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16u_C3IRSfs (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16u_AC4IRSfs (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16u_C4IRSfs (const Npp16u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s nConstant, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16s_C1IRSfs (const Npp16s nConstant, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16s_C3IRSfs (const Npp16s aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16s_AC4IRSfs (const Npp16s aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[4], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

Four 16-bit signed short channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16s_C4IRSfs (const Npp16s aConstants[4], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16sc_C1RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc nConstant, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16sc_C1IRSfs (const Npp16sc nConstant, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16sc_C3RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc aConstants[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16sc_C3IRSfs (const Npp16sc aConstants[3], Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16sc_AC4RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc aConstants[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_16sc_AC4IRSfs (const Npp16sc aConstants[3], Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32s_C1RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32s_C1IRSfs (const Npp32s nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32s_C3RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32s_C3IRSfs (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32sc_C1RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc nConstant, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32sc_C1IRSfs (const Npp32sc nConstant, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32sc_C3RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc aConstants[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32sc_C3IRSfs (const Npp32sc aConstants[3], Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32sc_AC4RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc aConstants[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32sc_AC4IRSfs (const Npp32sc aConstants[3], Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

- NppStatus nppiAddC_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f nConstant, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image add constant.

- NppStatus nppiAddC_32f_C1IR (const Npp32f nConstant, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image add constant.

- NppStatus nppiAddC_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image add constant.

- NppStatus nppiAddC_32f_C3IR (const Npp32f aConstants[3], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image add constant.

- NppStatus nppiAddC_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha image add constant.

- NppStatus nppiAddC_32f_AC4IR (const Npp32f aConstants[3], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

Four 32-bit floating point channel with unmodified alpha in place image add constant.

- NppStatus nppiAddC_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[4], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image add constant.

- NppStatus nppiAddC_32f_C4IR (const Npp32f aConstants[4], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image add constant.

- NppStatus nppiAddC_32fc_C1R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc nConstant, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image add constant.

- NppStatus nppiAddC_32fc_C1IR (const Npp32fc nConstant, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image add constant.

- NppStatus nppiAddC_32fc_C3R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image add constant.

- NppStatus nppiAddC_32fc_C3IR (const Npp32fc aConstants[3], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image add constant.

- NppStatus nppiAddC_32fc_AC4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha image add constant.

- NppStatus nppiAddC_32fc_AC4IR (const Npp32fc aConstants[3], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha in place image add constant.

- NppStatus nppiAddC_32fc_C4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[4], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image add constant.

- NppStatus nppiAddC_32fc_C4IR (const Npp32fc aConstants[4], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image add constant.

7.7.1 Detailed Description

Adds a constant value to each pixel of an image.

7.7.2 Function Documentation

7.7.2.1 NppStatus nppiAddC_16s_AC4IRSfs (const Npp16s *aConstants*[3], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.2 NppStatus nppiAddC_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.3 NppStatus nppiAddC_16s_C1IRSfs (const Npp16s *nConstant*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image add constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.4 NppStatus nppiAddC_16s_C1RSfs (const Npp16s * *pSrc1*, int *nSrc1Step*, const Npp16s *nConstant*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.5 NppStatus nppiAddC_16s_C3IRSfs (const Npp16s *aConstants*[3], Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.6 NppStatus nppiAddC_16s_C3RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.7 NppStatus nppiAddC_16s_C4IRSfs (const Npp16s *aConstants*[4], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.8 NppStatus nppiAddC_16s_C4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[4], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.9 NppStatus nppiAddC_16sc_AC4IRSfs (const Npp16sc *aConstants*[3], Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.10 NppStatus nppiAddC_16sc_AC4RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *aConstants*[3], Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.11 NppStatus nppiAddC_16sc_C1IRSfs (const Npp16sc *nConstant*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image add constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.12 NppStatus nppiAddC_16sc_C1RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *nConstant*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.13 NppStatus nppiAddC_16sc_C3IRSfs (const Npp16sc *aConstants*[3], Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.14 NppStatus nppiAddC_16sc_C3RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *aConstants*[3], Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.15 NppStatus nppiAddC_16u_AC4IRSfs (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.16 NppStatus nppiAddC_16u_AC4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.17 NppStatus nppiAddC_16u_C1IRSfs (const Npp16u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image add constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.18 NppStatus nppiAddC_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.19 NppStatus nppiAddC_16u_C3IRSfs (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.20 NppStatus nppiAddC_16u_C3RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.21 NppStatus nppiAddC_16u_C4IRSfs (const Npp16u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.22 NppStatus nppiAddC_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.23 NppStatus nppiAddC_32f_AC4IR (const Npp32f *aConstants*[3], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha in place image add constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.24 NppStatus nppiAddC_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha image add constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.25 NppStatus nppiAddC_32f_C1IR (const Npp32f *nConstant*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image add constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.26 NppStatus nppiAddC_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *nConstant*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image add constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.27 NppStatus nppiAddC_32f_C3IR (const Npp32f *aConstants*[3], Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image add constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.28 NppStatus nppiAddC_32f_C3R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[3], Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image add constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.29 NppStatus nppiAddC_32f_C4IR (const Npp32f *aConstants*[4], Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image add constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.30 NppStatus nppiAddC_32f_C4R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[4], Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image add constant.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
aConstants fixed size array of constant values, one per channel.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.31 NppStatus nppiAddC_32fc_AC4IR (const Npp32fc *aConstants*[3], Npp32fc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha in place image add constant.

Parameters:

aConstants fixed size array of constant values, one per channel.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.32 NppStatus nppiAddC_32fc_AC4R (const Npp32fc * *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[3], Npp32fc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha image add constant.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
aConstants fixed size array of constant values, one per channel.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.33 NppStatus nppiAddC_32fc_C1IR (const Npp32fc *nConstant*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image add constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.34 NppStatus nppiAddC_32fc_C1R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *nConstant*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image add constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.35 NppStatus nppiAddC_32fc_C3IR (const Npp32fc *aConstants*[3], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image add constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.36 NppStatus nppiAddC_32fc_C3R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[3], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image add constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.37 NppStatus nppiAddC_32fc_C4IR (const Npp32fc *aConstants*[4], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image add constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.38 NppStatus nppiAddC_32fc_C4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[4], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image add constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.39 NppStatus nppiAddC_32s_C1IRSfs (const Npp32s *nConstant*, Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image add constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.40 NppStatus nppiAddC_32s_C1RSfs (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s *nConstant*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.41 NppStatus nppiAddC_32s_C3IRSfs (const Npp32s *aConstants*[3], Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.42 NppStatus nppiAddC_32s_C3RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.43 NppStatus nppiAddC_32sc_AC4IRSfs (const Npp32sc *aConstants*[3], Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.44 NppStatus nppiAddC_32sc_AC4RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *aConstants*[3], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.45 NppStatus nppiAddC_32sc_C1IRSfs (const Npp32sc *nConstant*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image add constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.46 NppStatus nppiAddC_32sc_C1RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *nConstant*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.47 NppStatus nppiAddC_32sc_C3IRSfs (const Npp32sc *aConstants*[3], Npp32sc $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.48 NppStatus nppiAddC_32sc_C3RSfs (const Npp32sc $*$ *pSrc1*, int *nSrc1Step*, const Npp32sc *aConstants*[3], Npp32sc $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.49 NppStatus nppiAddC_8u_AC4IRSfs (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel..

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.50 NppStatus nppiAddC_8u_AC4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel..

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.51 NppStatus nppiAddC_8u_C1IRSfs (const Npp8u *nConstant*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image add constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.52 NppStatus nppiAddC_8u_C1RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.53 NppStatus nppiAddC_8u_C3IRSfs (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel 8-bit unsigned char in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel..

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.54 NppStatus nppiAddC_8u_C3RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel..

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.55 NppStatus nppiAddC_8u_C4IRSfs (const Npp8u *aConstants*[4], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image add constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.7.2.56 NppStatus nppiAddC_8u_C4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image add constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel..

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8 MulC

Multiplies each pixel of an image by a constant value.

Functions

- NppStatus nppiMulC_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_8u_C1IRSfs (const Npp8u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_8u_C3IRSfs (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel 8-bit unsigned char in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_8u_AC4IRSfs (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_8u_C4IRSfs (const Npp8u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16u_C1IRSfs (const Npp16u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

Three 16-bit unsigned short channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16u_C3IRSfs (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16u_AC4IRSfs (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16u_C4IRSfs (const Npp16u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s nConstant, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16s_C1IRSfs (const Npp16s nConstant, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16s_C3IRSfs (const Npp16s aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16s_AC4IRSfs (const Npp16s aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[4], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16s_C4IRSfs (const Npp16s aConstants[4], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16sc_C1RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc nConstant, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16sc_C1IRSfs (const Npp16sc nConstant, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16sc_C3RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc aConstants[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16sc_C3IRSfs (const Npp16sc aConstants[3], Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16sc_AC4RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc aConstants[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_16sc_AC4IRSfs (const Npp16sc aConstants[3], Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32s_C1RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32s_C1IRSfs (const Npp32s nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32s_C3RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32s_C3IRSfs (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

Three 32-bit signed integer channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32sc_C1RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc nConstant, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32sc_C1IRSfs (const Npp32sc nConstant, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32sc_C3RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc aConstants[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32sc_C3IRSfs (const Npp32sc aConstants[3], Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32sc_AC4RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc aConstants[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32sc_AC4IRSfs (const Npp32sc aConstants[3], Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

- NppStatus nppiMulC_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f nConstant, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image multiply by constant.

- NppStatus nppiMulC_32f_C1IR (const Npp32f nConstant, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image multiply by constant.

- NppStatus nppiMulC_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image multiply by constant.

- NppStatus nppiMulC_32f_C3IR (const Npp32f aConstants[3], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image multiply by constant.

- NppStatus nppiMulC_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha image multiply by constant.

- NppStatus nppiMulC_32f_AC4IR (const Npp32f aConstants[3], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha in place image multiply by constant.

- NppStatus nppiMulC_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[4], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image multiply by constant.

- NppStatus nppiMulC_32f_C4IR (const Npp32f aConstants[4], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image multiply by constant.

- NppStatus nppiMulC_32fc_C1R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc nConstant, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image multiply by constant.

- NppStatus nppiMulC_32fc_C1IR (const Npp32fc nConstant, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image multiply by constant.

- NppStatus nppiMulC_32fc_C3R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image multiply by constant.

- NppStatus nppiMulC_32fc_C3IR (const Npp32fc aConstants[3], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image multiply by constant.

- NppStatus nppiMulC_32fc_AC4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha image multiply by constant.

- NppStatus nppiMulC_32fc_AC4IR (const Npp32fc aConstants[3], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha in place image multiply by constant.

- NppStatus nppiMulC_32fc_C4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[4], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image multiply by constant.

- NppStatus nppiMulC_32fc_C4IR (const Npp32fc aConstants[4], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image multiply by constant.

7.8.1 Detailed Description

Multiplies each pixel of an image by a constant value.

7.8.2 Function Documentation

7.8.2.1 NppStatus nppiMulC_16s_AC4IRSfs (const Npp16s *aConstants*[3], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.2 NppStatus nppiMulC_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.3 NppStatus nppiMulC_16s_C1IRSfs (const Npp16s *nConstant*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.4 NppStatus nppiMulC_16s_C1RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *nConstant*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
nConstant Constant.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.5 NppStatus nppiMulC_16s_C3IRSfs (const Npp16s *aConstants*[3], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.6 NppStatus nppiMulC_16s_C3RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.7 NppStatus nppiMulC_16s_C4IRSfs (const Npp16s *aConstants*[4], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.8 NppStatus nppiMulC_16s_C4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[4], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.9 NppStatus nppiMulC_16sc_AC4IRSfs (const Npp16sc *aConstants*[3], Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.10 NppStatus nppiMulC_16sc_AC4RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *aConstants*[3], Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.11 NppStatus nppiMulC_16sc_C1IRSfs (const Npp16sc *nConstant*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.12 NppStatus nppiMulC_16sc_C1RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *nConstant*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.13 NppStatus nppiMulC_16sc_C3IRSfs (const Npp16sc *aConstants*[3], Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.14 NppStatus nppiMulC_16sc_C3RSfs (const Npp16sc * *pSrc1*, int *nSrc1Step*, const Npp16sc *aConstants*[3], Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.15 NppStatus nppiMulC_16u_AC4IRSfs (const Npp16u *aConstants*[3], Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.16 NppStatus nppiMulC_16u_AC4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.17 NppStatus nppiMulC_16u_C1IRSfs (const Npp16u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.18 NppStatus nppiMulC_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.19 NppStatus nppiMulC_16u_C3IRSfs (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.20 NppStatus nppiMulC_16u_C3RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.21 NppStatus nppiMulC_16u_C4IRSfs (const Npp16u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.22 NppStatus nppiMulC_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.23 NppStatus nppiMulC_32f_AC4IR (const Npp32f *aConstants*[3], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha in place image multiply by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.24 NppStatus nppiMulC_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha image multiply by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.25 NppStatus nppiMulC_32f_C1IR (const Npp32f *nConstant*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image multiply by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.26 NppStatus nppiMulC_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *nConstant*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image multiply by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.27 NppStatus nppiMulC_32f_C3IR (const Npp32f *aConstants*[3], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image multiply by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.28 NppStatus nppiMulC_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image multiply by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.29 NppStatus nppiMulC_32f_C4IR (const Npp32f *aConstants*[4], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image multiply by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.30 NppStatus nppiMulC_32f_C4R (const Npp32f $*$ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[4], Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image multiply by constant.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
aConstants fixed size array of constant values, one per channel.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.31 NppStatus nppiMulC_32fc_AC4IR (const Npp32fc *aConstants*[3], Npp32fc $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha in place image multiply by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.32 NppStatus nppiMulC_32fc_AC4R (const Npp32fc $*$ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[3], Npp32fc $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha image multiply by constant.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
aConstants fixed size array of constant values, one per channel.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.33 NppStatus nppiMulC_32fc_C1IR (const Npp32fc *nConstant*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image multiply by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.34 NppStatus nppiMulC_32fc_C1R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *nConstant*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image multiply by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.35 NppStatus nppiMulC_32fc_C3IR (const Npp32fc *aConstants*[3], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image multiply by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.36 NppStatus nppiMulC_32fc_C3R (const Npp32fc * *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[3], Npp32fc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image multiply by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.37 NppStatus nppiMulC_32fc_C4IR (const Npp32fc *aConstants*[4], Npp32fc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image multiply by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.38 NppStatus nppiMulC_32fc_C4R (const Npp32fc * *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[4], Npp32fc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image multiply by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.39 NppStatus nppiMulC_32s_C1IRSfs (const Npp32s *nConstant*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.40 NppStatus nppiMulC_32s_C1RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *nConstant*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.41 NppStatus nppiMulC_32s_C3IRSfs (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.42 NppStatus nppiMulC_32s_C3RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.43 NppStatus nppiMulC_32sc_AC4IRSfs (const Npp32sc *aConstants*[3], Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.44 NppStatus nppiMulC_32sc_AC4RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *aConstants*[3], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.45 NppStatus nppiMulC_32sc_C1IRSfs (const Npp32sc *nConstant*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.46 NppStatus nppiMulC_32sc_C1RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *nConstant*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.47 NppStatus nppiMulC_32sc_C3IRSfs (const Npp32sc *aConstants*[3], Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.48 NppStatus nppiMulC_32sc_C3RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *aConstants*[3], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.49 NppStatus nppiMulC_8u_AC4IRSfs (const Npp8u *aConstants*[3], Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.50 NppStatus nppiMulC_8u_AC4RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.51 NppStatus nppiMulC_8u_C1IRSfs (const Npp8u *nConstant*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.52 NppStatus nppiMulC_8u_C1RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.53 NppStatus nppiMulC_8u_C3IRSfs (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel 8-bit unsigned char in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.54 NppStatus nppiMulC_8u_C3RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.55 NppStatus nppiMulC_8u_C4IRSfs (const Npp8u *aConstants*[4], Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image multiply by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.8.2.56 NppStatus nppiMulC_8u_C4RSfs (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[4], Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image multiply by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9 MulCScale

Multiplies each pixel of an image by a constant value then scales the result by the maximum value for the data bit width.

Functions

- NppStatus nppiMulCScale_8u_C1R (const Npp8u *pSrc1, int nSrc1Step, const Npp8u nConstant, Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_8u_C1IR (const Npp8u nConstant, Npp8u *pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_8u_C3R (const Npp8u *pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_8u_C3IR (const Npp8u aConstants[3], Npp8u *pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel 8-bit unsigned char in place image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_8u_AC4R (const Npp8u *pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel with unmodified alpha image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_8u_AC4IR (const Npp8u aConstants[3], Npp8u *pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel with unmodified alpha in place image multiply by constant, scale and scale by max bit width value.

- NppStatus nppiMulCScale_8u_C4R (const Npp8u *pSrc1, int nSrc1Step, const Npp8u aConstants[4], Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_8u_C4IR (const Npp8u aConstants[4], Npp8u *pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_16u_C1R (const Npp16u *pSrc1, int nSrc1Step, const Npp16u nConstant, Npp16u *pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_16u_C1IR (const Npp16u nConstant, Npp16u *pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_16u_C3IR (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel with unmodified alpha image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_16u_AC4IR (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel with unmodified alpha in place image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image multiply by constant and scale by max bit width value.

- NppStatus nppiMulCScale_16u_C4IR (const Npp16u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image multiply by constant and scale by max bit width value.

7.9.1 Detailed Description

Multiplies each pixel of an image by a constant value then scales the result by the maximum value for the data bit width.

7.9.2 Function Documentation

7.9.2.1 NppStatus nppiMulCScale_16u_AC4IR (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel with unmodified alpha in place image multiply by constant and scale by max bit width value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.2 NppStatus nppiMulCScale_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel with unmodified alpha image multiply by constant and scale by max bit width value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.3 NppStatus nppiMulCScale_16u_C1IR (const Npp16u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image multiply by constant and scale by max bit width value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.4 NppStatus nppiMulCScale_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image multiply by constant and scale by max bit width value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.5 NppStatus nppiMulCScale_16u_C3IR (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image multiply by constant and scale by max bit width value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.6 NppStatus nppiMulCScale_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image multiply by constant and scale by max bit width value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.7 NppStatus nppiMulCScale_16u_C4IR (const Npp16u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image multiply by constant and scale by max bit width value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.8 NppStatus nppiMulCScale_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image multiply by constant and scale by max bit width value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.9 NppStatus nppiMulCScale_8u_AC4IR (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel with unmodified alpha in place image multiply by constant, scale and scale by max bit width value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.10 NppStatus nppiMulCScale_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel with unmodified alpha image multiply by constant and scale by max bit width value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.11 NppStatus nppiMulCScale_8u_C1IR (const Npp8u *nConstant*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image multiply by constant and scale by max bit width value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.12 NppStatus nppiMulCScale_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image multiply by constant and scale by max bit width value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.13 NppStatus nppiMulCScale_8u_C3IR (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel 8-bit unsigned char in place image multiply by constant and scale by max bit width value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.14 NppStatus nppiMulCScale_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image multiply by constant and scale by max bit width value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.15 NppStatus nppiMulCScale_8u_C4IR (const Npp8u *aConstants*[4], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image multiply by constant and scale by max bit width value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.9.2.16 NppStatus nppiMulCScale_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image multiply by constant and scale by max bit width value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10 SubC

Subtracts a constant value from each pixel of an image.

Functions

- NppStatus nppiSubC_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_8u_C1IRSfs (const Npp8u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_8u_C3IRSfs (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel 8-bit unsigned char in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_8u_AC4IRSfs (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_8u_C4IRSfs (const Npp8u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16u_C1IRSfs (const Npp16u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

Three 16-bit unsigned short channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16u_C3IRSfs (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16u_AC4IRSfs (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16u_C4IRSfs (const Npp16u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s nConstant, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16s_C1IRSfs (const Npp16s nConstant, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16s_C3IRSfs (const Npp16s aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16s_AC4IRSfs (const Npp16s aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[4], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

Four 16-bit signed short channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16s_C4IRSfs (const Npp16s aConstants[4], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16sc_C1RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc nConstant, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16sc_C1IRSfs (const Npp16sc nConstant, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16sc_C3RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc aConstants[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16sc_C3IRSfs (const Npp16sc aConstants[3], Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16sc_AC4RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc aConstants[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_16sc_AC4IRSfs (const Npp16sc aConstants[3], Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32s_C1RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32s_C1IRSfs (const Npp32s nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32s_C3RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32s_C3IRSfs (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32sc_C1RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc nConstant, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32sc_C1IRSfs (const Npp32sc nConstant, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32sc_C3RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc aConstants[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32sc_C3IRSfs (const Npp32sc aConstants[3], Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32sc_AC4RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc aConstants[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32sc_AC4IRSfs (const Npp32sc aConstants[3], Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

- NppStatus nppiSubC_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f nConstant, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image subtract constant.

- NppStatus nppiSubC_32f_C1IR (const Npp32f nConstant, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image subtract constant.

- NppStatus nppiSubC_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image subtract constant.

- NppStatus nppiSubC_32f_C3IR (const Npp32f aConstants[3], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image subtract constant.

- NppStatus nppiSubC_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha image subtract constant.

- NppStatus nppiSubC_32f_AC4IR (const Npp32f aConstants[3], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

Four 32-bit floating point channel with unmodified alpha in place image subtract constant.

- NppStatus nppiSubC_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[4], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image subtract constant.

- NppStatus nppiSubC_32f_C4IR (const Npp32f aConstants[4], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image subtract constant.

- NppStatus nppiSubC_32fc_C1R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc nConstant, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image subtract constant.

- NppStatus nppiSubC_32fc_C1IR (const Npp32fc nConstant, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image subtract constant.

- NppStatus nppiSubC_32fc_C3R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image subtract constant.

- NppStatus nppiSubC_32fc_C3IR (const Npp32fc aConstants[3], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image subtract constant.

- NppStatus nppiSubC_32fc_AC4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha image subtract constant.

- NppStatus nppiSubC_32fc_AC4IR (const Npp32fc aConstants[3], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha in place image subtract constant.

- NppStatus nppiSubC_32fc_C4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[4], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image subtract constant.

- NppStatus nppiSubC_32fc_C4IR (const Npp32fc aConstants[4], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image subtract constant.

7.10.1 Detailed Description

Subtracts a constant value from each pixel of an image.

7.10.2 Function Documentation

7.10.2.1 NppStatus nppiSubC_16s_AC4IRSfs (const Npp16s *aConstants*[3], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.2 NppStatus nppiSubC_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.3 NppStatus nppiSubC_16s_C1IRSfs (const Npp16s *nConstant*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.4 NppStatus nppiSubC_16s_C1RSfs (const Npp16s * *pSrc1*, int *nSrc1Step*, const Npp16s *nConstant*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.5 NppStatus nppiSubC_16s_C3IRSfs (const Npp16s *aConstants*[3], Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.6 NppStatus nppiSubC_16s_C3RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.7 NppStatus nppiSubC_16s_C4IRSfs (const Npp16s *aConstants*[4], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.8 NppStatus nppiSubC_16s_C4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[4], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.9 NppStatus nppiSubC_16sc_AC4IRSfs (const Npp16sc *aConstants*[3], Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.10 NppStatus nppiSubC_16sc_AC4RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *aConstants*[3], Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.11 NppStatus nppiSubC_16sc_C1IRSfs (const Npp16sc *nConstant*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.12 NppStatus nppiSubC_16sc_C1RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *nConstant*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.13 NppStatus nppiSubC_16sc_C3IRSfs (const Npp16sc *aConstants*[3], Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.14 NppStatus nppiSubC_16sc_C3RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *aConstants*[3], Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.15 NppStatus nppiSubC_16u_AC4IRSfs (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.16 NppStatus nppiSubC_16u_AC4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.17 NppStatus nppiSubC_16u_C1IRSfs (const Npp16u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.18 NppStatus nppiSubC_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.19 NppStatus nppiSubC_16u_C3IRSfs (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.20 NppStatus nppiSubC_16u_C3RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.21 NppStatus nppiSubC_16u_C4IRSfs (const Npp16u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.22 NppStatus nppiSubC_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.23 NppStatus nppiSubC_32f_AC4IR (const Npp32f *aConstants*[3], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha in place image subtract constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.24 NppStatus nppiSubC_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha image subtract constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.25 NppStatus nppiSubC_32f_C1IR (const Npp32f *nConstant*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image subtract constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.26 NppStatus nppiSubC_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *nConstant*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image subtract constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.27 NppStatus nppiSubC_32f_C3IR (const Npp32f *aConstants*[3], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image subtract constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.28 NppStatus nppiSubC_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image subtract constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.29 NppStatus nppiSubC_32f_C4IR (const Npp32f *aConstants*[4], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image subtract constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.30 NppStatus nppiSubC_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[4], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image subtract constant.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
aConstants fixed size array of constant values, one per channel.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.31 NppStatus nppiSubC_32fc_AC4IR (const Npp32fc *aConstants*[3], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha in place image subtract constant.

Parameters:

aConstants fixed size array of constant values, one per channel.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.32 NppStatus nppiSubC_32fc_AC4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[3], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha image subtract constant.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
aConstants fixed size array of constant values, one per channel.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.33 NppStatus nppiSubC_32fc_C1IR (const Npp32fc *nConstant*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image subtract constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.34 NppStatus nppiSubC_32fc_C1R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *nConstant*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image subtract constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.35 NppStatus nppiSubC_32fc_C3IR (const Npp32fc *aConstants*[3], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image subtract constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.36 NppStatus nppiSubC_32fc_C3R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[3], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image subtract constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.37 NppStatus nppiSubC_32fc_C4IR (const Npp32fc *aConstants*[4], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image subtract constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.38 NppStatus nppiSubC_32fc_C4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[4], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image subtract constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.39 NppStatus nppiSubC_32s_C1IRSfs (const Npp32s *nConstant*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.40 NppStatus nppiSubC_32s_C1RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *nConstant*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.41 NppStatus nppiSubC_32s_C3IRSfs (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.42 NppStatus nppiSubC_32s_C3RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.43 NppStatus nppiSubC_32sc_AC4IRSfs (const Npp32sc *aConstants*[3], Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.44 NppStatus nppiSubC_32sc_AC4RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *aConstants*[3], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.45 NppStatus nppiSubC_32sc_C1IRSfs (const Npp32sc *nConstant*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.46 NppStatus nppiSubC_32sc_C1RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *nConstant*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.47 NppStatus nppiSubC_32sc_C3IRSfs (const Npp32sc *aConstants*[3], Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.48 NppStatus nppiSubC_32sc_C3RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *aConstants*[3], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.49 NppStatus nppiSubC_8u_AC4IRSfs (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.50 NppStatus nppiSubC_8u_AC4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.51 NppStatus nppiSubC_8u_C1IRSfs (const Npp8u *nConstant*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.52 NppStatus nppiSubC_8u_C1RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.53 NppStatus nppiSubC_8u_C3IRSfs (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel 8-bit unsigned char in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.54 NppStatus nppiSubC_8u_C3RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.55 NppStatus nppiSubC_8u_C4IRSfs (const Npp8u *aConstants*[4], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image subtract constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.10.2.56 NppStatus nppiSubC_8u_C4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11 DivC

Divides each pixel of an image by a constant value.

Functions

- NppStatus nppiDivC_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_8u_C1IRSfs (const Npp8u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_8u_C3IRSfs (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel 8-bit unsigned char in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_8u_AC4IRSfs (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_8u_C4IRSfs (const Npp8u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16u_C1IRSfs (const Npp16u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

Three 16-bit unsigned short channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16u_C3IRSfs (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16u_AC4IRSfs (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16u_C4IRSfs (const Npp16u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s nConstant, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16s_C1IRSfs (const Npp16s nConstant, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16s_C3IRSfs (const Npp16s aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16s_AC4IRSfs (const Npp16s aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s aConstants[4], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16s_C4IRSfs (const Npp16s aConstants[4], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16sc_C1RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc nConstant, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16sc_C1IRSfs (const Npp16sc nConstant, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16sc_C3RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc aConstants[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16sc_C3IRSfs (const Npp16sc aConstants[3], Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16sc_AC4RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc aConstants[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_16sc_AC4IRSfs (const Npp16sc aConstants[3], Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32s_C1RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32s_C1IRSfs (const Npp32s nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32s_C3RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32s_C3IRSfs (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

Three 32-bit signed integer channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32sc_C1RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc nConstant, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32sc_C1IRSfs (const Npp32sc nConstant, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32sc_C3RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc aConstants[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32sc_C3IRSfs (const Npp32sc aConstants[3], Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32sc_AC4RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc aConstants[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32sc_AC4IRSfs (const Npp32sc aConstants[3], Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

- NppStatus nppiDivC_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f nConstant, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image divided by constant.

- NppStatus nppiDivC_32f_C1IR (const Npp32f nConstant, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image divided by constant.

- NppStatus nppiDivC_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image divided by constant.

- NppStatus nppiDivC_32f_C3IR (const Npp32f aConstants[3], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image divided by constant.

- NppStatus nppiDivC_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha image divided by constant.

- NppStatus nppiDivC_32f_AC4IR (const Npp32f aConstants[3], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha in place image divided by constant.

- NppStatus nppiDivC_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f aConstants[4], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image divided by constant.

- NppStatus nppiDivC_32f_C4IR (const Npp32f aConstants[4], Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image divided by constant.

- NppStatus nppiDivC_32fc_C1R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc nConstant, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image divided by constant.

- NppStatus nppiDivC_32fc_C1IR (const Npp32fc nConstant, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image divided by constant.

- NppStatus nppiDivC_32fc_C3R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image divided by constant.

- NppStatus nppiDivC_32fc_C3IR (const Npp32fc aConstants[3], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image divided by constant.

- NppStatus nppiDivC_32fc_AC4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha image divided by constant.

- NppStatus nppiDivC_32fc_AC4IR (const Npp32fc aConstants[3], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha in place image divided by constant.

- NppStatus nppiDivC_32fc_C4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc aConstants[4], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image divided by constant.

- NppStatus nppiDivC_32fc_C4IR (const Npp32fc aConstants[4], Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image divided by constant.

7.11.1 Detailed Description

Divides each pixel of an image by a constant value.

7.11.2 Function Documentation

7.11.2.1 NppStatus nppiDivC_16s_AC4IRSfs (const Npp16s *aConstants*[3], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.2 NppStatus nppiDivC_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.3 NppStatus nppiDivC_16s_C1IRSfs (const Npp16s *nConstant*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.4 NppStatus nppiDivC_16s_C1RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *nConstant*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.5 NppStatus nppiDivC_16s_C3IRSfs (const Npp16s *aConstants*[3], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.6 NppStatus nppiDivC_16s_C3RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.7 NppStatus nppiDivC_16s_C4IRSfs (const Npp16s *aConstants*[4], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.8 NppStatus nppiDivC_16s_C4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s *aConstants*[4], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.9 NppStatus nppiDivC_16sc_AC4IRSfs (const Npp16sc *aConstants*[3], Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.10 NppStatus nppiDivC_16sc_AC4RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc *aConstants*[3], Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.11 NppStatus nppiDivC_16sc_C1IRSfs (const Npp16sc *nConstant*, Npp16sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.12 NppStatus nppiDivC_16sc_C1RSfs (const Npp16sc * *pSrc1*, int *nSrc1Step*, const Npp16sc *nConstant*, Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.13 NppStatus nppiDivC_16sc_C3IRSfs (const Npp16sc *aConstants*[3], Npp16sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.14 NppStatus nppiDivC_16sc_C3RSfs (const Npp16sc * *pSrc1*, int *nSrc1Step*, const Npp16sc *aConstants*[3], Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.15 NppStatus nppiDivC_16u_AC4IRSfs (const Npp16u *aConstants*[3], Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.16 NppStatus nppiDivC_16u_AC4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.17 NppStatus nppiDivC_16u_C1IRSfs (const Npp16u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.18 NppStatus nppiDivC_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.19 NppStatus nppiDivC_16u_C3IRSfs (const Npp16u *aConstants*[3], Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.20 NppStatus nppiDivC_16u_C3RSfs (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.21 NppStatus nppiDivC_16u_C4IRSfs (const Npp16u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.22 NppStatus nppiDivC_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.23 NppStatus nppiDivC_32f_AC4IR (const Npp32f *aConstants*[3], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha in place image divided by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.24 NppStatus nppiDivC_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha image divided by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.25 NppStatus nppiDivC_32f_C1IR (const Npp32f *nConstant*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image divided by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.26 NppStatus nppiDivC_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *nConstant*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image divided by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.27 NppStatus nppiDivC_32f_C3IR (const Npp32f *aConstants*[3], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image divided by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.28 NppStatus nppiDivC_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image divided by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.29 NppStatus nppiDivC_32f_C4IR (const Npp32f *aConstants*[4], Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image divided by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.30 NppStatus nppiDivC_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f *aConstants*[4], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image divided by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.31 NppStatus nppiDivC_32fc_AC4IR (const Npp32fc *aConstants*[3], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha in place image divided by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.32 NppStatus nppiDivC_32fc_AC4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[3], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel with unmodified alpha image divided by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.33 NppStatus nppiDivC_32fc_C1IR (const Npp32fc *nConstant*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image divided by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.34 NppStatus nppiDivC_32fc_C1R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *nConstant*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image divided by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.35 NppStatus nppiDivC_32fc_C3IR (const Npp32fc *aConstants*[3], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image divided by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.36 NppStatus nppiDivC_32fc_C3R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[3], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image divided by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.37 NppStatus nppiDivC_32fc_C4IR (const Npp32fc *aConstants*[4], Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel in place image divided by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.38 NppStatus nppiDivC_32fc_C4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc *aConstants*[4], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit complex floating point (32-bit floating point real, 32-bit floating point imaginary) channel image divided by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.39 NppStatus nppiDivC_32s_C1IRSfs (const Npp32s *nConstant*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.40 NppStatus nppiDivC_32s_C1RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *nConstant*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.41 NppStatus nppiDivC_32s_C3IRSfs (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.42 NppStatus nppiDivC_32s_C3RSfs (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.43 NppStatus nppiDivC_32sc_AC4IRSfs (const Npp32sc *aConstants*[3], Npp32sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.44 NppStatus nppiDivC_32sc_AC4RSfs (const Npp32sc * *pSrc1*, int *nSrc1Step*, const Npp32sc *aConstants*[3], Npp32sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.45 NppStatus nppiDivC_32sc_C1IRSfs (const Npp32sc *nConstant*, Npp32sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.46 NppStatus nppiDivC_32sc_C1RSfs (const Npp32sc * *pSrc1*, int *nSrc1Step*, const Npp32sc *nConstant*, Npp32sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.47 NppStatus nppiDivC_32sc_C3IRSfs (const Npp32sc *aConstants*[3], Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.48 NppStatus nppiDivC_32sc_C3RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc *aConstants*[3], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed complex integer (32-bit real, 32-bit imaginary) channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.49 NppStatus nppiDivC_8u_AC4IRSfs (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.50 NppStatus nppiDivC_8u_AC4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.51 NppStatus nppiDivC_8u_C1IRSfs (const Npp8u *nConstant*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.52 NppStatus nppiDivC_8u_C1RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.53 NppStatus nppiDivC_8u_C3IRSfs (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel 8-bit unsigned char in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.54 NppStatus nppiDivC_8u_C3RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.55 NppStatus nppiDivC_8u_C4IRSfs (const Npp8u *aConstants*[4], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image divided by constant, scale, then clamp to saturated value.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.11.2.56 NppStatus nppiDivC_8u_C4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.12 AbsDiffC

Determines absolute difference between each pixel of an image and a constant value.

Functions

- NppStatus nppiAbsDiffC_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nConstant)

  One 8-bit unsigned char channel image absolute difference with constant.

- NppStatus nppiAbsDiffC_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp16u nConstant)

  One 16-bit unsigned short channel image absolute difference with constant.

- NppStatus nppiAbsDiffC_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nConstant)

  One 32-bit floating point channel image absolute difference with constant.

7.12.1 Detailed Description

Determines absolute difference between each pixel of an image and a constant value.

7.12.2 Function Documentation

7.12.2.1 NppStatus nppiAbsDiffC_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp16u *nConstant*)

One 16-bit unsigned short channel image absolute difference with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.12.2.2 NppStatus nppiAbsDiffC_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nConstant*)

One 32-bit floating point channel image absolute difference with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.12.2.3 NppStatus nppiAbsDiffC_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nConstant*)

One 8-bit unsigned char channel image absolute difference with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13 Add

Pixel by pixel addition of two images.

Functions

- NppStatus nppiAdd_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_8u_C1IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_8u_C3IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_8u_AC4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_8u_C4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16u_C1IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16u_C3IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16u_AC4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16u_C4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16s_C1IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16s_C3IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

One 16-bit signed short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16s_AC4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16s_C4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16sc_C1RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16sc_C1IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16sc_C3RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16sc_C3IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16sc_AC4RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_16sc_AC4IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32s_C1RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Note: This function is to be deprecated in future NPP releases, use the function above with a scale factor of 0 instead.

- NppStatus nppiAdd_32s_C1IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32s_C3RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32s_C3IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32sc_C1RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32sc_C1IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32sc_C3RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32sc_C3IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32sc_AC4RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32sc_AC4IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiAdd_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image addition.

- NppStatus nppiAdd_32f_C1IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image addition.

- NppStatus nppiAdd_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image addition.

- NppStatus nppiAdd_32f_C3IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image addition.

- NppStatus nppiAdd_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha image addition.

- NppStatus nppiAdd_32f_AC4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha in place image addition.

- NppStatus nppiAdd_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image addition.

- NppStatus nppiAdd_32f_C4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image addition.

- NppStatus nppiAdd_32fc_C1R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image addition.

- NppStatus nppiAdd_32fc_C1IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image addition.

- NppStatus nppiAdd_32fc_C3R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image addition.

- NppStatus nppiAdd_32fc_C3IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image addition.

- NppStatus nppiAdd_32fc_AC4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image addition.

- NppStatus nppiAdd_32fc_AC4IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image addition.

- NppStatus nppiAdd_32fc_C4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image addition.

- NppStatus nppiAdd_32fc_C4IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image addition.

7.13.1 Detailed Description

Pixel by pixel addition of two images.

7.13.2 Function Documentation

7.13.2.1 NppStatus nppiAdd_16s_AC4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.2 NppStatus nppiAdd_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.3 NppStatus nppiAdd_16s_C1IRSfs (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.4 NppStatus nppiAdd_16s_C1RSfs (const Npp16s * *pSrc1*, int *nSrc1Step*, const Npp16s * *pSrc2*, int *nSrc2Step*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.5 NppStatus nppiAdd_16s_C3IRSfs (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.6 NppStatus nppiAdd_16s_C3RSfs (const Npp16s * *pSrc1*, int *nSrc1Step*, const Npp16s * *pSrc2*, int *nSrc2Step*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.7 NppStatus nppiAdd_16s_C4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.8 NppStatus nppiAdd_16s_C4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.9 NppStatus nppiAdd_16sc_AC4IRSfs (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.10 NppStatus nppiAdd_16sc_AC4RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc ∗ *pSrc2*, int *nSrc2Step*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.11 NppStatus nppiAdd_16sc_C1IRSfs (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.12 NppStatus nppiAdd_16sc_C1RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc ∗ *pSrc2*, int *nSrc2Step*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.13 NppStatus nppiAdd_16sc_C3IRSfs (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.14 NppStatus nppiAdd_16sc_C3RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc ∗ *pSrc2*, int *nSrc2Step*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.15 NppStatus nppiAdd_16u_AC4IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.16 NppStatus nppiAdd_16u_AC4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.17 NppStatus nppiAdd_16u_C1IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.18 NppStatus nppiAdd_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.19 NppStatus nppiAdd_16u_C3IRSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.20 NppStatus nppiAdd_16u_C3RSfs (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.21 NppStatus nppiAdd_16u_C4IRSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.22 NppStatus nppiAdd_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.23 NppStatus nppiAdd_32f_AC4IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha in place image addition.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.24 NppStatus nppiAdd_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha image addition.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.25 NppStatus nppiAdd_32f_C1IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image addition.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.26 NppStatus nppiAdd_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image addition.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.27 NppStatus nppiAdd_32f_C3IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image addition.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.28 NppStatus nppiAdd_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image addition.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.29 NppStatus nppiAdd_32f_C4IR (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image addition.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.30 NppStatus nppiAdd_32f_C4R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image addition.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.31 NppStatus nppiAdd_32fc_AC4IR (const Npp32fc * *pSrc*, int *nSrcStep*, Npp32fc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image addition.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.32 NppStatus nppiAdd_32fc_AC4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image addition.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.33 NppStatus nppiAdd_32fc_C1IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image addition.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.34 NppStatus nppiAdd_32fc_C1R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image addition.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.35 NppStatus nppiAdd_32fc_C3IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image addition.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.36 NppStatus nppiAdd_32fc_C3R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image addition.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.37 NppStatus nppiAdd_32fc_C4IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image addition.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.38 NppStatus nppiAdd_32fc_C4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image addition.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.39 NppStatus nppiAdd_32s_C1IRSfs (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.40 NppStatus nppiAdd_32s_C1R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Note: This function is to be deprecated in future NPP releases, use the function above with a scale factor of 0 instead.

32-bit image add. Add the pixel values of corresponding pixels in the ROI and write them to the output image.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.41 NppStatus nppiAdd_32s_C1RSfs (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.42 NppStatus nppiAdd_32s_C3IRSfs (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.43 NppStatus nppiAdd_32s_C3RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.44 NppStatus nppiAdd_32sc_AC4IRSfs (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.45 NppStatus nppiAdd_32sc_AC4RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.46 NppStatus nppiAdd_32sc_C1IRSfs (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.47 NppStatus nppiAdd_32sc_C1RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.48 NppStatus nppiAdd_32sc_C3IRSfs (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.49 NppStatus nppiAdd_32sc_C3RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.50 NppStatus nppiAdd_8u_AC4IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.51 NppStatus nppiAdd_8u_AC4RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.52 NppStatus nppiAdd_8u_C1IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.53 NppStatus nppiAdd_8u_C1RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.54 NppStatus nppiAdd_8u_C3IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.55 NppStatus nppiAdd_8u_C3RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.56 NppStatus nppiAdd_8u_C4IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.13.2.57 NppStatus nppiAdd_8u_C4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image addition, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.14 AddSquare

Pixel by pixel addition of squared pixels from source image to floating point pixel values of destination image.

Functions

- NppStatus nppiAddSquare_8u32f_C1IMR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image squared then added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddSquare_8u32f_C1IR (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image squared then added to in place floating point destination image.

- NppStatus nppiAddSquare_16u32f_C1IMR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image squared then added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddSquare_16u32f_C1IR (const Npp16u ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image squared then added to in place floating point destination image.

- NppStatus nppiAddSquare_32f_C1IMR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image squared then added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddSquare_32f_C1IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image squared then added to in place floating point destination image.

7.14.1 Detailed Description

Pixel by pixel addition of squared pixels from source image to floating point pixel values of destination image.

7.14.2 Function Documentation

7.14.2.1 NppStatus nppiAddSquare_16u32f_C1IMR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image squared then added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.14.2.2 NppStatus nppiAddSquare_16u32f_C1IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image squared then added to in place floating point destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.14.2.3 NppStatus nppiAddSquare_32f_C1IMR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image squared then added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.14.2.4 NppStatus nppiAddSquare_32f_C1IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image squared then added to in place floating point destination image.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.14.2.5 NppStatus nppiAddSquare_8u32f_C1IMR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image squared then added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pMask Mask-Image Pointer.
nMaskStep Mask-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.14.2.6 NppStatus nppiAddSquare_8u32f_C1IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image squared then added to in place floating point destination image.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.15 AddProduct

Pixel by pixel addition of product of pixels from two source images to floating point pixel values of destination image.

Functions

- NppStatus nppiAddProduct_8u32f_C1IMR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image product added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddProduct_8u32f_C1IR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image product added to in place floating point destination image.

- NppStatus nppiAddProduct_16u32f_C1IMR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image product added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddProduct_16u32f_C1IR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image product added to in place floating point destination image.

- NppStatus nppiAddProduct_32f_C1IMR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image product added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddProduct_32f_C1IR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image product added to in place floating point destination image.

7.15.1 Detailed Description

Pixel by pixel addition of product of pixels from two source images to floating point pixel values of destination image.

7.15.2 Function Documentation

7.15.2.1 NppStatus nppiAddProduct_16u32f_C1IMR (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image product added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.15.2.2 NppStatus nppiAddProduct_16u32f_C1IR (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image product added to in place floating point destination image.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.15.2.3 NppStatus nppiAddProduct_32f_C1IMR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image product added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.15.2.4 NppStatus nppiAddProduct_32f_C1IR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image product added to in place floating point destination image.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.15.2.5 NppStatus nppiAddProduct_8u32f_C1IMR (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image product added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.15.2.6 NppStatus nppiAddProduct_8u32f_C1IR (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image product added to in place floating point destination image.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.16 AddWeighted

Pixel by pixel addition of alpha weighted pixel values from a source image to floating point pixel values of destination image.

Functions

- NppStatus nppiAddWeighted_8u32f_C1IMR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, Npp32f nAlpha)

  One 8-bit unsigned char channel alpha weighted image added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddWeighted_8u32f_C1IR (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, Npp32f nAlpha)

  One 8-bit unsigned char channel alpha weighted image added to in place floating point destination image.

- NppStatus nppiAddWeighted_16u32f_C1IMR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, Npp32f nAlpha)

  One 16-bit unsigned short channel alpha weighted image added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddWeighted_16u32f_C1IR (const Npp16u ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, Npp32f nAlpha)

  One 16-bit unsigned short channel alpha weighted image added to in place floating point destination image.

- NppStatus nppiAddWeighted_32f_C1IMR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, Npp32f nAlpha)

  One 32-bit floating point channel alpha weighted image added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

- NppStatus nppiAddWeighted_32f_C1IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, Npp32f nAlpha)

  One 32-bit floating point channel alpha weighted image added to in place floating point destination image.

7.16.1 Detailed Description

Pixel by pixel addition of alpha weighted pixel values from a source image to floating point pixel values of destination image.

7.16.2 Function Documentation

7.16.2.1 NppStatus nppiAddWeighted_16u32f_C1IMR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, Npp32f *nAlpha*)

One 16-bit unsigned short channel alpha weighted image added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAlpha Alpha weight to be applied to source image pixels (0.0F to 1.0F)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.16.2.2 NppStatus nppiAddWeighted_16u32f_C1IR (const Npp16u $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, Npp32f *nAlpha*)

One 16-bit unsigned short channel alpha weighted image added to in place floating point destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAlpha Alpha weight to be applied to source image pixels (0.0F to 1.0F)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.16.2.3 NppStatus nppiAddWeighted_32f_C1IMR (const Npp32f $*$ *pSrc*, int *nSrcStep*, const Npp8u $*$ *pMask*, int *nMaskStep*, Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, Npp32f *nAlpha*)

One 32-bit floating point channel alpha weighted image added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAlpha Alpha weight to be applied to source image pixels (0.0F to 1.0F)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.16.2.4 NppStatus nppiAddWeighted_32f_C1IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, Npp32f *nAlpha*)

One 32-bit floating point channel alpha weighted image added to in place floating point destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAlpha Alpha weight to be applied to source image pixels (0.0F to 1.0F)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.16.2.5 NppStatus nppiAddWeighted_8u32f_C1IMR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, Npp32f *nAlpha*)

One 8-bit unsigned char channel alpha weighted image added to in place floating point destination image using filter mask (updates destination when mask is non-zero).

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAlpha Alpha weight to be applied to source image pixels (0.0F to 1.0F)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.16.2.6 NppStatus nppiAddWeighted_8u32f_C1IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, Npp32f *nAlpha*)

One 8-bit unsigned char channel alpha weighted image added to in place floating point destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAlpha Alpha weight to be applied to source image pixels (0.0F to 1.0F)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17 Mul

Pixel by pixel multiply of two images.

Functions

- NppStatus nppiMul_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_8u_C1IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_8u_C3IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_8u_AC4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_8u_C4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16u_C1IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16u_C3IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16u_AC4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16u_C4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16s_C1IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16s_C3IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

One 16-bit signed short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16s_AC4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16s_C4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16sc_C1RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16sc_C1IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16sc_C3RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16sc_C3IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16sc_AC4RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_16sc_AC4IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32s_C1RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Note: This function is to be deprecated in future NPP releases, use the function above with a scale factor of 0 instead.

- NppStatus nppiMul_32s_C1IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32s_C3RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32s_C3IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32sc_C1RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32sc_C1IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32sc_C3RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32sc_C3IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32sc_AC4RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32sc_AC4IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiMul_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image multiplication.

- NppStatus nppiMul_32f_C1IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image multiplication.

- NppStatus nppiMul_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image multiplication.

- NppStatus nppiMul_32f_C3IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image multiplication.

- NppStatus nppiMul_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha image multiplication.

- NppStatus nppiMul_32f_AC4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha in place image multiplication.

- NppStatus nppiMul_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image multiplication.

- NppStatus nppiMul_32f_C4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image multiplication.

- NppStatus nppiMul_32fc_C1R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image multiplication.

- NppStatus nppiMul_32fc_C1IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image multiplication.

- NppStatus nppiMul_32fc_C3R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image multiplication.

- NppStatus nppiMul_32fc_C3IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image multiplication.

- NppStatus nppiMul_32fc_AC4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image multiplication.

- NppStatus nppiMul_32fc_AC4IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image multiplication.

- NppStatus nppiMul_32fc_C4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image multiplication.

- NppStatus nppiMul_32fc_C4IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image multiplication.

7.17.1 Detailed Description

Pixel by pixel multiply of two images.

7.17.2 Function Documentation

7.17.2.1 NppStatus nppiMul_16s_AC4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.2 NppStatus nppiMul_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.3 NppStatus nppiMul_16s_C1IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.4 NppStatus nppiMul_16s_C1RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.5 NppStatus nppiMul_16s_C3IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.6 NppStatus nppiMul_16s_C3RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.7 NppStatus nppiMul_16s_C4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.8 NppStatus nppiMul_16s_C4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.9 NppStatus nppiMul_16sc_AC4IRSfs (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.10 NppStatus nppiMul_16sc_AC4RSfs (const Npp16sc * *pSrc1*, int *nSrc1Step*, const Npp16sc * *pSrc2*, int *nSrc2Step*, Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.11 NppStatus nppiMul_16sc_C1IRSfs (const Npp16sc * *pSrc*, int *nSrcStep*, Npp16sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.12 NppStatus nppiMul_16sc_C1RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc ∗ *pSrc2*, int *nSrc2Step*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.13 NppStatus nppiMul_16sc_C3IRSfs (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.14 NppStatus nppiMul_16sc_C3RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc ∗ *pSrc2*, int *nSrc2Step*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.15 NppStatus nppiMul_16u_AC4IRSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.16 NppStatus nppiMul_16u_AC4RSfs (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.17 NppStatus nppiMul_16u_C1IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.18 NppStatus nppiMul_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.19 NppStatus nppiMul_16u_C3IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.20 NppStatus nppiMul_16u_C3RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.21 NppStatus nppiMul_16u_C4IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.22 NppStatus nppiMul_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.23 NppStatus nppiMul_32f_AC4IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha in place image multiplication.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.24 NppStatus nppiMul_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha image multiplication.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.25 NppStatus nppiMul_32f_C1IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image multiplication.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.26 NppStatus nppiMul_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image multiplication.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.27 NppStatus nppiMul_32f_C3IR (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image multiplication.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.28 NppStatus nppiMul_32f_C3R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image multiplication.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.29 NppStatus nppiMul_32f_C4IR (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image multiplication.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.30 NppStatus nppiMul_32f_C4R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image multiplication.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.31 NppStatus nppiMul_32fc_AC4IR (const Npp32fc * *pSrc*, int *nSrcStep*, Npp32fc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image multiplication.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.32 NppStatus nppiMul_32fc_AC4R (const Npp32fc * *pSrc1*, int *nSrc1Step*, const Npp32fc * *pSrc2*, int *nSrc2Step*, Npp32fc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image multiplication.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.33 NppStatus nppiMul_32fc_C1IR (const Npp32fc * *pSrc*, int *nSrcStep*, Npp32fc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image multiplication.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.34 NppStatus nppiMul_32fc_C1R (const Npp32fc * *pSrc1*, int *nSrc1Step*, const Npp32fc * *pSrc2*, int *nSrc2Step*, Npp32fc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image multiplication.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.35 NppStatus nppiMul_32fc_C3IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image multiplication.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.36 NppStatus nppiMul_32fc_C3R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image multiplication.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.37 NppStatus nppiMul_32fc_C4IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image multiplication.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.38 NppStatus nppiMul_32fc_C4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image multiplication.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.39 NppStatus nppiMul_32s_C1IRSfs (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.40 NppStatus nppiMul_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Note: This function is to be deprecated in future NPP releases, use the function above with a scale factor of 0 instead.

1 channel 32-bit image multiplication. Multiply corresponding pixels in ROI.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.41 NppStatus nppiMul_32s_C1RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.42 NppStatus nppiMul_32s_C3IRSfs (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.43 NppStatus nppiMul_32s_C3RSfs (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.44 NppStatus nppiMul_32sc_AC4IRSfs (const Npp32sc * *pSrc*, int *nSrcStep*, Npp32sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.45 NppStatus nppiMul_32sc_AC4RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.46 NppStatus nppiMul_32sc_C1IRSfs (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.47 NppStatus nppiMul_32sc_C1RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.48 NppStatus nppiMul_32sc_C3IRSfs (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.49 NppStatus nppiMul_32sc_C3RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.50 NppStatus nppiMul_8u_AC4IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.51 NppStatus nppiMul_8u_AC4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.52 NppStatus nppiMul_8u_C1IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.53 NppStatus nppiMul_8u_C1RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.54 NppStatus nppiMul_8u_C3IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.55 NppStatus nppiMul_8u_C3RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.56 NppStatus nppiMul_8u_C4IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.17.2.57 NppStatus nppiMul_8u_C4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image multiplication, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18 MulScale

Pixel by pixel multiplies each pixel of two images then scales the result by the maximum value for the data bit width.

Functions

- NppStatus nppiMulScale_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_8u_C1IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_8u_C3IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel with unmodified alpha image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_8u_AC4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel with unmodified alpha in place image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_8u_C4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_16u_C1IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

One 16-bit unsigned short channel in place image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_16u_C3IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel with unmodified alpha image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_16u_AC4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel with unmodified alpha in place image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image multiplication then scale by maximum value for pixel bit width.

- NppStatus nppiMulScale_16u_C4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image multiplication then scale by maximum value for pixel bit width.

7.18.1 Detailed Description

Pixel by pixel multiplies each pixel of two images then scales the result by the maximum value for the data bit width.

7.18.2 Function Documentation

7.18.2.1 NppStatus nppiMulScale_16u_AC4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel with unmodified alpha in place image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.2 NppStatus nppiMulScale_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel with unmodified alpha image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.3 NppStatus nppiMulScale_16u_C1IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.4 NppStatus nppiMulScale_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.5 NppStatus nppiMulScale_16u_C3IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.6 NppStatus nppiMulScale_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.7 NppStatus nppiMulScale_16u_C4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.8 NppStatus nppiMulScale_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.9 NppStatus nppiMulScale_8u_AC4IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel with unmodified alpha in place image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.10 NppStatus nppiMulScale_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel with unmodified alpha image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.11 NppStatus nppiMulScale_8u_C1IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.12 NppStatus nppiMulScale_8u_C1R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.13 NppStatus nppiMulScale_8u_C3IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.14 NppStatus nppiMulScale_8u_C3R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.15 NppStatus nppiMulScale_8u_C4IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.18.2.16 NppStatus nppiMulScale_8u_C4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image multiplication then scale by maximum value for pixel bit width.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19 Sub

Pixel by pixel subtraction of two images.

Functions

- NppStatus nppiSub_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_8u_C1IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_8u_C3IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_8u_AC4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_8u_C4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16u_C1IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16u_C3IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16u_AC4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16u_C4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16s_C1IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16s_C3IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

One 16-bit signed short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16s_AC4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16s_C4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16sc_C1RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16sc_C1IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16sc_C3RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16sc_C3IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16sc_AC4RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_16sc_AC4IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32s_C1RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Note: This function is to be deprecated in future NPP releases, use the function above with a scale factor of 0 instead.

- NppStatus nppiSub_32s_C1IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32s_C3RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32s_C3IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32s_C4RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32s_C4IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32sc_C1RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32sc_C1IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32sc_C3RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32sc_C3IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32sc_AC4RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32sc_AC4IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSub_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image subtraction.

- NppStatus nppiSub_32f_C1IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image subtraction.

- NppStatus nppiSub_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image subtraction.

- NppStatus nppiSub_32f_C3IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image subtraction.

- NppStatus nppiSub_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha image subtraction.

- NppStatus nppiSub_32f_AC4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha in place image subtraction.

- NppStatus nppiSub_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image subtraction.

- NppStatus nppiSub_32f_C4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image subtraction.

- NppStatus nppiSub_32fc_C1R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image subtraction.

- NppStatus nppiSub_32fc_C1IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image subtraction.

- NppStatus nppiSub_32fc_C3R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image subtraction.

- NppStatus nppiSub_32fc_C3IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image subtraction.

- NppStatus nppiSub_32fc_AC4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image subtraction.

- NppStatus nppiSub_32fc_AC4IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image subtraction.

- NppStatus nppiSub_32fc_C4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image subtraction.

- NppStatus nppiSub_32fc_C4IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image subtraction.

7.19.1 Detailed Description

Pixel by pixel subtraction of two images.

7.19.2 Function Documentation

7.19.2.1 NppStatus nppiSub_16s_AC4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.2 NppStatus nppiSub_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.3 NppStatus nppiSub_16s_C1IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.4 NppStatus nppiSub_16s_C1RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.5 NppStatus nppiSub_16s_C3IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.6 NppStatus nppiSub_16s_C3RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.7 NppStatus nppiSub_16s_C4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.8 NppStatus nppiSub_16s_C4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.9 NppStatus nppiSub_16sc_AC4IRSfs (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.10 NppStatus nppiSub_16sc_AC4RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc ∗ *pSrc2*, int *nSrc2Step*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.11 NppStatus nppiSub_16sc_C1IRSfs (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.12 NppStatus nppiSub_16sc_C1RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc ∗ *pSrc2*, int *nSrc2Step*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.13 NppStatus nppiSub_16sc_C3IRSfs (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.14 NppStatus nppiSub_16sc_C3RSfs (const Npp16sc ∗ *pSrc1*, int *nSrc1Step*, const Npp16sc ∗ *pSrc2*, int *nSrc2Step*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.15 NppStatus nppiSub_16u_AC4IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.16 NppStatus nppiSub_16u_AC4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.17 NppStatus nppiSub_16u_C1IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.18 NppStatus nppiSub_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.19 NppStatus nppiSub_16u_C3IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.20 NppStatus nppiSub_16u_C3RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.21 NppStatus nppiSub_16u_C4IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.22 NppStatus nppiSub_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.23 NppStatus nppiSub_32f_AC4IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha in place image subtraction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.24 NppStatus nppiSub_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha image subtraction.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.25 NppStatus nppiSub_32f_C1IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image subtraction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.26 NppStatus nppiSub_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image subtraction.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.27 NppStatus nppiSub_32f_C3IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image subtraction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.28 NppStatus nppiSub_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image subtraction.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.29 NppStatus nppiSub_32f_C4IR (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image subtraction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.30 NppStatus nppiSub_32f_C4R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image subtraction.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.31 NppStatus nppiSub_32fc_AC4IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image subtraction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.32 NppStatus nppiSub_32fc_AC4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image subtraction.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.33 NppStatus nppiSub_32fc_C1IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image subtraction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.34 NppStatus nppiSub_32fc_C1R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image subtraction.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.35 NppStatus nppiSub_32fc_C3IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image subtraction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.36 NppStatus nppiSub_32fc_C3R (const Npp32fc * *pSrc1*, int *nSrc1Step*, const Npp32fc * *pSrc2*, int *nSrc2Step*, Npp32fc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image subtraction.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.37 NppStatus nppiSub_32fc_C4IR (const Npp32fc * *pSrc*, int *nSrcStep*, Npp32fc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image subtraction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.38 NppStatus nppiSub_32fc_C4R (const Npp32fc * *pSrc1*, int *nSrc1Step*, const Npp32fc * *pSrc2*, int *nSrc2Step*, Npp32fc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image subtraction.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.39 NppStatus nppiSub_32s_C1IRSfs (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.40 NppStatus nppiSub_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Note: This function is to be deprecated in future NPP releases, use the function above with a scale factor of 0 instead.

32-bit image subtraction. Subtract pSrc1's pixels from corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.41 NppStatus nppiSub_32s_C1RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.42 NppStatus nppiSub_32s_C3IRSfs (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.43 NppStatus nppiSub_32s_C3RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.44 NppStatus nppiSub_32s_C4IRSfs (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.45 NppStatus nppiSub_32s_C4RSfs (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.46 NppStatus nppiSub_32sc_AC4IRSfs (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.47 NppStatus nppiSub_32sc_AC4RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.48 NppStatus nppiSub_32sc_C1IRSfs (const Npp32sc $*$ *pSrc*, int *nSrcStep*, Npp32sc $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.49 NppStatus nppiSub_32sc_C1RSfs (const Npp32sc $*$ *pSrc1*, int *nSrc1Step*, const Npp32sc $*$ *pSrc2*, int *nSrc2Step*, Npp32sc $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.50 NppStatus nppiSub_32sc_C3IRSfs (const Npp32sc $*$ *pSrc*, int *nSrcStep*, Npp32sc $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.51 NppStatus nppiSub_32sc_C3RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.52 NppStatus nppiSub_8u_AC4IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.53 NppStatus nppiSub_8u_AC4RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.54 NppStatus nppiSub_8u_C1IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.55 NppStatus nppiSub_8u_C1RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.56 NppStatus nppiSub_8u_C3IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.57 NppStatus nppiSub_8u_C3RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.58 NppStatus nppiSub_8u_C4IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.19.2.59 NppStatus nppiSub_8u_C4RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image subtraction, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20 Div

Pixel by pixel division of two images.

Functions

- NppStatus nppiDiv_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_8u_C1IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_8u_C3IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_8u_AC4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_8u_C4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16u_C1IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

One 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16u_C3IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16u_AC4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16u_C4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16s_C1IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16s_C3IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16s_AC4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16s_C4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16sc_C1RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16sc_C1IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16sc_C3RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16sc_C3IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16sc_AC4RSfs (const Npp16sc ∗pSrc1, int nSrc1Step, const Npp16sc ∗pSrc2, int nSrc2Step, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_16sc_AC4IRSfs (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32s_C1RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

One 32-bit signed integer channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Note: This function is to be deprecated in future NPP releases, use the function above with a scale factor of 0 instead.

- NppStatus nppiDiv_32s_C1IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32s_C3RSfs (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32s_C3IRSfs (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32sc_C1RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32sc_C1IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32sc_C3RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32sc_C3IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32sc_AC4RSfs (const Npp32sc ∗pSrc1, int nSrc1Step, const Npp32sc ∗pSrc2, int nSrc2Step, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32sc_AC4IRSfs (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image division.

- NppStatus nppiDiv_32f_C1IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image division.

- NppStatus nppiDiv_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image division.

- NppStatus nppiDiv_32f_C3IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image division.

- NppStatus nppiDiv_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha image division.

- NppStatus nppiDiv_32f_AC4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel with unmodified alpha in place image division.

- NppStatus nppiDiv_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image division.

- NppStatus nppiDiv_32f_C4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image division.

- NppStatus nppiDiv_32fc_C1R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image division.

- NppStatus nppiDiv_32fc_C1IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image division.

- NppStatus nppiDiv_32fc_C3R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image division.

- NppStatus nppiDiv_32fc_C3IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image division.

- NppStatus nppiDiv_32fc_AC4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image division.

- NppStatus nppiDiv_32fc_AC4IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image division.

- NppStatus nppiDiv_32fc_C4R (const Npp32fc ∗pSrc1, int nSrc1Step, const Npp32fc ∗pSrc2, int nSrc2Step, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image division.

- NppStatus nppiDiv_32fc_C4IR (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image division.

7.20.1 Detailed Description

Pixel by pixel division of two images.

7.20.2 Function Documentation

7.20.2.1 NppStatus nppiDiv_16s_AC4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.2 NppStatus nppiDiv_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.3 NppStatus nppiDiv_16s_C1IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.4 NppStatus nppiDiv_16s_C1RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.5 NppStatus nppiDiv_16s_C3IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.6 NppStatus nppiDiv_16s_C3RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.7 NppStatus nppiDiv_16s_C4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.8 NppStatus nppiDiv_16s_C4RSfs (const Npp16s * *pSrc1*, int *nSrc1Step*, const Npp16s * *pSrc2*, int *nSrc2Step*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.9 NppStatus nppiDiv_16sc_AC4IRSfs (const Npp16sc * *pSrc*, int *nSrcStep*, Npp16sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.10 NppStatus nppiDiv_16sc_AC4RSfs (const Npp16sc * *pSrc1*, int *nSrc1Step*, const Npp16sc * *pSrc2*, int *nSrc2Step*, Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.11 NppStatus nppiDiv_16sc_C1IRSfs (const Npp16sc * *pSrc*, int *nSrcStep*, Npp16sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.12 NppStatus nppiDiv_16sc_C1RSfs (const Npp16sc * *pSrc1*, int *nSrc1Step*, const Npp16sc * *pSrc2*, int *nSrc2Step*, Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.13 NppStatus nppiDiv_16sc_C3IRSfs (const Npp16sc * *pSrc*, int *nSrcStep*, Npp16sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.14 NppStatus nppiDiv_16sc_C3RSfs (const Npp16sc * *pSrc1*, int *nSrc1Step*, const Npp16sc * *pSrc2*, int *nSrc2Step*, Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short complex number (16-bit real, 16-bit imaginary) channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.15 NppStatus nppiDiv_16u_AC4IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.16 NppStatus nppiDiv_16u_AC4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.17 NppStatus nppiDiv_16u_C1IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.18 NppStatus nppiDiv_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.19 NppStatus nppiDiv_16u_C3IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.20 NppStatus nppiDiv_16u_C3RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.21 NppStatus nppiDiv_16u_C4IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.22 NppStatus nppiDiv_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.23 NppStatus nppiDiv_32f_AC4IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha in place image division.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.24 NppStatus nppiDiv_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel with unmodified alpha image division.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.25 NppStatus nppiDiv_32f_C1IR (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image division.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.26 NppStatus nppiDiv_32f_C1R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image division.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.27 NppStatus nppiDiv_32f_C3IR (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image division.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.28 NppStatus nppiDiv_32f_C3R (const Npp32f $*$ *pSrc1*, int *nSrc1Step*, const Npp32f $*$ *pSrc2*, int *nSrc2Step*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image division.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.29 NppStatus nppiDiv_32f_C4IR (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image division.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.30 NppStatus nppiDiv_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image division.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.31 NppStatus nppiDiv_32fc_AC4IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image division.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.32 NppStatus nppiDiv_32fc_AC4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image division.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.33 NppStatus nppiDiv_32fc_C1IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image division.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.34 NppStatus nppiDiv_32fc_C1R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image division.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.35 NppStatus nppiDiv_32fc_C3IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image division.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.36 NppStatus nppiDiv_32fc_C3R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image division.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.37 NppStatus nppiDiv_32fc_C4IR (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel in place image division.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.38 NppStatus nppiDiv_32fc_C4R (const Npp32fc ∗ *pSrc1*, int *nSrc1Step*, const Npp32fc ∗ *pSrc2*, int *nSrc2Step*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point complex number (32-bit real, 32-bit imaginary) channel image division.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.39 NppStatus nppiDiv_32s_C1IRSfs (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.40 NppStatus nppiDiv_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Note: This function is to be deprecated in future NPP releases, use the function above with a scale factor of 0 instead.

32-bit image division. Divide pixels in pSrc2 by pSrc1's pixels.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.41 NppStatus nppiDiv_32s_C1RSfs (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.42 NppStatus nppiDiv_32s_C3IRSfs (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.43 NppStatus nppiDiv_32s_C3RSfs (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.44 NppStatus nppiDiv_32sc_AC4IRSfs (const Npp32sc * *pSrc*, int *nSrcStep*, Npp32sc * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.45 NppStatus nppiDiv_32sc_AC4RSfs (const Npp32sc * *pSrc1*, int *nSrc1Step*, const Npp32sc * *pSrc2*, int *nSrc2Step*, Npp32sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.46 NppStatus nppiDiv_32sc_C1IRSfs (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.47 NppStatus nppiDiv_32sc_C1RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.48 NppStatus nppiDiv_32sc_C3IRSfs (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.49 NppStatus nppiDiv_32sc_C3RSfs (const Npp32sc ∗ *pSrc1*, int *nSrc1Step*, const Npp32sc ∗ *pSrc2*, int *nSrc2Step*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 32-bit signed integer complex number (32-bit real, 32-bit imaginary) channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.50 NppStatus nppiDiv_8u_AC4IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.51 NppStatus nppiDiv_8u_AC4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel with unmodified alpha image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.52 NppStatus nppiDiv_8u_C1IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.53 NppStatus nppiDiv_8u_C1RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.54 NppStatus nppiDiv_8u_C3IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.55 NppStatus nppiDiv_8u_C3RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.56 NppStatus nppiDiv_8u_C4IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.20.2.57 NppStatus nppiDiv_8u_C4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21 Div_Round

Pixel by pixel division of two images using result rounding modes.

Functions

- NppStatus nppiDiv_Round_8u_C1RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  One 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_8u_C1IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  One 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_8u_C3RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Three 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_8u_C3IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Three 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_8u_AC4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 8-bit unsigned char channel image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_8u_AC4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 8-bit unsigned char channel in place image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_8u_C4RSfs (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_8u_C4IRSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16u_C1RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

One 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16u_C1IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  One 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16u_C3RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Three 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16u_C3IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Three 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16u_AC4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 16-bit unsigned short channel image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16u_AC4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 16-bit unsigned short channel in place image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16u_C4RSfs (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16u_C4IRSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16s_C1RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  One 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16s_C1IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  One 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16s_C3RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Three 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16s_C3IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Three 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16s_AC4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 16-bit signed short channel image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16s_AC4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 16-bit signed short channel in place image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16s_C4RSfs (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiDiv_Round_16s_C4IRSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, NppRoundMode rndMode, int nScaleFactor)

  Four 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

7.21.1 Detailed Description

Pixel by pixel division of two images using result rounding modes.

7.21.2 Function Documentation

7.21.2.1 NppStatus nppiDiv_Round_16s_AC4IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 16-bit signed short channel in place image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.2 NppStatus nppiDiv_Round_16s_AC4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 16-bit signed short channel image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.3 NppStatus nppiDiv_Round_16s_C1IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

One 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.4 NppStatus nppiDiv_Round_16s_C1RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

One 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.5 NppStatus nppiDiv_Round_16s_C3IRSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Three 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.6 NppStatus nppiDiv_Round_16s_C3RSfs (const Npp16s * *pSrc1*, int *nSrc1Step*, const Npp16s * *pSrc2*, int *nSrc2Step*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Three 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.7 NppStatus nppiDiv_Round_16s_C4IRSfs (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 16-bit signed short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.8 NppStatus nppiDiv_Round_16s_C4RSfs (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 16-bit signed short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.9 NppStatus nppiDiv_Round_16u_AC4IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.10 NppStatus nppiDiv_Round_16u_AC4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 16-bit unsigned short channel image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.11 NppStatus nppiDiv_Round_16u_C1IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.12 NppStatus nppiDiv_Round_16u_C1RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

One 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.13 NppStatus nppiDiv_Round_16u_C3IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.14 NppStatus nppiDiv_Round_16u_C3RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Three 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.15 NppStatus nppiDiv_Round_16u_C4IRSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.16 NppStatus nppiDiv_Round_16u_C4RSfs (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 16-bit unsigned short channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.17 NppStatus nppiDiv_Round_8u_AC4IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.18 NppStatus nppiDiv_Round_8u_AC4RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 8-bit unsigned char channel image division with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.19 NppStatus nppiDiv_Round_8u_C1IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.20 NppStatus nppiDiv_Round_8u_C1RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

One 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.21 NppStatus nppiDiv_Round_8u_C3IRSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Three 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.22 NppStatus nppiDiv_Round_8u_C3RSfs (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Three 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.23 NppStatus nppiDiv_Round_8u_C4IRSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.21.2.24 NppStatus nppiDiv_Round_8u_C4RSfs (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *rndMode*, int *nScaleFactor*)

Four 8-bit unsigned char channel image division, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rndMode Result Rounding mode to be used (NPP_RND_ZERO, NPP_RND_NEAR, or NP_RND_-FINANCIAL)

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22 Abs

Absolute value of each pixel value in an image.

Functions

- NppStatus nppiAbs_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit signed short channel image absolute value.

- NppStatus nppiAbs_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit signed short channel in place image absolute value.

- NppStatus nppiAbs_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit signed short channel image absolute value.

- NppStatus nppiAbs_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit signed short channel in place image absolute value.

- NppStatus nppiAbs_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit signed short channel image absolute value with unmodified alpha.

- NppStatus nppiAbs_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit signed short channel in place image absolute value with unmodified alpha.

- NppStatus nppiAbs_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit signed short channel image absolute value.

- NppStatus nppiAbs_16s_C4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit signed short channel in place image absolute value.

- NppStatus nppiAbs_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image absolute value.

- NppStatus nppiAbs_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image absolute value.

- NppStatus nppiAbs_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image absolute value.

- NppStatus nppiAbs_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image absolute value.

- NppStatus nppiAbs_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

Four 32-bit floating point channel image absolute value with unmodified alpha.

- NppStatus nppiAbs_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image absolute value with unmodified alpha.

- NppStatus nppiAbs_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image absolute value.

- NppStatus nppiAbs_32f_C4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image absolute value.

7.22.1 Detailed Description

Absolute value of each pixel value in an image.

7.22.2 Function Documentation

7.22.2.1 NppStatus nppiAbs_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit signed short channel in place image absolute value with unmodified alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.2 NppStatus nppiAbs_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit signed short channel image absolute value with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.3 NppStatus nppiAbs_16s_C1IR (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit signed short channel in place image absolute value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.4 NppStatus nppiAbs_16s_C1R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit signed short channel image absolute value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.5 NppStatus nppiAbs_16s_C3IR (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit signed short channel in place image absolute value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.6 NppStatus nppiAbs_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit signed short channel image absolute value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.7 NppStatus nppiAbs_16s_C4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit signed short channel in place image absolute value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.8 NppStatus nppiAbs_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit signed short channel image absolute value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.9 NppStatus nppiAbs_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image absolute value with unmodified alpha.

Parameters:

- ***pSrcDst*** In-Place Image Pointer.
- ***nSrcDstStep*** In-Place-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.10 NppStatus nppiAbs_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image absolute value with unmodified alpha.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.11 NppStatus nppiAbs_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image absolute value.

Parameters:

- ***pSrcDst*** In-Place Image Pointer.
- ***nSrcDstStep*** In-Place-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.12 NppStatus nppiAbs_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image absolute value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.13 NppStatus nppiAbs_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image absolute value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.14 NppStatus nppiAbs_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image absolute value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.15 NppStatus nppiAbs_32f_C4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image absolute value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.22.2.16 NppStatus nppiAbs_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image absolute value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.23 AbsDiff

Pixel by pixel absolute difference between two images.

Functions

- NppStatus nppiAbsDiff_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel absolute difference of image1 minus image2.

- NppStatus nppiAbsDiff_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channels absolute difference of image1 minus image2.

- NppStatus nppiAbsDiff_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channels absolute difference of image1 minus image2.

- NppStatus nppiAbsDiff_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel absolute difference of image1 minus image2.

- NppStatus nppiAbsDiff_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel absolute difference of image1 minus image2.

7.23.1 Detailed Description

Pixel by pixel absolute difference between two images.

7.23.2 Function Documentation

7.23.2.1 NppStatus nppiAbsDiff_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel absolute difference of image1 minus image2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.23.2.2 NppStatus nppiAbsDiff_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel absolute difference of image1 minus image2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.23.2.3 NppStatus nppiAbsDiff_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel absolute difference of image1 minus image2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.23.2.4 NppStatus nppiAbsDiff_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channels absolute difference of image1 minus image2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.23.2.5 NppStatus nppiAbsDiff_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channels absolute difference of image1 minus image2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24 Sqr

Square each pixel in an image.

Functions

- NppStatus nppiSqr_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_8u_C1IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_8u_C3IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_8u_AC4IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_8u_C4IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16u_C1RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16u_C1IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

One 16-bit unsigned short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16u_C3RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16u_C3IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16u_AC4RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16u_AC4IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16u_C4RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16u_C4IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16s_C1RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16s_C1IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16s_C3RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16s_C3IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16s_AC4RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16s_AC4IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16s_C4RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_16s_C4IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqr_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image squared.

- NppStatus nppiSqr_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image squared.

- NppStatus nppiSqr_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image squared.

- NppStatus nppiSqr_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image squared.

- NppStatus nppiSqr_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image squared with unmodified alpha.

- NppStatus nppiSqr_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image squared with unmodified alpha.

- NppStatus nppiSqr_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image squared.

- NppStatus nppiSqr_32f_C4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image squared.

7.24.1 Detailed Description

Square each pixel in an image.

7.24.2 Function Documentation

7.24.2.1 NppStatus nppiSqr_16s_AC4IRSfs (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.2 NppStatus nppiSqr_16s_AC4RSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.3 NppStatus nppiSqr_16s_C1IRSfs (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.4 NppStatus nppiSqr_16s_C1RSfs (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.5 NppStatus nppiSqr_16s_C3IRSfs (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.6 NppStatus nppiSqr_16s_C3RSfs (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.7 NppStatus nppiSqr_16s_C4IRSfs (Npp16s $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.8 NppStatus nppiSqr_16s_C4RSfs (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp16s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.9 NppStatus nppiSqr_16u_AC4IRSfs (Npp16u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.10 NppStatus nppiSqr_16u_AC4RSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.11 NppStatus nppiSqr_16u_C1IRSfs (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.12 NppStatus nppiSqr_16u_C1RSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.13 NppStatus nppiSqr_16u_C3IRSfs (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.14 NppStatus nppiSqr_16u_C3RSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.15 NppStatus nppiSqr_16u_C4IRSfs (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.16 NppStatus nppiSqr_16u_C4RSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.17 NppStatus nppiSqr_32f_AC4IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image squared with unmodified alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.18 NppStatus nppiSqr_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image squared with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.19 NppStatus nppiSqr_32f_C1IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image squared.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.20 NppStatus nppiSqr_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image squared.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.21 NppStatus nppiSqr_32f_C3IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image squared.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.22 NppStatus nppiSqr_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image squared.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.23 NppStatus nppiSqr_32f_C4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image squared.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.24 NppStatus nppiSqr_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image squared.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.25 NppStatus nppiSqr_8u_AC4IRSfs (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.26 NppStatus nppiSqr_8u_AC4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image squared with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.27 NppStatus nppiSqr_8u_C1IRSfs (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.28 NppStatus nppiSqr_8u_C1RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.29 NppStatus nppiSqr_8u_C3IRSfs (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.30 NppStatus nppiSqr_8u_C3RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.31 NppStatus nppiSqr_8u_C4IRSfs (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.24.2.32 NppStatus nppiSqr_8u_C4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image squared, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25 Sqrt

Pixel by pixel square root of each pixel in an image.

Functions

- NppStatus nppiSqrt_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_8u_C1IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_8u_C3IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_8u_AC4IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 8-bit unsigned char channel in place image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16u_C1RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16u_C1IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16u_C3RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16u_C3IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16u_AC4RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16u_AC4IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit unsigned short channel in place image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16s_C1RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16s_C1IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16s_C3RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16s_C3IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16s_AC4RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_16s_AC4IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Four 16-bit signed short channel in place image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiSqrt_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image square root.

- NppStatus nppiSqrt_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image square root.

- NppStatus nppiSqrt_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image square root.

- NppStatus nppiSqrt_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image square root.

- NppStatus nppiSqrt_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image square root with unmodified alpha.

- NppStatus nppiSqrt_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image square root with unmodified alpha.

- NppStatus nppiSqrt_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel image square root.

- NppStatus nppiSqrt_32f_C4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit floating point channel in place image square root.

7.25.1 Detailed Description

Pixel by pixel square root of each pixel in an image.

7.25.2 Function Documentation

7.25.2.1 NppStatus nppiSqrt_16s_AC4IRSfs (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel in place image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.2 NppStatus nppiSqrt_16s_AC4RSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit signed short channel image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.3 NppStatus nppiSqrt_16s_C1IRSfs (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.4 NppStatus nppiSqrt_16s_C1RSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.5 NppStatus nppiSqrt_16s_C3IRSfs (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.6 NppStatus nppiSqrt_16s_C3RSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.7 NppStatus nppiSqrt_16u_AC4IRSfs (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel in place image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.8 NppStatus nppiSqrt_16u_AC4RSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 16-bit unsigned short channel image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.9 NppStatus nppiSqrt_16u_C1IRSfs (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.10 NppStatus nppiSqrt_16u_C1RSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.11 NppStatus nppiSqrt_16u_C3IRSfs (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.12 NppStatus nppiSqrt_16u_C3RSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.13 NppStatus nppiSqrt_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image square root with unmodified alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.14 NppStatus nppiSqrt_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image square root with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.15 NppStatus nppiSqrt_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image square root.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.16 NppStatus nppiSqrt_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image square root.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.17 NppStatus nppiSqrt_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image square root.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.18 NppStatus nppiSqrt_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image square root.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.19 NppStatus nppiSqrt_32f_C4IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel in place image square root.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.20 NppStatus nppiSqrt_32f_C4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit floating point channel image square root.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.21 NppStatus nppiSqrt_8u_AC4IRSfs (Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel in place image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.22 NppStatus nppiSqrt_8u_AC4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Four 8-bit unsigned char channel image square root with unmodified alpha, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.23 NppStatus nppiSqrt_8u_C1IRSfs (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.24 NppStatus nppiSqrt_8u_C1RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.25 NppStatus nppiSqrt_8u_C3IRSfs (Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel in place image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.25.2.26 NppStatus nppiSqrt_8u_C3RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image square root, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26 Ln

Pixel by pixel natural logarithm of each pixel in an image.

Functions

- NppStatus nppiLn_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_8u_C1IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_8u_C3IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_16u_C1RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_16u_C1IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_16u_C3RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_16u_C3IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_16s_C1RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_16s_C1IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_16s_C3RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_16s_C3IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiLn_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image natural logarithm.

- NppStatus nppiLn_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image natural logarithm.

- NppStatus nppiLn_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image natural logarithm.

- NppStatus nppiLn_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image natural logarithm.

7.26.1 Detailed Description

Pixel by pixel natural logarithm of each pixel in an image.

7.26.2 Function Documentation

7.26.2.1 NppStatus nppiLn_16s_C1IRSfs (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.2 NppStatus nppiLn_16s_C1RSfs (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp16s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.3 NppStatus nppiLn_16s_C3IRSfs (Npp16s $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.4 NppStatus nppiLn_16s_C3RSfs (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp16s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.5 NppStatus nppiLn_16u_C1IRSfs (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.6 NppStatus nppiLn_16u_C1RSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.7 NppStatus nppiLn_16u_C3IRSfs (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.8 NppStatus nppiLn_16u_C3RSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.9 NppStatus nppiLn_32f_C1IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image natural logarithm.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.10 NppStatus nppiLn_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image natural logarithm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.11 NppStatus nppiLn_32f_C3IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image natural logarithm.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.12 NppStatus nppiLn_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image natural logarithm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.13 NppStatus nppiLn_8u_C1IRSfs (Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.14 NppStatus nppiLn_8u_C1RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.15 NppStatus nppiLn_8u_C3IRSfs (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel in place image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.26.2.16 NppStatus nppiLn_8u_C3RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image natural logarithm, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27 Exp

Exponential value of each pixel in an image.

Functions

- NppStatus nppiExp_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_8u_C1IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 8-bit unsigned char channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_8u_C3IRSfs (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 8-bit unsigned char channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_16u_C1RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_16u_C1IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit unsigned short channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_16u_C3RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_16u_C3IRSfs (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit unsigned short channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_16s_C1RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_16s_C1IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  One 16-bit signed short channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_16s_C3RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_16s_C3IRSfs (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, int nScaleFactor)

  Three 16-bit signed short channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

- NppStatus nppiExp_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel image exponential.

- NppStatus nppiExp_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit floating point channel in place image exponential.

- NppStatus nppiExp_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel image exponential.

- NppStatus nppiExp_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit floating point channel in place image exponential.

7.27.1 Detailed Description

Exponential value of each pixel in an image.

7.27.2 Function Documentation

7.27.2.1 NppStatus nppiExp_16s_C1IRSfs (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.2 NppStatus nppiExp_16s_C1RSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit signed short channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.3 NppStatus nppiExp_16s_C3IRSfs (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.4 NppStatus nppiExp_16s_C3RSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit signed short channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.5 NppStatus nppiExp_16u_C1IRSfs (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.6 NppStatus nppiExp_16u_C1RSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 16-bit unsigned short channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.7 NppStatus nppiExp_16u_C3IRSfs (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.8 NppStatus nppiExp_16u_C3RSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 16-bit unsigned short channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.9 NppStatus nppiExp_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel in place image exponential.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.10 NppStatus nppiExp_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit floating point channel image exponential.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.11 NppStatus nppiExp_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel in place image exponential.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.12 NppStatus nppiExp_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit floating point channel image exponential.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.13 NppStatus nppiExp_8u_C1IRSfs (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.14 NppStatus nppiExp_8u_C1RSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

One 8-bit unsigned char channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.15 NppStatus nppiExp_8u_C3IRSfs (Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel in place image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.27.2.16 NppStatus nppiExp_8u_C3RSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, int *nScaleFactor*)

Three 8-bit unsigned char channel image exponential, scale by 2^(-nScaleFactor), then clamp to saturated value.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.28 Logical Operations

Modules

- AndC

  Pixel by pixel logical and of an image with a constant.

- OrC

  Pixel by pixel logical or of an image with a constant.

- XorC

  Pixel by pixel logical exclusive or of an image with a constant.

- RShiftC

  Pixel by pixel right shift of an image by a constant value.

- LShiftC

  Pixel by pixel left shift of an image by a constant value.

- And

  Pixel by pixel logical and of images.

- Or

  Pixel by pixel logical or of images.

- Xor

  Pixel by pixel logical exclusive or of images.

- Not

  Pixel by pixel logical not of image.

7.29 AndC

Pixel by pixel logical and of an image with a constant.

Functions

- NppStatus nppiAndC_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image logical and with constant.

- NppStatus nppiAndC_8u_C1IR (const Npp8u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image logical and with constant.

- NppStatus nppiAndC_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image logical and with constant.

- NppStatus nppiAndC_8u_C3IR (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image logical and with constant.

- NppStatus nppiAndC_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical and with constant with unmodified alpha.

- NppStatus nppiAndC_8u_AC4IR (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical and with constant with unmodified alpha.

- NppStatus nppiAndC_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical and with constant.

- NppStatus nppiAndC_8u_C4IR (const Npp8u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical and with constant.

- NppStatus nppiAndC_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image logical and with constant.

- NppStatus nppiAndC_16u_C1IR (const Npp16u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image logical and with constant.

- NppStatus nppiAndC_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image logical and with constant.

- NppStatus nppiAndC_16u_C3IR (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image logical and with constant.

- NppStatus nppiAndC_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical and with constant with unmodified alpha.

- NppStatus nppiAndC_16u_AC4IR (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical and with constant with unmodified alpha.

- NppStatus nppiAndC_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical and with constant.

- NppStatus nppiAndC_16u_C4IR (const Npp16u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical and with constant.

- NppStatus nppiAndC_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel image logical and with constant.

- NppStatus nppiAndC_32s_C1IR (const Npp32s nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel in place image logical and with constant.

- NppStatus nppiAndC_32s_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel image logical and with constant.

- NppStatus nppiAndC_32s_C3IR (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel in place image logical and with constant.

- NppStatus nppiAndC_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical and with constant with unmodified alpha.

- NppStatus nppiAndC_32s_AC4IR (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical and with constant with unmodified alpha.

- NppStatus nppiAndC_32s_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[4], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical and with constant.

- NppStatus nppiAndC_32s_C4IR (const Npp32s aConstants[4], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical and with constant.

7.29.1 Detailed Description

Pixel by pixel logical and of an image with a constant.

7.29.2 Function Documentation

7.29.2.1 NppStatus nppiAndC_16u_AC4IR (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical and with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.2 NppStatus nppiAndC_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical and with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.3 NppStatus nppiAndC_16u_C1IR (const Npp16u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image logical and with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.4 NppStatus nppiAndC_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.5 NppStatus nppiAndC_16u_C3IR (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image logical and with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.6 NppStatus nppiAndC_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.7 NppStatus nppiAndC_16u_C4IR (const Npp16u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical and with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.8 NppStatus nppiAndC_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.9 NppStatus nppiAndC_32s_AC4IR (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical and with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.10 NppStatus nppiAndC_32s_AC4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical and with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.11 NppStatus nppiAndC_32s_C1IR (const Npp32s *nConstant*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel in place image logical and with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.12 NppStatus nppiAndC_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *nConstant*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.13 NppStatus nppiAndC_32s_C3IR (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel in place image logical and with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.14 NppStatus nppiAndC_32s_C3R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.15 NppStatus nppiAndC_32s_C4IR (const Npp32s *aConstants*[4], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical and with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.16 NppStatus nppiAndC_32s_C4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[4], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.17 NppStatus nppiAndC_8u_AC4IR (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical and with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.18 NppStatus nppiAndC_8u_AC4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical and with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.19 NppStatus nppiAndC_8u_C1IR (const Npp8u *nConstant*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image logical and with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.20 NppStatus nppiAndC_8u_C1R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u *nConstant*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.21 NppStatus nppiAndC_8u_C3IR (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image logical and with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.22 NppStatus nppiAndC_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.23 NppStatus nppiAndC_8u_C4IR (const Npp8u *aConstants*[4], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical and with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.29.2.24 NppStatus nppiAndC_8u_C4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[4], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical and with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30 OrC

Pixel by pixel logical or of an image with a constant.

Functions

- NppStatus nppiOrC_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image logical or with constant.

- NppStatus nppiOrC_8u_C1IR (const Npp8u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image logical or with constant.

- NppStatus nppiOrC_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image logical or with constant.

- NppStatus nppiOrC_8u_C3IR (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image logical or with constant.

- NppStatus nppiOrC_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical or with constant with unmodified alpha.

- NppStatus nppiOrC_8u_AC4IR (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical or with constant with unmodified alpha.

- NppStatus nppiOrC_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical or with constant.

- NppStatus nppiOrC_8u_C4IR (const Npp8u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical or with constant.

- NppStatus nppiOrC_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image logical or with constant.

- NppStatus nppiOrC_16u_C1IR (const Npp16u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image logical or with constant.

- NppStatus nppiOrC_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image logical or with constant.

- NppStatus nppiOrC_16u_C3IR (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image logical or with constant.

- NppStatus nppiOrC_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical or with constant with unmodified alpha.

- NppStatus nppiOrC_16u_AC4IR (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical or with constant with unmodified alpha.

- NppStatus nppiOrC_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical or with constant.

- NppStatus nppiOrC_16u_C4IR (const Npp16u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical or with constant.

- NppStatus nppiOrC_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel image logical or with constant.

- NppStatus nppiOrC_32s_C1IR (const Npp32s nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel in place image logical or with constant.

- NppStatus nppiOrC_32s_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel image logical or with constant.

- NppStatus nppiOrC_32s_C3IR (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel in place image logical or with constant.

- NppStatus nppiOrC_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical or with constant with unmodified alpha.

- NppStatus nppiOrC_32s_AC4IR (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical or with constant with unmodified alpha.

- NppStatus nppiOrC_32s_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[4], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical or with constant.

- NppStatus nppiOrC_32s_C4IR (const Npp32s aConstants[4], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical or with constant.

7.30.1 Detailed Description

Pixel by pixel logical or of an image with a constant.

7.30.2 Function Documentation

7.30.2.1 NppStatus nppiOrC_16u_AC4IR (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical or with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.2 NppStatus nppiOrC_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical or with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.3 NppStatus nppiOrC_16u_C1IR (const Npp16u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image logical or with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.4 NppStatus nppiOrC_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.5 NppStatus nppiOrC_16u_C3IR (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image logical or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.6 NppStatus nppiOrC_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.7 NppStatus nppiOrC_16u_C4IR (const Npp16u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.8 NppStatus nppiOrC_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.9 NppStatus nppiOrC_32s_AC4IR (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical or with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.10 NppStatus nppiOrC_32s_AC4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical or with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.11 NppStatus nppiOrC_32s_C1IR (const Npp32s *nConstant*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel in place image logical or with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.12 NppStatus nppiOrC_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *nConstant*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.13 NppStatus nppiOrC_32s_C3IR (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel in place image logical or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.14 NppStatus nppiOrC_32s_C3R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.15 NppStatus nppiOrC_32s_C4IR (const Npp32s *aConstants*[4], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.16 NppStatus nppiOrC_32s_C4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[4], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.17 NppStatus nppiOrC_8u_AC4IR (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical or with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.18 NppStatus nppiOrC_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical or with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.19 NppStatus nppiOrC_8u_C1IR (const Npp8u *nConstant*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image logical or with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.20 NppStatus nppiOrC_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.21 NppStatus nppiOrC_8u_C3IR (const Npp8u *aConstants*[3], Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image logical or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.22 NppStatus nppiOrC_8u_C3R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.23 NppStatus nppiOrC_8u_C4IR (const Npp8u *aConstants*[4], Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.30.2.24 NppStatus nppiOrC_8u_C4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[4], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31 XorC

Pixel by pixel logical exclusive or of an image with a constant.

Functions

- NppStatus nppiXorC_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image logical exclusive or with constant.

- NppStatus nppiXorC_8u_C1IR (const Npp8u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image logical exclusive or with constant.

- NppStatus nppiXorC_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image logical exclusive or with constant.

- NppStatus nppiXorC_8u_C3IR (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image logical exclusive or with constant.

- NppStatus nppiXorC_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical exclusive or with constant with unmodified alpha.

- NppStatus nppiXorC_8u_AC4IR (const Npp8u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical exclusive or with constant with unmodified alpha.

- NppStatus nppiXorC_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical exclusive or with constant.

- NppStatus nppiXorC_8u_C4IR (const Npp8u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical exclusive or with constant.

- NppStatus nppiXorC_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image logical exclusive or with constant.

- NppStatus nppiXorC_16u_C1IR (const Npp16u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image logical exclusive or with constant.

- NppStatus nppiXorC_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image logical exclusive or with constant.

- NppStatus nppiXorC_16u_C3IR (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image logical exclusive or with constant.

- NppStatus nppiXorC_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical exclusive or with constant with unmodified alpha.

- NppStatus nppiXorC_16u_AC4IR (const Npp16u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical exclusive or with constant with unmodified alpha.

- NppStatus nppiXorC_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical exclusive or with constant.

- NppStatus nppiXorC_16u_C4IR (const Npp16u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical exclusive or with constant.

- NppStatus nppiXorC_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel image logical exclusive or with constant.

- NppStatus nppiXorC_32s_C1IR (const Npp32s nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel in place image logical exclusive or with constant.

- NppStatus nppiXorC_32s_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel image logical exclusive or with constant.

- NppStatus nppiXorC_32s_C3IR (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel in place image logical exclusive or with constant.

- NppStatus nppiXorC_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical exclusive or with constant with unmodified alpha.

- NppStatus nppiXorC_32s_AC4IR (const Npp32s aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical exclusive or with constant with unmodified alpha.

- NppStatus nppiXorC_32s_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s aConstants[4], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical exclusive or with constant.

- NppStatus nppiXorC_32s_C4IR (const Npp32s aConstants[4], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical exclusive or with constant.

7.31.1 Detailed Description

Pixel by pixel logical exclusive or of an image with a constant.

7.31.2 Function Documentation

7.31.2.1 NppStatus nppiXorC_16u_AC4IR (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical exclusive or with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.2 NppStatus nppiXorC_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical exclusive or with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.3 NppStatus nppiXorC_16u_C1IR (const Npp16u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image logical exclusive or with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.4 NppStatus nppiXorC_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.5 NppStatus nppiXorC_16u_C3IR (const Npp16u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image logical exclusive or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.6 NppStatus nppiXorC_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.7 NppStatus nppiXorC_16u_C4IR (const Npp16u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical exclusive or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.8 NppStatus nppiXorC_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.9 NppStatus nppiXorC_32s_AC4IR (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical exclusive or with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.10 NppStatus nppiXorC_32s_AC4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical exclusive or with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.11 NppStatus nppiXorC_32s_C1IR (const Npp32s *nConstant*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel in place image logical exclusive or with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.12 NppStatus nppiXorC_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *nConstant*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.13 NppStatus nppiXorC_32s_C3IR (const Npp32s *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel in place image logical exclusive or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.14 NppStatus nppiXorC_32s_C3R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.15 NppStatus nppiXorC_32s_C4IR (const Npp32s *aConstants*[4], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical exclusive or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.16 NppStatus nppiXorC_32s_C4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s *aConstants*[4], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.17 NppStatus nppiXorC_8u_AC4IR (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical exclusive or with constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.18 NppStatus nppiXorC_8u_AC4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical exclusive or with constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.19 NppStatus nppiXorC_8u_C1IR (const Npp8u *nConstant*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image logical exclusive or with constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.20 NppStatus nppiXorC_8u_C1R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u *nConstant*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.21 NppStatus nppiXorC_8u_C3IR (const Npp8u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image logical exclusive or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.22 NppStatus nppiXorC_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.23 NppStatus nppiXorC_8u_C4IR (const Npp8u *aConstants*[4], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical exclusive or with constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.31.2.24 NppStatus nppiXorC_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u *aConstants*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical exclusive or with constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32 RShiftC

Pixel by pixel right shift of an image by a constant value.

Functions

- NppStatus nppiRShiftC_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp32u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image right shift by constant.

- NppStatus nppiRShiftC_8u_C1IR (const Npp32u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image right shift by constant.

- NppStatus nppiRShiftC_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image right shift by constant.

- NppStatus nppiRShiftC_8u_C3IR (const Npp32u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image right shift by constant.

- NppStatus nppiRShiftC_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_8u_AC4IR (const Npp32u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image right shift by constant.

- NppStatus nppiRShiftC_8u_C4IR (const Npp32u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image right shift by constant.

- NppStatus nppiRShiftC_8s_C1R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp32u nConstant, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit signed char channel image right shift by constant.

- NppStatus nppiRShiftC_8s_C1IR (const Npp32u nConstant, Npp8s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit signed char channel in place image right shift by constant.

- NppStatus nppiRShiftC_8s_C3R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit signed char channel image right shift by constant.

- NppStatus nppiRShiftC_8s_C3IR (const Npp32u aConstants[3], Npp8s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit signed char channel in place image right shift by constant.

- NppStatus nppiRShiftC_8s_AC4R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit signed char channel image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_8s_AC4IR (const Npp32u aConstants[3], Npp8s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit signed char channel in place image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_8s_C4R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[4], Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit signed char channel image right shift by constant.

- NppStatus nppiRShiftC_8s_C4IR (const Npp32u aConstants[4], Npp8s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit signed char channel in place image right shift by constant.

- NppStatus nppiRShiftC_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp32u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image right shift by constant.

- NppStatus nppiRShiftC_16u_C1IR (const Npp32u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image right shift by constant.

- NppStatus nppiRShiftC_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image right shift by constant.

- NppStatus nppiRShiftC_16u_C3IR (const Npp32u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image right shift by constant.

- NppStatus nppiRShiftC_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_16u_AC4IR (const Npp32u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image right shift by constant.

- NppStatus nppiRShiftC_16u_C4IR (const Npp32u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image right shift by constant.

- NppStatus nppiRShiftC_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp32u nConstant, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit signed short channel image right shift by constant.

- NppStatus nppiRShiftC_16s_C1IR (const Npp32u nConstant, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit signed short channel in place image right shift by constant.

- NppStatus nppiRShiftC_16s_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit signed short channel image right shift by constant.

- NppStatus nppiRShiftC_16s_C3IR (const Npp32u aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit signed short channel in place image right shift by constant.

- NppStatus nppiRShiftC_16s_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit signed short channel image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_16s_AC4IR (const Npp32u aConstants[3], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit signed short channel in place image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_16s_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[4], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit signed short channel image right shift by constant.

- NppStatus nppiRShiftC_16s_C4IR (const Npp32u aConstants[4], Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit signed short channel in place image right shift by constant.

- NppStatus nppiRShiftC_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32u nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel image right shift by constant.

- NppStatus nppiRShiftC_32s_C1IR (const Npp32u nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel in place image right shift by constant.

- NppStatus nppiRShiftC_32s_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel image right shift by constant.

- NppStatus nppiRShiftC_32s_C3IR (const Npp32u aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel in place image right shift by constant.

- NppStatus nppiRShiftC_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

Four 32-bit signed integer channel image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_32s_AC4IR (const Npp32u aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image right shift by constant with unmodified alpha.

- NppStatus nppiRShiftC_32s_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[4], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image right shift by constant.

- NppStatus nppiRShiftC_32s_C4IR (const Npp32u aConstants[4], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image right shift by constant.

7.32.1 Detailed Description

Pixel by pixel right shift of an image by a constant value.

7.32.2 Function Documentation

7.32.2.1 NppStatus nppiRShiftC_16s_AC4IR (const Npp32u *aConstants*[3], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit signed short channel in place image right shift by constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.2 NppStatus nppiRShiftC_16s_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit signed short channel image right shift by constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.3 NppStatus nppiRShiftC_16s_C1IR (const Npp32u *nConstant*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit signed short channel in place image right shift by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.4 NppStatus nppiRShiftC_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *nConstant*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit signed short channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.5 NppStatus nppiRShiftC_16s_C3IR (const Npp32u *aConstants*[3], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit signed short channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.6 NppStatus nppiRShiftC_16s_C3R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit signed short channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.7 NppStatus nppiRShiftC_16s_C4IR (const Npp32u *aConstants*[4], Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit signed short channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.8 NppStatus nppiRShiftC_16s_C4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[4], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit signed short channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.9 NppStatus nppiRShiftC_16u_AC4IR (const Npp32u *aConstants*[3], Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image right shift by constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.10 NppStatus nppiRShiftC_16u_AC4R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image right shift by constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.11 NppStatus nppiRShiftC_16u_C1IR (const Npp32u *nConstant*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image right shift by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.12 NppStatus nppiRShiftC_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.13 NppStatus nppiRShiftC_16u_C3IR (const Npp32u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.14 NppStatus nppiRShiftC_16u_C3R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.15 NppStatus nppiRShiftC_16u_C4IR (const Npp32u *aConstants*[4], Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.16 NppStatus nppiRShiftC_16u_C4R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[4], Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.17 NppStatus nppiRShiftC_32s_AC4IR (const Npp32u *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image right shift by constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.18 NppStatus nppiRShiftC_32s_AC4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image right shift by constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.19 NppStatus nppiRShiftC_32s_C1IR (const Npp32u *nConstant*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel in place image right shift by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.20 NppStatus nppiRShiftC_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *nConstant*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.21 NppStatus nppiRShiftC_32s_C3IR (const Npp32u *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.22 NppStatus nppiRShiftC_32s_C3R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.23 NppStatus nppiRShiftC_32s_C4IR (const Npp32u *aConstants*[4], Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.24 NppStatus nppiRShiftC_32s_C4R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[4], Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.25 NppStatus nppiRShiftC_8s_AC4IR (const Npp32u *aConstants*[3], Npp8s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit signed char channel in place image right shift by constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.26 NppStatus nppiRShiftC_8s_AC4R (const Npp8s * *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit signed char channel image right shift by constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.27 NppStatus nppiRShiftC_8s_C1IR (const Npp32u *nConstant*, Npp8s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit signed char channel in place image right shift by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.28 NppStatus nppiRShiftC_8s_C1R (const Npp8s * *pSrc1*, int *nSrc1Step*, const Npp32u *nConstant*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit signed char channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.29 NppStatus nppiRShiftC_8s_C3IR (const Npp32u *aConstants*[3], Npp8s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit signed char channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.30 NppStatus nppiRShiftC_8s_C3R (const Npp8s * *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit signed char channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.31 NppStatus nppiRShiftC_8s_C4IR (const Npp32u *aConstants*[4], Npp8s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit signed char channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.32 NppStatus nppiRShiftC_8s_C4R (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[4], Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit signed char channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.33 NppStatus nppiRShiftC_8u_AC4IR (const Npp32u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image right shift by constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.34 NppStatus nppiRShiftC_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image right shift by constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.35 NppStatus nppiRShiftC_8u_C1IR (const Npp32u *nConstant*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image right shift by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.36 NppStatus nppiRShiftC_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.37 NppStatus nppiRShiftC_8u_C3IR (const Npp32u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.38 NppStatus nppiRShiftC_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.39 NppStatus nppiRShiftC_8u_C4IR (const Npp32u *aConstants*[4], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image right shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.32.2.40 NppStatus nppiRShiftC_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image right shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33 LShiftC

Pixel by pixel left shift of an image by a constant value.

Functions

- NppStatus nppiLShiftC_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp32u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image left shift by constant.

- NppStatus nppiLShiftC_8u_C1IR (const Npp32u nConstant, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image left shift by constant.

- NppStatus nppiLShiftC_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image left shift by constant.

- NppStatus nppiLShiftC_8u_C3IR (const Npp32u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image left shift by constant.

- NppStatus nppiLShiftC_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image left shift by constant with unmodified alpha.

- NppStatus nppiLShiftC_8u_AC4IR (const Npp32u aConstants[3], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image left shift by constant with unmodified alpha.

- NppStatus nppiLShiftC_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image left shift by constant.

- NppStatus nppiLShiftC_8u_C4IR (const Npp32u aConstants[4], Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image left shift by constant.

- NppStatus nppiLShiftC_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp32u nConstant, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image left shift by constant.

- NppStatus nppiLShiftC_16u_C1IR (const Npp32u nConstant, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image left shift by constant.

- NppStatus nppiLShiftC_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image left shift by constant.

- NppStatus nppiLShiftC_16u_C3IR (const Npp32u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image left shift by constant.

- NppStatus nppiLShiftC_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image left shift by constant with unmodified alpha.

- NppStatus nppiLShiftC_16u_AC4IR (const Npp32u aConstants[3], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image left shift by constant with unmodified alpha.

- NppStatus nppiLShiftC_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp32u aConstants[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image left shift by constant.

- NppStatus nppiLShiftC_16u_C4IR (const Npp32u aConstants[4], Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image left shift by constant.

- NppStatus nppiLShiftC_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32u nConstant, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel image left shift by constant.

- NppStatus nppiLShiftC_32s_C1IR (const Npp32u nConstant, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel in place image left shift by constant.

- NppStatus nppiLShiftC_32s_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel image left shift by constant.

- NppStatus nppiLShiftC_32s_C3IR (const Npp32u aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel in place image left shift by constant.

- NppStatus nppiLShiftC_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image left shift by constant with unmodified alpha.

- NppStatus nppiLShiftC_32s_AC4IR (const Npp32u aConstants[3], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image left shift by constant with unmodified alpha.

- NppStatus nppiLShiftC_32s_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32u aConstants[4], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image left shift by constant.

- NppStatus nppiLShiftC_32s_C4IR (const Npp32u aConstants[4], Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image left shift by constant.

7.33.1 Detailed Description

Pixel by pixel left shift of an image by a constant value.

7.33.2 Function Documentation

7.33.2.1 NppStatus nppiLShiftC_16u_AC4IR (const Npp32u *aConstants*[3], Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image left shift by constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.2 NppStatus nppiLShiftC_16u_AC4R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image left shift by constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.3 NppStatus nppiLShiftC_16u_C1IR (const Npp32u *nConstant*, Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image left shift by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.4 NppStatus nppiLShiftC_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *nConstant*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.5 NppStatus nppiLShiftC_16u_C3IR (const Npp32u *aConstants*[3], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image left shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.6 NppStatus nppiLShiftC_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.7 NppStatus nppiLShiftC_16u_C4IR (const Npp32u *aConstants*[4], Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image left shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.8 NppStatus nppiLShiftC_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.9 NppStatus nppiLShiftC_32s_AC4IR (const Npp32u *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image left shift by constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.10 NppStatus nppiLShiftC_32s_AC4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image left shift by constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.11 NppStatus nppiLShiftC_32s_C1IR (const Npp32u *nConstant*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel in place image left shift by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.12 NppStatus nppiLShiftC_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *nConstant*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.13 NppStatus nppiLShiftC_32s_C3IR (const Npp32u *aConstants*[3], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel in place image left shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.14 NppStatus nppiLShiftC_32s_C3R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.15 NppStatus nppiLShiftC_32s_C4IR (const Npp32u *aConstants*[4], Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image left shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.16 NppStatus nppiLShiftC_32s_C4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[4], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.17 NppStatus nppiLShiftC_8u_AC4IR (const Npp32u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image left shift by constant with unmodified alpha.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.18 NppStatus nppiLShiftC_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image left shift by constant with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.19 NppStatus nppiLShiftC_8u_C1IR (const Npp32u *nConstant*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image left shift by constant.

Parameters:

nConstant Constant.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.20 NppStatus nppiLShiftC_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nConstant Constant.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.21 NppStatus nppiLShiftC_8u_C3IR (const Npp32u *aConstants*[3], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image left shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.22 NppStatus nppiLShiftC_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.23 NppStatus nppiLShiftC_8u_C4IR (const Npp32u *aConstants*[4], Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image left shift by constant.

Parameters:

aConstants fixed size array of constant values, one per channel.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.33.2.24 NppStatus nppiLShiftC_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u *aConstants*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image left shift by constant.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

aConstants fixed size array of constant values, one per channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34 And

Pixel by pixel logical and of images.

Functions

- NppStatus nppiAnd_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image logical and.

- NppStatus nppiAnd_8u_C1IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image logical and.

- NppStatus nppiAnd_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image logical and.

- NppStatus nppiAnd_8u_C3IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image logical and.

- NppStatus nppiAnd_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical and with unmodified alpha.

- NppStatus nppiAnd_8u_AC4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical and with unmodified alpha.

- NppStatus nppiAnd_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical and.

- NppStatus nppiAnd_8u_C4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical and.

- NppStatus nppiAnd_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image logical and.

- NppStatus nppiAnd_16u_C1IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image logical and.

- NppStatus nppiAnd_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image logical and.

- NppStatus nppiAnd_16u_C3IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image logical and.

- NppStatus nppiAnd_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical and with unmodified alpha.

- NppStatus nppiAnd_16u_AC4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical and with unmodified alpha.

- NppStatus nppiAnd_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical and.

- NppStatus nppiAnd_16u_C4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical and.

- NppStatus nppiAnd_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel image logical and.

- NppStatus nppiAnd_32s_C1IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel in place image logical and.

- NppStatus nppiAnd_32s_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel image logical and.

- NppStatus nppiAnd_32s_C3IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel in place image logical and.

- NppStatus nppiAnd_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical and with unmodified alpha.

- NppStatus nppiAnd_32s_AC4IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical and with unmodified alpha.

- NppStatus nppiAnd_32s_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical and.

- NppStatus nppiAnd_32s_C4IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical and.

7.34.1 Detailed Description

Pixel by pixel logical and of images.

7.34.2 Function Documentation

7.34.2.1 NppStatus nppiAnd_16u_AC4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical and with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.2 NppStatus nppiAnd_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical and with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.3 NppStatus nppiAnd_16u_C1IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.4 NppStatus nppiAnd_16u_C1R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.5 NppStatus nppiAnd_16u_C3IR (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.6 NppStatus nppiAnd_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.7 NppStatus nppiAnd_16u_C4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.8 NppStatus nppiAnd_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.9 NppStatus nppiAnd_32s_AC4IR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical and with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.10 NppStatus nppiAnd_32s_AC4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical and with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.11 NppStatus nppiAnd_32s_C1IR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.12 NppStatus nppiAnd_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.13 NppStatus nppiAnd_32s_C3IR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.14 NppStatus nppiAnd_32s_C3R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.15 NppStatus nppiAnd_32s_C4IR (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.16 NppStatus nppiAnd_32s_C4R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.17 NppStatus nppiAnd_8u_AC4IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical and with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.18 NppStatus nppiAnd_8u_AC4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical and with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.19 NppStatus nppiAnd_8u_C1IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.20 NppStatus nppiAnd_8u_C1R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.21 NppStatus nppiAnd_8u_C3IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.22 NppStatus nppiAnd_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.23 NppStatus nppiAnd_8u_C4IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical and.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.34.2.24 NppStatus nppiAnd_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical and.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35 Or

Pixel by pixel logical or of images.

Functions

- NppStatus nppiOr_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image logical or.

- NppStatus nppiOr_8u_C1IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image logical or.

- NppStatus nppiOr_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image logical or.

- NppStatus nppiOr_8u_C3IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image logical or.

- NppStatus nppiOr_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical or with unmodified alpha.

- NppStatus nppiOr_8u_AC4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical or with unmodified alpha.

- NppStatus nppiOr_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical or.

- NppStatus nppiOr_8u_C4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical or.

- NppStatus nppiOr_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image logical or.

- NppStatus nppiOr_16u_C1IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image logical or.

- NppStatus nppiOr_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image logical or.

- NppStatus nppiOr_16u_C3IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image logical or.

- NppStatus nppiOr_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical or with unmodified alpha.

- NppStatus nppiOr_16u_AC4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical or with unmodified alpha.

- NppStatus nppiOr_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical or.

- NppStatus nppiOr_16u_C4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical or.

- NppStatus nppiOr_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel image logical or.

- NppStatus nppiOr_32s_C1IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel in place image logical or.

- NppStatus nppiOr_32s_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel image logical or.

- NppStatus nppiOr_32s_C3IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel in place image logical or.

- NppStatus nppiOr_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical or with unmodified alpha.

- NppStatus nppiOr_32s_AC4IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical or with unmodified alpha.

- NppStatus nppiOr_32s_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical or.

- NppStatus nppiOr_32s_C4IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical or.

7.35.1 Detailed Description

Pixel by pixel logical or of images.

7.35.2 Function Documentation

7.35.2.1 NppStatus nppiOr_16u_AC4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical or with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.2 NppStatus nppiOr_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical or with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.3 NppStatus nppiOr_16u_C1IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.4 NppStatus nppiOr_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.5 NppStatus nppiOr_16u_C3IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.6 NppStatus nppiOr_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.7 NppStatus nppiOr_16u_C4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.8 NppStatus nppiOr_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.9 NppStatus nppiOr_32s_AC4IR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical or with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.10 NppStatus nppiOr_32s_AC4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical or with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.11 NppStatus nppiOr_32s_C1IR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.12 NppStatus nppiOr_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.13 NppStatus nppiOr_32s_C3IR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.14 NppStatus nppiOr_32s_C3R (const Npp32s $*$ *pSrc1*, int *nSrc1Step*, const Npp32s $*$ *pSrc2*, int *nSrc2Step*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.15 NppStatus nppiOr_32s_C4IR (const Npp32s $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.16 NppStatus nppiOr_32s_C4R (const Npp32s $*$ *pSrc1*, int *nSrc1Step*, const Npp32s $*$ *pSrc2*, int *nSrc2Step*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.17 NppStatus nppiOr_8u_AC4IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical or with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.18 NppStatus nppiOr_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical or with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.19 NppStatus nppiOr_8u_C1IR (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.20 NppStatus nppiOr_8u_C1R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.21 NppStatus nppiOr_8u_C3IR (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.22 NppStatus nppiOr_8u_C3R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.23 NppStatus nppiOr_8u_C4IR (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.35.2.24 NppStatus nppiOr_8u_C4R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36 Xor

Pixel by pixel logical exclusive or of images.

Functions

- NppStatus nppiXor_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image logical exclusive or.
- NppStatus nppiXor_8u_C1IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image logical exclusive or.
- NppStatus nppiXor_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image logical exclusive or.
- NppStatus nppiXor_8u_C3IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image logical exclusive or.
- NppStatus nppiXor_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical exclusive or with unmodified alpha.
- NppStatus nppiXor_8u_AC4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical exclusive or with unmodified alpha.
- NppStatus nppiXor_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical exclusive or.
- NppStatus nppiXor_8u_C4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical exclusive or.
- NppStatus nppiXor_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image logical exclusive or.
- NppStatus nppiXor_16u_C1IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image logical exclusive or.
- NppStatus nppiXor_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image logical exclusive or.

- NppStatus nppiXor_16u_C3IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel in place image logical exclusive or.

- NppStatus nppiXor_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical exclusive or with unmodified alpha.

- NppStatus nppiXor_16u_AC4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical exclusive or with unmodified alpha.

- NppStatus nppiXor_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image logical exclusive or.

- NppStatus nppiXor_16u_C4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image logical exclusive or.

- NppStatus nppiXor_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel image logical exclusive or.

- NppStatus nppiXor_32s_C1IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 32-bit signed integer channel in place image logical exclusive or.

- NppStatus nppiXor_32s_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel image logical exclusive or.

- NppStatus nppiXor_32s_C3IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 32-bit signed integer channel in place image logical exclusive or.

- NppStatus nppiXor_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical exclusive or with unmodified alpha.

- NppStatus nppiXor_32s_AC4IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical exclusive or with unmodified alpha.

- NppStatus nppiXor_32s_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel image logical exclusive or.

- NppStatus nppiXor_32s_C4IR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 32-bit signed integer channel in place image logical exclusive or.

7.36.1 Detailed Description

Pixel by pixel logical exclusive or of images.

7.36.2 Function Documentation

7.36.2.1 NppStatus nppiXor_16u_AC4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical exclusive or with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.2 NppStatus nppiXor_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical exclusive or with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.3 NppStatus nppiXor_16u_C1IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.4 NppStatus nppiXor_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.5 NppStatus nppiXor_16u_C3IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.6 NppStatus nppiXor_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.7 NppStatus nppiXor_16u_C4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.8 NppStatus nppiXor_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.9 NppStatus nppiXor_32s_AC4IR (const Npp32s $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical exclusive or with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.10 NppStatus nppiXor_32s_AC4R (const Npp32s $*$ *pSrc1*, int *nSrc1Step*, const Npp32s $*$ *pSrc2*, int *nSrc2Step*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical exclusive or with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.11 NppStatus nppiXor_32s_C1IR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.12 NppStatus nppiXor_32s_C1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 32-bit signed integer channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.13 NppStatus nppiXor_32s_C3IR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.14 NppStatus nppiXor_32s_C3R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 32-bit signed integer channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.15 NppStatus nppiXor_32s_C4IR (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.16 NppStatus nppiXor_32s_C4R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 32-bit signed integer channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.17 NppStatus nppiXor_8u_AC4IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical exclusive or with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.18 NppStatus nppiXor_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical exclusive or with unmodified alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.19 NppStatus nppiXor_8u_C1IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.20 NppStatus nppiXor_8u_C1R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.21 NppStatus nppiXor_8u_C3IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.22 NppStatus nppiXor_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.23 NppStatus nppiXor_8u_C4IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical exclusive or.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.36.2.24 NppStatus nppiXor_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical exclusive or.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.37 Not

Pixel by pixel logical not of image.

Functions

- NppStatus nppiNot_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image logical not.

- NppStatus nppiNot_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image logical not.

- NppStatus nppiNot_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image logical not.

- NppStatus nppiNot_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image logical not.

- NppStatus nppiNot_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical not with unmodified alpha.

- NppStatus nppiNot_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical not with unmodified alpha.

- NppStatus nppiNot_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image logical not.

- NppStatus nppiNot_8u_C4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image logical not.

7.37.1 Detailed Description

Pixel by pixel logical not of image.

7.37.2 Function Documentation

7.37.2.1 NppStatus nppiNot_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical not with unmodified alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.37.2.2 NppStatus nppiNot_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical not with unmodified alpha.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.37.2.3 NppStatus nppiNot_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image logical not.

Parameters:

pSrcDst In-Place Image Pointer.
nSrcDstStep In-Place-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.37.2.4 NppStatus nppiNot_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image logical not.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.37.2.5 NppStatus nppiNot_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image logical not.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.37.2.6 NppStatus nppiNot_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image logical not.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.37.2.7 NppStatus nppiNot_8u_C4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image logical not.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.37.2.8 NppStatus nppiNot_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image logical not.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.38 Alpha Composition

Modules

- AlphaCompC

  Composite two images using constant alpha values.

- AlphaPremulC

  Premultiplies pixels of an image using a constant alpha value.

- AlphaComp

  Composite two images using alpha opacity values contained in each image.

- AlphaPremul

  Premultiplies image pixels by image alpha opacity values.

7.39 AlphaCompC

Composite two images using constant alpha values.

Functions

- NppStatus nppiAlphaCompC_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u nAlpha2, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 8-bit unsigned char channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u nAlpha2, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Three 8-bit unsigned char channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u nAlpha2, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 8-bit unsigned char channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u nAlpha2, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 8-bit unsigned char channel image composition with alpha using constant source alpha.

- NppStatus nppiAlphaCompC_8s_C1R (const Npp8s ∗pSrc1, int nSrc1Step, Npp8s nAlpha1, const Npp8s ∗pSrc2, int nSrc2Step, Npp8s nAlpha2, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 8-bit signed char channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u nAlpha1, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u nAlpha2, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 16-bit unsigned short channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u nAlpha1, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u nAlpha2, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Three 16-bit unsigned short channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u nAlpha1, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u nAlpha2, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 16-bit unsigned short channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u nAlpha1, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u nAlpha2, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 16-bit unsigned short channel image composition with alpha using constant source alpha.

- NppStatus nppiAlphaCompC_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, Npp16s nAlpha1, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s nAlpha2, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 16-bit signed short channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_32u_C1R (const Npp32u ∗pSrc1, int nSrc1Step, Npp32u nAlpha1, const Npp32u ∗pSrc2, int nSrc2Step, Npp32u nAlpha2, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 32-bit unsigned integer channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_32s_C1R (const Npp32s ∗pSrc1, int nSrc1Step, Npp32s nAlpha1, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s nAlpha2, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 32-bit signed integer channel image composition using constant alpha.

- NppStatus nppiAlphaCompC_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, Npp32f nAlpha1, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f nAlpha2, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 32-bit floating point channel image composition using constant alpha.

7.39.1 Detailed Description

Composite two images using constant alpha values.

7.39.2 Function Documentation

7.39.2.1 NppStatus nppiAlphaCompC_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, Npp16s *nAlpha1*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s *nAlpha2*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 16-bit signed short channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.2 NppStatus nppiAlphaCompC_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u *nAlpha1*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u *nAlpha2*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 16-bit unsigned short channel image composition with alpha using constant source alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.3 NppStatus nppiAlphaCompC_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u *nAlpha1*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u *nAlpha2*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 16-bit unsigned short channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.4 NppStatus nppiAlphaCompC_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u *nAlpha1*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u *nAlpha2*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Three 16-bit unsigned short channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.5 NppStatus nppiAlphaCompC_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u *nAlpha1*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u *nAlpha2*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 16-bit unsigned short channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.6 NppStatus nppiAlphaCompC_32f_C1R (const Npp32f * *pSrc1*, int *nSrc1Step*, Npp32f *nAlpha1*, const Npp32f * *pSrc2*, int *nSrc2Step*, Npp32f *nAlpha2*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 32-bit floating point channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0.0 - 1.0).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0.0 - 1.0).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.7 NppStatus nppiAlphaCompC_32s_C1R (const Npp32s * *pSrc1*, int *nSrc1Step*, Npp32s *nAlpha1*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s *nAlpha2*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 32-bit signed integer channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.8 NppStatus nppiAlphaCompC_32u_C1R (const Npp32u ∗ *pSrc1*, int *nSrc1Step*, Npp32u *nAlpha1*, const Npp32u ∗ *pSrc2*, int *nSrc2Step*, Npp32u *nAlpha2*, Npp32u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 32-bit unsigned integer channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.9 NppStatus nppiAlphaCompC_8s_C1R (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, Npp8s *nAlpha1*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, Npp8s *nAlpha2*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 8-bit signed char channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.10 NppStatus nppiAlphaCompC_8u_AC4R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, Npp8u *nAlpha2*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 8-bit unsigned char channel image composition with alpha using constant source alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.11 NppStatus nppiAlphaCompC_8u_C1R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, Npp8u *nAlpha2*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 8-bit unsigned char channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.12 NppStatus nppiAlphaCompC_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u *nAlpha2*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Three 8-bit unsigned char channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.39.2.13 NppStatus nppiAlphaCompC_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u *nAlpha2*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 8-bit unsigned char channel image composition using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

nAlpha2 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40 AlphaPremulC

Premultiplies pixels of an image using a constant alpha value.

Functions

- NppStatus nppiAlphaPremulC_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_8u_C1IR (Npp8u nAlpha1, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 8-bit unsigned char channel in place image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_8u_C3IR (Npp8u nAlpha1, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three 8-bit unsigned char channel in place image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_8u_C4IR (Npp8u nAlpha1, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image premultiplication with alpha using constant alpha.

- NppStatus nppiAlphaPremulC_8u_AC4IR (Npp8u nAlpha1, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image premultiplication with alpha using constant alpha.

- NppStatus nppiAlphaPremulC_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u nAlpha1, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_16u_C1IR (Npp16u nAlpha1, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One 16-bit unsigned short channel in place image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u nAlpha1, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three 16-bit unsigned short channel image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_16u_C3IR (Npp16u nAlpha1, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

    Three 16-bit unsigned short channel in place image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u nAlpha1, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

    Four 16-bit unsigned short channel image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_16u_C4IR (Npp16u nAlpha1, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

    Four 16-bit unsigned short channel in place image premultiplication using constant alpha.

- NppStatus nppiAlphaPremulC_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u nAlpha1, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

    Four 16-bit unsigned short channel image premultiplication with alpha using constant alpha.

- NppStatus nppiAlphaPremulC_16u_AC4IR (Npp16u nAlpha1, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

    Four 16-bit unsigned short channel in place image premultiplication with alpha using constant alpha.

7.40.1 Detailed Description

Premultiplies pixels of an image using a constant alpha value.

7.40.2 Function Documentation

7.40.2.1 NppStatus nppiAlphaPremulC_16u_AC4IR (Npp16u *nAlpha1*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image premultiplication with alpha using constant alpha.

Parameters:

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.2 NppStatus nppiAlphaPremulC_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u *nAlpha1*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image premultiplication with alpha using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.3 NppStatus nppiAlphaPremulC_16u_C1IR (Npp16u *nAlpha1*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel in place image premultiplication using constant alpha.

Parameters:

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.4 NppStatus nppiAlphaPremulC_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u *nAlpha1*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 16-bit unsigned short channel image premultiplication using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.5 NppStatus nppiAlphaPremulC_16u_C3IR (Npp16u *nAlpha1*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel in place image premultiplication using constant alpha.

Parameters:

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.6 NppStatus nppiAlphaPremulC_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u *nAlpha1*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 16-bit unsigned short channel image premultiplication using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.7 NppStatus nppiAlphaPremulC_16u_C4IR (Npp16u *nAlpha1*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image premultiplication using constant alpha.

Parameters:

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.8 NppStatus nppiAlphaPremulC_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u *nAlpha1*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image premultiplication using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.9 NppStatus nppiAlphaPremulC_8u_AC4IR (Npp8u *nAlpha1*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image premultiplication with alpha using constant alpha.

Parameters:

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.10 NppStatus nppiAlphaPremulC_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image premultiplication with alpha using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.11 NppStatus nppiAlphaPremulC_8u_C1IR (Npp8u *nAlpha1*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel in place image premultiplication using constant alpha.

Parameters:

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.12 NppStatus nppiAlphaPremulC_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

One 8-bit unsigned char channel image premultiplication using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.13 NppStatus nppiAlphaPremulC_8u_C3IR (Npp8u *nAlpha1*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel in place image premultiplication using constant alpha.

Parameters:

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.14 NppStatus nppiAlphaPremulC_8u_C3R (const Npp8u * *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three 8-bit unsigned char channel image premultiplication using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.15 NppStatus nppiAlphaPremulC_8u_C4IR (Npp8u *nAlpha1*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image premultiplication using constant alpha.

Parameters:

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.40.2.16 NppStatus nppiAlphaPremulC_8u_C4R (const Npp8u * *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image premultiplication using constant alpha.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

nAlpha1 Image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41 AlphaComp

Composite two images using alpha opacity values contained in each image.

Functions

- NppStatus nppiAlphaComp_8u_AC1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 8-bit unsigned char channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 8-bit unsigned char channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_8s_AC1R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 8-bit signed char channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_16u_AC1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 16-bit unsigned short channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 16-bit unsigned short channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_16s_AC1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 16-bit signed short channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_32u_AC1R (const Npp32u ∗pSrc1, int nSrc1Step, const Npp32u ∗pSrc2, int nSrc2Step, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 32-bit unsigned integer channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_32u_AC4R (const Npp32u ∗pSrc1, int nSrc1Step, const Npp32u ∗pSrc2, int nSrc2Step, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 32-bit unsigned integer channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_32s_AC1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 32-bit signed integer channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_32s_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 32-bit signed integer channel image composition using image alpha values (0 - max channel pixel value).

- NppStatus nppiAlphaComp_32f_AC1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  One 32-bit floating point channel image composition using image alpha values (0.0 - 1.0).

- NppStatus nppiAlphaComp_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, NppiAlphaOp eAlphaOp)

  Four 32-bit floating point channel image composition using image alpha values (0.0 - 1.0).

7.41.1 Detailed Description

Composite two images using alpha opacity values contained in each image.

7.41.2 Function Documentation

7.41.2.1 NppStatus nppiAlphaComp_16s_AC1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 16-bit signed short channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.2 NppStatus nppiAlphaComp_16u_AC1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 16-bit unsigned short channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.3 NppStatus nppiAlphaComp_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 16-bit unsigned short channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.4 NppStatus nppiAlphaComp_32f_AC1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 32-bit floating point channel image composition using image alpha values (0.0 - 1.0).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.5 NppStatus nppiAlphaComp_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 32-bit floating point channel image composition using image alpha values (0.0 - 1.0).

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.6 NppStatus nppiAlphaComp_32s_AC1R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 32-bit signed integer channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.
nSrc1Step Source-Image Line Step.
pSrc2 Source-Image Pointer.
nSrc2Step Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.7 NppStatus nppiAlphaComp_32s_AC4R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 32-bit signed integer channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.8 NppStatus nppiAlphaComp_32u_AC1R (const Npp32u * *pSrc1*, int *nSrc1Step*, const Npp32u * *pSrc2*, int *nSrc2Step*, Npp32u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 32-bit unsigned integer channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.9 NppStatus nppiAlphaComp_32u_AC4R (const Npp32u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u ∗ *pSrc2*, int *nSrc2Step*, Npp32u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 32-bit unsigned integer channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.10 NppStatus nppiAlphaComp_8s_AC1R (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 8-bit signed char channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.11 NppStatus nppiAlphaComp_8u_AC1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

One 8-bit unsigned char channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.41.2.12 NppStatus nppiAlphaComp_8u_AC4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiAlphaOp *eAlphaOp*)

Four 8-bit unsigned char channel image composition using image alpha values (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eAlphaOp alpha-blending operation..

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.42 AlphaPremul

Premultiplies image pixels by image alpha opacity values.

Functions

- NppStatus nppiAlphaPremul_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel image premultiplication with pixel alpha (0 - max channel pixel value).

- NppStatus nppiAlphaPremul_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 8-bit unsigned char channel in place image premultiplication with pixel alpha (0 - max channel pixel value).

- NppStatus nppiAlphaPremul_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel image premultiplication with pixel alpha (0 - max channel pixel value).

- NppStatus nppiAlphaPremul_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four 16-bit unsigned short channel in place image premultiplication with pixel alpha (0 - max channel pixel value).

7.42.1 Detailed Description

Premultiplies image pixels by image alpha opacity values.

7.42.2 Function Documentation

7.42.2.1 NppStatus nppiAlphaPremul_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel in place image premultiplication with pixel alpha (0 - max channel pixel value).

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.42.2.2 NppStatus nppiAlphaPremul_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 16-bit unsigned short channel image premultiplication with pixel alpha (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.42.2.3 NppStatus nppiAlphaPremul_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel in place image premultiplication with pixel alpha (0 - max channel pixel value).

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.42.2.4 NppStatus nppiAlphaPremul_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four 8-bit unsigned char channel image premultiplication with pixel alpha (0 - max channel pixel value).

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.43 Color and Sampling Conversion

Routines manipulating an image's color model and sampling format.

Modules

- Color Model Conversion

  Routines for converting between various image color models.

- Color Sampling Format Conversion

  Routines for converting between various image color sampling formats.

- Color Gamma Correction

  Routines for correcting image color gamma.

- Complement Color Key

  Routines for performing complement color key replacement.

- Color Processing

  Routines for performing image color manipulation.

7.43.1 Detailed Description

Routines manipulating an image's color model and sampling format.

7.44 Color Model Conversion

Routines for converting between various image color models.

RGBToYUV

RGB to YUV color conversion.

Here is how NPP converts gamma corrected RGB or BGR to YUV. For digital RGB values in the range [0..255], Y has the range [0..255], U varies in the range [-112..+112], and V in the range [-157..+157]. To fit in the range of [0..255], a constant value of 128 is added to computed U and V values, and V is then saturated.

```
Npp32f nY =  0.299F * R + 0.587F * G + 0.114F * B;
Npp32f nU = (0.492F * ((Npp32f)nB - nY)) + 128.0F;
Npp32f nV = (0.877F * ((Npp32f)nR - nY)) + 128.0F;
if (nV > 255.0F)
    nV = 255.0F;
```

- NppStatus nppiRGBToYUV_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

    3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed YUV color conversion.

- NppStatus nppiRGBToYUV_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

    4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed YUV color conversion with alpha, not affecting alpha.

- NppStatus nppiRGBToYUV_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

    3 channel 8-bit unsigned planar RGB to 3 channel 8-bit unsigned planar YUV color conversion.

- NppStatus nppiRGBToYUV_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

    3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YUV color conversion.

- NppStatus nppiRGBToYUV_8u_AC4P4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[4], int nDstStep, NppiSize oSizeROI)

    4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned planar YUV color conversion with alpha.

YUVToRGB

YUV to RGB color conversion.

Here is how NPP converts YUV to gamma corrected RGB or BGR.

```
Npp32f nY = (Npp32f)Y;
Npp32f nU = (Npp32f)U - 128.0F;
Npp32f nV = (Npp32f)V - 128.0F;
Npp32f nR = nY + 1.140F * nV;
if (nR < 0.0F)
```

```
        nR = 0.0F;
    if (nR > 255.0F)
        nR = 255.0F;
    Npp32f nG = nY - 0.394F * nU - 0.581F * nV;
    if (nG < 0.0F)
        nG = 0.0F;
    if (nG > 255.0F)
        nG = 255.0F;
    Npp32f nB = nY + 2.032F * nU;
    if (nB < 0.0F)
        nB = 0.0F;
    if (nB > 255.0F)
        nB = 255.0F;
```

- NppStatus nppiYUVToRGB_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed YUV to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYUVToRGB_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit packed YUV with alpha to 4 channel 8-bit unsigned packed RGB color conversion with alpha, not affecting alpha.

- NppStatus nppiYUVToRGB_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV to 3 channel 8-bit unsigned planar RGB color conversion.

- NppStatus nppiYUVToRGB_8u_P3C3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV to 3 channel 8-bit unsigned packed RGB color conversion.

RGBToYUV422

RGB to YUV422 color conversion.

- NppStatus nppiRGBToYUV422_8u_C3C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 2 channel 8-bit unsigned packed YUV422 color conversion.

- NppStatus nppiRGBToYUV422_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned planar RGB to 3 channel 8-bit unsigned planar YUV422 color conversion.

- NppStatus nppiRGBToYUV422_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YUV422 color conversion.

YUV422ToRGB

YUV422 to RGB color conversion.

- NppStatus nppiYUV422ToRGB_8u_C2C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YUV422 to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYUV422ToRGB_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV422 to 3 channel 8-bit unsigned planar RGB color conversion.

- NppStatus nppiYUV422ToRGB_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV422 to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYUV422ToRGB_8u_P3AC4R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV422 to 4 channel 8-bit unsigned packed RGB color conversion with alpha.

RGBToYUV420

RGB to YUV420 color conversion.

- NppStatus nppiRGBToYUV420_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned planar RGB to 3 channel 8-bit unsigned planar YUV420 color conversion.

- NppStatus nppiRGBToYUV420_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YUV420 color conversion.

YUV420ToRGB

YUV420 to RGB color conversion.

- NppStatus nppiYUV420ToRGB_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV420 to 3 channel 8-bit unsigned planar RGB color conversion.

- NppStatus nppiYUV420ToRGB_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV420 to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYUV420ToRGB_8u_P3AC4R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV420 to 4 channel 8-bit unsigned packed RGB color conversion with alpha.

BGRToYUV420

BGR to YUV420 color conversion.

- NppStatus nppiBGRToYUV420_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned pacmed BGR with alpha to 3 channel 8-bit unsigned planar YUV420 color conversion.

YUV420ToBGR

YUV420 to BGR color conversion.

- NppStatus nppiYUV420ToBGR_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YUV420 to 3 channel 8-bit unsigned packed BGR color conversion.

RGBToYCbCr

RGB to YCbCr color conversion.

Here is how NPP converts gamma corrected RGB or BGR to YCbCr. In the YCbCr model, Y is defined to have a nominal range [16..235], while Cb and Cr are defined to have a range [16..240], with the value of 128 as corresponding to zero.

```
Npp32f nY  =  0.257F * R + 0.504F * G + 0.098F * B + 16.0F;
Npp32f nCb = -0.148F * R - 0.291F * G + 0.439F * B + 128.0F;
Npp32f nCr =  0.439F * R - 0.368F * G - 0.071F * B + 128.0F;
```

- NppStatus nppiRGBToYCbCr_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel unsigned 8-bit packed YCbCr color conversion.

- NppStatus nppiRGBToYCbCr_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 4 channel unsigned 8-bit packed YCbCr with alpha color conversion, not affecting alpha.

- NppStatus nppiRGBToYCbCr_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel planar 8-bit unsigned RGB to 3 channel planar 8-bit YCbCr color conversion.

- NppStatus nppiRGBToYCbCr_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel unsigned 8-bit planar YCbCr color conversion.

- NppStatus nppiRGBToYCbCr_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 3 channel 8-bit unsigned planar YCbCr color conversion.

YCbCrToRGB

YCbCr to RGB color conversion.

Here is how NPP converts YCbCr to gamma corrected RGB or BGR. The output RGB values are saturated to the range [0..255].

```
Npp32f nY = 1.164F * ((Npp32f)Y - 16.0F);
Npp32f nR = ((Npp32f)Cr - 128.0F);
Npp32f nB = ((Npp32f)Cb - 128.0F);
Npp32f nG = nY - 0.813F * nR - 0.392F * nB;
if (nG > 255.0F)
    nG = 255.0F;
nR = nY + 1.596F * nR;
if (nR > 255.0F)
    nR = 255.0F;
nB = nY + 2.017F * nB;
if (nB > 255.0F)
    nB = 255.0F;
```

- NppStatus nppiYCbCrToRGB_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed YCbCr to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYCbCrToRGB_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed YCbCr with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion, not affecting alpha.

- NppStatus nppiYCbCrToRGB_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr to 3 channel 8-bit unsigned planar RGB color conversion.

- NppStatus nppiYCbCrToRGB_8u_P3C3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYCbCrToRGB_8u_P3C4R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  3 channel 8-bit unsigned planar YCbCr to 4 channel 8-bit unsigned packed RGB color conversion with constant alpha.

YCbCrToBGR

YCbCr to BGR color conversion.

- NppStatus nppiYCbCrToBGR_8u_P3C3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr to 3 channel 8-bit unsigned packed BGR color conversion.

- NppStatus nppiYCbCrToBGR_8u_P3C4R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  3 channel 8-bit unsigned planar YCbCr to 4 channel 8-bit unsigned packed BGR color conversion with constant alpha.

YCbCrToBGR_709CSC

YCbCr to BGR_709CSC color conversion.

- NppStatus nppiYCbCrToBGR_709CSC_8u_P3C3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr to 3 channel 8-bit unsigned packed BGR_709CSC color conversion.

- NppStatus nppiYCbCrToBGR_709CSC_8u_P3C4R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  3 channel 8-bit unsigned planar YCbCr to 4 channel 8-bit unsigned packed BGR_709CSC color conversion with constant alpha.

RGBToYCbCr422

RGB to YCbCr422 color conversion.

- NppStatus nppiRGBToYCbCr422_8u_C3C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 2 channel 8-bit unsigned packed YCbCr422 color conversion.

- NppStatus nppiRGBToYCbCr422_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YCbCr422 color conversion.

- NppStatus nppiRGBToYCbCr422_8u_P3C2R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar RGB to 2 channel 8-bit unsigned packed YCbCr422 color conversion.

YCbCr422ToRGB

YCbCr422 to RGB color conversion.

- NppStatus nppiYCbCr422ToRGB_8u_C2C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYCbCr422ToRGB_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar RGB color conversion.

- NppStatus nppiYCbCr422ToRGB_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr422 to 3 channel 8-bit unsigned packed RGB color conversion.

RGBToYCrCb422

RGB to YCrCb422 color conversion.

- NppStatus nppiRGBToYCrCb422_8u_C3C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 2 channel 8-bit unsigned packed YCrCb422 color conversion.

- NppStatus nppiRGBToYCrCb422_8u_P3C2R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar RGB to 2 channel 8-bit unsigned packed YCrCb422 color conversion.

YCrCb422ToRGB

YCrCb422 to RGB color conversion.

- NppStatus nppiYCrCb422ToRGB_8u_C2C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYCrCb422ToRGB_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned planar RGB color conversion.

BGRToYCbCr422

BGR to YCbCr422 color conversion.

- NppStatus nppiBGRToYCbCr422_8u_C3C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed BGR to 2 channel 8-bit unsigned packed YCrCb422 color conversion.

- NppStatus nppiBGRToYCbCr422_8u_AC4C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 2 channel 8-bit unsigned packed YCrCb422 color conversion.

- NppStatus nppiBGRToYCbCr422_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCbCr422 color conversion.

- NppStatus nppiBGRToYCbCr422_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr422 color conversion.

YCbCr422ToBGR

YCbCr422 to BGR color conversion.

- NppStatus nppiYCbCr422ToBGR_8u_C2C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned packed BGR color conversion.

- NppStatus nppiYCbCr422ToBGR_8u_C2C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  2 channel 8-bit unsigned packed YCrCb422 to 4 channel 8-bit unsigned packed BGR color conversion with constant alpha.

- NppStatus nppiYCbCr422ToBGR_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr422 to 3 channel 8-bit unsigned packed BGR color conversion.

RGBToCbYCr422

RGB to CbYCr422 color conversion.

- NppStatus nppiRGBToCbYCr422_8u_C3C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 2 channel 8-bit unsigned packed CbYCr422 color conversion.

- NppStatus nppiRGBToCbYCr422Gamma_8u_C3C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB first gets forward gamma corrected then converted to 2 channel 8-bit unsigned packed CbYCr422 color conversion.

CbYCr422ToRGB

CbYCr422 to RGB color conversion.

- NppStatus nppiCbYCr422ToRGB_8u_C2C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed CbYCrC22 to 3 channel 8-bit unsigned packed RGB color conversion.

BGRToCbYCr422

BGR to CbYCr422 color conversion.

- NppStatus nppiBGRToCbYCr422_8u_AC4C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 2 channel 8-bit unsigned packed CbYCr422 color conversion.

BGRToCbYCr422_709HDTV

BGR to CbYCr422_709HDTV color conversion.

- NppStatus nppiBGRToCbYCr422_709HDTV_8u_C3C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed BGR to 2 channel 8-bit unsigned packed CbYCr422_709HDTV color conversion.

- NppStatus nppiBGRToCbYCr422_709HDTV_8u_AC4C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 2 channel 8-bit unsigned packed CbYCr422_709HDTV color conversion.

CbYCr422ToBGR

CbYCr422 to BGR color conversion.

- NppStatus nppiCbYCr422ToBGR_8u_C2C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  2 channel 8-bit unsigned packed CbYCr422 to 4 channel 8-bit unsigned packed BGR color conversion with alpha.

CbYCr422ToBGR_709HDTV

CbYCr422 to BGR_709HDTV color conversion.

- NppStatus nppiCbYCr422ToBGR_709HDTV_8u_C2C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned packed BGR_709HDTV color conversion.

- NppStatus nppiCbYCr422ToBGR_709HDTV_8u_C2C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  2 channel 8-bit unsigned packed CbYCr422 to 4 channel 8-bit unsigned packed BGR_709HDTV color conversion with constant alpha.

RGBToYCbCr420

RGB to YCbCr420 color conversion.

- NppStatus nppiRGBToYCbCr420_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YCbCr420 color conversion.

YCbCr420ToRGB

YCbCr420 to RGB color conversion.

- NppStatus nppiYCbCr420ToRGB_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned packed RGB color conversion.

RGBToYCrCb420

RGB to YCrCb420 color conversion.

- NppStatus nppiRGBToYCrCb420_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 3 channel 8-bit unsigned planar YCrCb420 color conversion.

YCrCb420ToRGB

YCrCb420 to RGB color conversion.

- NppStatus nppiYCrCb420ToRGB_8u_P3C4R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  3 channel 8-bit unsigned planar YCrCb420 to 4 channel 8-bit unsigned packed RGB color conversion with constant alpha.

BGRToYCbCr420

BGR to YCbCr420 color conversion.

- NppStatus nppiBGRToYCbCr420_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCbCr420 color conversion.

- NppStatus nppiBGRToYCbCr420_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr420 color conversion.

BGRToYCbCr420_709CSC

BGR to YCbCr420_709CSC color conversion.

- NppStatus nppiBGRToYCbCr420_709CSC_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCbCr420_709CSC color conversion.

- NppStatus nppiBGRToYCbCr420_709CSC_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr420_709CSC color conversion.

BGRToYCbCr420_709HDTV

BGR to YCbCr420_709HDTV color conversion.

- NppStatus nppiBGRToYCbCr420_709HDTV_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr420_709HDTV color conversion.

BGRToYCrCb420_709CSC

BGR to YCrCb420_709CSC color conversion.

- NppStatus nppiBGRToYCrCb420_709CSC_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCrCb420_709CSC color conversion.

- NppStatus nppiBGRToYCrCb420_709CSC_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCrCb420_709CSC color conversion.

YCbCr420ToBGR

YCbCr420 to BGR color conversion.

- NppStatus nppiYCbCr420ToBGR_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned packed BGR color conversion.

- NppStatus nppiYCbCr420ToBGR_8u_P3C4R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  3 channel 8-bit unsigned planar YCbCr420 to 4 channel 8-bit unsigned packed BGR color conversion with constant alpha.

YCbCr420ToBGR_709CSC

YCbCr420_709CSC to BGR color conversion.

- NppStatus nppiYCbCr420ToBGR_709CSC_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned packed BGR_709CSC color conversion.

YCbCr420ToBGR_709HDTV

YCbCr420_709HDTV to BGR color conversion.

- NppStatus nppiYCbCr420ToBGR_709HDTV_8u_P3C4R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  3 channel 8-bit unsigned planar YCbCr420 to 4 channel 8-bit unsigned packed BGR_709HDTV color conversion with constant alpha.

BGRToYCrCb420

BGR to YCrCb420 color conversion.

- NppStatus nppiBGRToYCrCb420_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCrCb420 color conversion.

- NppStatus nppiBGRToYCrCb420_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCrCb420 color conversion.

BGRToYCbCr411

BGR to YCbCr411 color conversion.

- NppStatus nppiBGRToYCbCr411_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCbCr411 color conversion.

- NppStatus nppiBGRToYCbCr411_8u_AC4P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr411 color conversion.

YCbCr411ToBGR

YCbCr411 to BGR color conversion.

- NppStatus nppiYCbCr411ToBGR_8u_P3C3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned packed BGR color conversion.

- NppStatus nppiYCbCr411ToBGR_8u_P3C4R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nAval)

  3 channel 8-bit unsigned planar YCbCr411 to 4 channel 8-bit unsigned packed BGR color conversion with constant alpha.

RGBToXYZ

RGB to XYZ color conversion.

Here is how NPP converts gamma corrected RGB or BGR to XYZ.

```
Npp32f nNormalizedR = (Npp32f)R * 0.003921569F; // / 255.0F
Npp32f nNormalizedG = (Npp32f)G * 0.003921569F;
Npp32f nNormalizedB = (Npp32f)B * 0.003921569F;
Npp32f nX = 0.412453F * nNormalizedR + 0.35758F  * nNormalizedG + 0.180423F * nNormalizedB;
if (nX > 1.0F)
    nX = 1.0F;
Npp32f nY = 0.212671F * nNormalizedR + 0.71516F  * nNormalizedG + 0.072169F * nNormalizedB;
if (nY > 1.0F)
    nY = 1.0F;
Npp32f nZ = 0.019334F * nNormalizedR + 0.119193F * nNormalizedG + 0.950227F * nNormalizedB;
if (nZ > 1.0F)
    nZ = 1.0F;
X = (Npp8u)(nX * 255.0F);
Y = (Npp8u)(nY * 255.0F);
Z = (Npp8u)(nZ * 255.0F);
```

- NppStatus nppiRGBToXYZ_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed XYZ color conversion.

- NppStatus nppiRGBToXYZ_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed XYZ with alpha color conversion.

XYZToRGB

XYZ to RGB color conversion.

Here is how NPP converts XYZ to gamma corrected RGB or BGR. The code assumes that X,Y, and Z values are in the range [0..1].

```
Npp32f nNormalizedX = (Npp32f)X * 0.003921569F; // / 255.0F
Npp32f nNormalizedY = (Npp32f)Y * 0.003921569F;
```

```
Npp32f nNormalizedZ = (Npp32f)Z * 0.003921569F;
Npp32f nR = 3.240479F * nNormalizedX - 1.53715F  * nNormalizedY - 0.498535F * nNormalizedZ;
if (nR > 1.0F)
    nR = 1.0F;
Npp32f nG = -0.969256F * nNormalizedX + 1.875991F  * nNormalizedY + 0.041556F * nNormalizedZ;
if (nG > 1.0F)
    nG = 1.0F;
Npp32f nB = 0.055648F * nNormalizedX - 0.204043F * nNormalizedY + 1.057311F * nNormalizedZ;
if (nB > 1.0F)
    nB = 1.0F;
R = (Npp8u)(nR * 255.0F);
G = (Npp8u)(nG * 255.0F);
B = (Npp8u)(nB * 255.0F);
```

- NppStatus nppiXYZToRGB_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed XYZ to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiXYZToRGB_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed XYZ with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

RGBToLUV

RGB to LUV color conversion.

Here is how NPP converts gamma corrected RGB or BGR to CIE LUV using the CIE XYZ D65 white point with a Y luminance of 1.0. The computed values of the L component are in the range [0..100], U component in the range [-134..220], and V component in the range [-140..122]. The code uses cbrtf() the 32 bit floating point cube root math function.

```
// use CIE D65 chromaticity coordinates
#define nCIE_XYZ_D65_xn 0.312713F
#define nCIE_XYZ_D65_yn 0.329016F
#define nn_DIVISOR (-2.0F * nCIE_XYZ_D65_xn + 12.0F * nCIE_XYZ_D65_yn + 3.0F)
#define nun (4.0F * nCIE_XYZ_D65_xn / nn_DIVISOR)
#define nvn (9.0F * nCIE_XYZ_D65_yn / nn_DIVISOR)

// First convert to XYZ
Npp32f nNormalizedR = (Npp32f)R * 0.003921569F; // / 255.0F
Npp32f nNormalizedG = (Npp32f)G * 0.003921569F;
Npp32f nNormalizedB = (Npp32f)B * 0.003921569F;
Npp32f nX = 0.412453F * nNormalizedR + 0.35758F  * nNormalizedG + 0.180423F * nNormalizedB;
Npp32f nY = 0.212671F * nNormalizedR + 0.71516F  * nNormalizedG + 0.072169F * nNormalizedB;
Npp32f nZ = 0.019334F * nNormalizedR + 0.119193F * nNormalizedG + 0.950227F * nNormalizedB;
// Now calculate LUV from the XYZ value
Npp32f nTemp = nX + 15.0F * nY + 3.0F * nZ;
Npp32f nu = 4.0F * nX / nTemp;
Npp32f nv = 9.0F * nY / nTemp;
Npp32f nL = 116.0F * cbrtf(nY) - 16.0F;
if (nL < 0.0F)
    nL = 0.0F;
if (nL > 100.0F)
    nL = 100.0F;
nTemp = 13.0F * nL;
Npp32f nU = nTemp * (nu - nun);
if (nU < -134.0F)
    nU = -134.0F;
if (nU > 220.0F)
```

```
    nU = 220.0F;
Npp32f nV = nTemp * (nv - nvn);
if (nV < -140.0F)
    nV = -140.0F;
if (nV > 122.0F)
    nV = 122.0F;
L = (Npp8u)(nL * 255.0F * 0.01F); // / 100.0F
U = (Npp8u)((nU + 134.0F) * 255.0F * 0.0028249F); // / 354.0F
V = (Npp8u)((nV + 140.0F) * 255.0F * 0.0038168F); // / 262.0F
```

- NppStatus nppiRGBToLUV_8u_C3R (const Npp8u *pSrc, int nSrcStep, Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed LUV color conversion.

- NppStatus nppiRGBToLUV_8u_AC4R (const Npp8u *pSrc, int nSrcStep, Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed LUV with alpha color conversion.

LUVToRGB

LUV to RGB color conversion.

Here is how NPP converts CIE LUV to gamma corrected RGB or BGR using the CIE XYZ D65 white point with a Y luminance of 1.0. The code uses powf() the 32 bit floating point power math function.

```
// use CIE D65 chromaticity coordinates
#define nCIE_XYZ_D65_xn 0.312713F
#define nCIE_XYZ_D65_yn 0.329016F
#define nn_DIVISOR (-2.0F * nCIE_XYZ_D65_xn + 12.0F * nCIE_XYZ_D65_yn + 3.0F)
#define nun (4.0F * nCIE_XYZ_D65_xn / nn_DIVISOR)
#define nvn (9.0F * nCIE_XYZ_D65_yn / nn_DIVISOR)

// First convert normalized LUV back to original CIE LUV range
Npp32f nL = (Npp32f)L * 100.0F * 0.003921569F;  // / 255.0F
Npp32f nU = ((Npp32f)U * 354.0F * 0.003921569F) - 134.0F;
Npp32f nV = ((Npp32f)V * 262.0F * 0.003921569F) - 140.0F;
// Now convert LUV to CIE XYZ
Npp32f nTemp = 13.0F * nL;
Npp32f nu = nU / nTemp + nun;
Npp32f nv = nV / nTemp + nvn;
Npp32f nNormalizedY;
if (nL > 7.9996248F)
{
    nNormalizedY = (nL + 16.0F) * 0.008621F; // / 116.0F
    nNormalizedY = powf(nNormalizedY, 3.0F);
}
else
{
    nNormalizedY = nL * 0.001107F; // / 903.3F
}
Npp32f nNormalizedX = (-9.0F * nNormalizedY * nu) / ((nu - 4.0F) * nv - nu * nv);
Npp32f nNormalizedZ = (9.0F * nNormalizedY - 15.0F * nv * nNormalizedY - nv * nNormalizedX) / (3.0F * nv
Npp32f nR = 3.240479F * nNormalizedX - 1.53715F  * nNormalizedY - 0.498535F * nNormalizedZ;
if (nR > 1.0F)
    nR = 1.0F;
if (nR < 0.0F)
    nR = 0.0F;
Npp32f nG = -0.969256F * nNormalizedX + 1.875991F  * nNormalizedY + 0.041556F * nNormalizedZ;
if (nG > 1.0F)
    nG = 1.0F;
```

```
if (nG < 0.0F)
    nG = 0.0F;
Npp32f nB = 0.055648F * nNormalizedX - 0.204043F * nNormalizedY + 1.057311F * nNormalizedZ;
if (nB > 1.0F)
    nB = 1.0F;
if (nB < 0.0F)
    nB = 0.0F;
R = (Npp8u)(nR * 255.0F);
G = (Npp8u)(nG * 255.0F);
B = (Npp8u)(nB * 255.0F);
```

- NppStatus nppiLUVToRGB_8u_C3R (const Npp8u *pSrc, int nSrcStep, Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed LUV to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiLUVToRGB_8u_AC4R (const Npp8u *pSrc, int nSrcStep, Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed LUV with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

BGRToLab

BGR to Lab color conversion.

This is how NPP converts gamma corrected BGR or RGB to Lab using the CIE Lab D65 white point with a Y luminance of 1.0. The computed values of the L component are in the range [0..100], a and b component values are in the range [-128..127]. The code uses cbrtf() the 32 bit floating point cube root math function.

```
// use CIE Lab chromaticity coordinates
#define nCIE_LAB_D65_xn 0.950455F
#define nCIE_LAB_D65_yn 1.0F
#define nCIE_LAB_D65_zn 1.088753F
// First convert to XYZ
Npp32f nNormalizedR = (Npp32f)R * 0.003921569F; // / 255.0F
Npp32f nNormalizedG = (Npp32f)G * 0.003921569F;
Npp32f nNormalizedB = (Npp32f)B * 0.003921569F;
Npp32f nX = 0.412453F * nNormalizedR + 0.35758F  * nNormalizedG + 0.180423F * nNormalizedB;
Npp32f nY = 0.212671F * nNormalizedR + 0.71516F  * nNormalizedG + 0.072169F * nNormalizedB;
Npp32f nZ = 0.019334F * nNormalizedR + 0.119193F * nNormalizedG + 0.950227F * nNormalizedB;
Npp32f nL = cbrtf(nY);
Npp32f nA;
Npp32f nB;
Npp32f nfX = nX * 1.052128F; // / nCIE_LAB_D65_xn;
Npp32f nfY = nY;
Npp32f nfZ = nZ * 0.918482F; // / nCIE_LAB_D65_zn;
nfY = nL - 16.0F;
nL = 116.0F * nL - 16.0F;
nA = cbrtf(nfX) - 16.0F;
nA = 500.0F * (nA - nfY);
nB = cbrtf(nfZ) - 16.0F;
nB = 200.0F * (nfY - nB);
// Now scale Lab range
nL = nL * 255.0F * 0.01F; // / 100.0F
nA = nA + 128.0F;
nB = nB + 128.0F;
L = (Npp8u)nL;
a = (Npp8u)nA;
b = (Npp8u)nB;
```

- NppStatus nppiBGRToLab_8u_C3R (const Npp8u *pSrc, int nSrcStep, Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned packed Lab color conversion.

LabToBGR

Lab to BGR color conversion.

This is how NPP converts Lab to gamma corrected BGR or RGB using the CIE Lab D65 white point with a Y luminance of 1.0. The code uses powf() the 32 bit floating point power math function.

```
// use CIE Lab chromaticity coordinates
#define nCIE_LAB_D65_xn 0.950455F
#define nCIE_LAB_D65_yn 1.0F
#define nCIE_LAB_D65_zn 1.088753F
// First convert Lab back to original range then to CIE XYZ
Npp32f nL = (Npp32f)L * 100.0F * 0.003921569F;  // / 255.0F
Npp32f nA = (Npp32f)a - 128.0F;
Npp32f nB = (Npp32f)b - 128.0F;
Npp32f nP = (nL + 16.0F) * 0.008621F; // / 116.0F
Npp32f nNormalizedY = nP * nP * nP; // powf(nP, 3.0F);
Npp32f nNormalizedX = nCIE_LAB_D65_xn * powf((nP + nA * 0.002F), 3.0F); // / 500.0F
Npp32f nNormalizedZ = nCIE_LAB_D65_zn * powf((nP - nB * 0.005F), 3.0F); // / 200.0F
Npp32f nR = 3.240479F * nNormalizedX - 1.53715F  * nNormalizedY - 0.498535F * nNormalizedZ;
if (nR > 1.0F)
    nR = 1.0F;
Npp32f nG = -0.969256F * nNormalizedX + 1.875991F  * nNormalizedY + 0.041556F * nNormalizedZ;
if (nG > 1.0F)
    nG = 1.0F;
nB = 0.055648F * nNormalizedX - 0.204043F * nNormalizedY + 1.057311F * nNormalizedZ;
if (nB > 1.0F)
    nB = 1.0F;
R = (Npp8u)(nR * 255.0F);
G = (Npp8u)(nG * 255.0F);
B = (Npp8u)(nB * 255.0F);
```

- NppStatus nppiLabToBGR_8u_C3R (const Npp8u *pSrc, int nSrcStep, Npp8u *pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed Lab to 3 channel 8-bit unsigned packed BGR color conversion.

RGBToYCC

RGB to PhotoYCC color conversion.

This is how NPP converts gamma corrected BGR or RGB to PhotoYCC. The computed Y, C1, C2 values are then quantized and converted to fit in the range [0..1] before expanding to 8 bits.

```
Npp32f nNormalizedR = (Npp32f)R * 0.003921569F; // / 255.0F
Npp32f nNormalizedG = (Npp32f)G * 0.003921569F;
Npp32f nNormalizedB = (Npp32f)B * 0.003921569F;
Npp32f nY = 0.299F * nNormalizedR + 0.587F  * nNormalizedG + 0.114F * nNormalizedB;
Npp32f nC1 = nNormalizedB - nY;
nC1 = 111.4F * 0.003921569F * nC1 + 156.0F * 0.003921569F;
Npp32f nC2 = nNormalizedR - nY;
nC2 = 135.64F * 0.003921569F * nC2 + 137.0F * 0.003921569F;
nY = 1.0F * 0.713267F * nY; // / 1.402F
Y = (Npp8u)(nY  * 255.0F);
C1 = (Npp8u)(nC1 * 255.0F);
C2 = (Npp8u)(nC2 * 255.0F);
```

- NppStatus nppiRGBToYCC_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed YCC color conversion.

- NppStatus nppiRGBToYCC_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed YCC with alpha color conversion.

YCCToRGB

PhotoYCC to RGB color conversion.

This is how NPP converts PhotoYCC to gamma corrected RGB or BGR.

```
Npp32f nNormalizedY  = ((Npp32f)Y * 0.003921569F) * 1.3584F;  // / 255.0F
Npp32f nNormalizedC1 = (((Npp32f)C1 * 0.003921569F) - 156.0F * 0.003921569F) * 2.2179F;
Npp32f nNormalizedC2 = (((Npp32f)C2 * 0.003921569F) - 137.0F * 0.003921569F) * 1.8215F;
Npp32f nR = nNormalizedY + nNormalizedC2;
if (nR > 1.0F)
    nR = 1.0F;
Npp32f nG = nNormalizedY - 0.194F  * nNormalizedC1 - 0.509F * nNormalizedC2;
if (nG > 1.0F)
    nG = 1.0F;
Npp32f nB = nNormalizedY + nNormalizedC1;
if (nB > 1.0F)
    nB = 1.0F;
R = (Npp8u)(nR * 255.0F);
G = (Npp8u)(nG * 255.0F);
B = (Npp8u)(nB * 255.0F);
```

- NppStatus nppiYCCToRGB_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed YCC to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiYCCToRGB_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed YCC with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

RGBToHLS

RGB to HLS color conversion.

This is how NPP converts gamma corrected RGB or BGR to HLS. This code uses the fmaxf() and fminf() 32 bit floating point math functions.

```
Npp32f nNormalizedR = (Npp32f)R * 0.003921569F;  // / 255.0F
Npp32f nNormalizedG = (Npp32f)G * 0.003921569F;
Npp32f nNormalizedB = (Npp32f)B * 0.003921569F;
Npp32f nS;
Npp32f nH;
// Lightness
Npp32f nMax = fmaxf(nNormalizedR, nNormalizedG);
```

```
       nMax = fmaxf(nMax, nNormalizedB);
Npp32f nMin = fminf(nNormalizedR, nNormalizedG);
       nMin = fminf(nMin, nNormalizedB);
Npp32f nL = (nMax + nMin) * 0.5F;
Npp32f nDivisor = nMax - nMin;
// Saturation
if (nDivisor == 0.0F) // achromatics case
{
    nS = 0.0F;
    nH = 0.0F;
}
else // chromatics case
{
    if (nL > 0.5F)
        nS = nDivisor / (1.0F - (nMax + nMin - 1.0F));
    else
        nS = nDivisor / (nMax + nMin);
}
// Hue
Npp32f nCr = (nMax - nNormalizedR) / nDivisor;
Npp32f nCg = (nMax - nNormalizedG) / nDivisor;
Npp32f nCb = (nMax - nNormalizedB) / nDivisor;
if (nNormalizedR == nMax)
    nH = nCb - nCg;
else if (nNormalizedG == nMax)
    nH = 2.0F + nCr - nCb;
else if (nNormalizedB == nMax)
    nH = 4.0F + nCg - nCr;
nH = nH * 0.166667F; // / 6.0F
if (nH < 0.0F)
    nH = nH + 1.0F;
H = (Npp8u)(nH * 255.0F);
L = (Npp8u)(nL * 255.0F);
S = (Npp8u)(nS * 255.0F);
```

- NppStatus nppiRGBToHLS_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed HLS color conversion.

- NppStatus nppiRGBToHLS_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed HLS with alpha color conversion.

HLSToRGB

HLS to RGB color conversion.

This is how NPP converts HLS to gamma corrected RGB or BGR.

```
Npp32f nNormalizedH = (Npp32f)H * 0.003921569F;  // / 255.0F
Npp32f nNormalizedL = (Npp32f)L * 0.003921569F;
Npp32f nNormalizedS = (Npp32f)S * 0.003921569F;
Npp32f nM1;
Npp32f nM2;
Npp32f nR;
Npp32f nG;
Npp32f nB;
Npp32f nh = 0.0F;
if (nNormalizedL <= 0.5F)
    nM2 = nNormalizedL * (1.0F + nNormalizedS);
```

```
else
    nM2 = nNormalizedL + nNormalizedS - nNormalizedL * nNormalizedS;
nM1 = 2.0F * nNormalizedL - nM2;
if (nNormalizedS == 0.0F)
    nR = nG = nB = nNormalizedL;
else
{
    nh = nNormalizedH + 0.3333F;
    if (nh > 1.0F)
        nh -= 1.0F;
}
Npp32f nMDiff = nM2 - nM1;
if (0.6667F < nh)
    nR = nM1;
else
{
    if (nh < 0.1667F)
        nR = (nM1 + nMDiff * nh * 6.0F); // / 0.1667F
    else if (nh < 0.5F)
        nR = nM2;
    else
        nR = nM1 + nMDiff * ( 0.6667F - nh ) * 6.0F; // / 0.1667F
}
if (nR > 1.0F)
    nR = 1.0F;
nh = nNormalizedH;
if (0.6667F < nh)
    nG = nM1;
else
{
    if (nh < 0.1667F)
        nG = (nM1 + nMDiff * nh * 6.0F); // / 0.1667F
    else if (nh < 0.5F)
        nG = nM2;
    else
        nG = nM1 + nMDiff * (0.6667F - nh ) * 6.0F; // / 0.1667F
}
if (nG > 1.0F)
    nG = 1.0F;
nh = nNormalizedH - 0.3333F;
if (nh < 0.0F)
    nh += 1.0F;
if (0.6667F < nh)
    nB = nM1;
else
{
    if (nh < 0.1667F)
        nB = (nM1 + nMDiff * nh * 6.0F); // / 0.1667F
    else if (nh < 0.5F)
        nB = nM2;
    else
        nB = nM1 + nMDiff * (0.6667F - nh ) * 6.0F; // / 0.1667F
}
if (nB > 1.0F)
    nB = 1.0F;
R = (Npp8u)(nR * 255.0F);
G = (Npp8u)(nG * 255.0F);
B = (Npp8u)(nB * 255.0F);
```

- NppStatus nppiHLSToRGB_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed HLS to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiHLSToRGB_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

4 channel 8-bit unsigned packed HLS with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

BGRToHLS

BGR to HLS color conversion.

- NppStatus nppiBGRToHLS_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 4 channel 8-bit unsigned packed HLS with alpha color conversion.

- NppStatus nppiBGRToHLS_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar HLS color conversion.

- NppStatus nppiBGRToHLS_8u_AC4P4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[4], int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed BGR with alpha to 4 channel 8-bit unsigned planar HLS with alpha color conversion.

- NppStatus nppiBGRToHLS_8u_P3C3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar BGR to 3 channel 8-bit unsigned packed HLS color conversion.

- NppStatus nppiBGRToHLS_8u_AP4C4R (const Npp8u ∗const pSrc[4], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned planar BGR with alpha to 4 channel 8-bit unsigned packed HLS with alpha color conversion.

- NppStatus nppiBGRToHLS_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar BGR to 3 channel 8-bit unsigned planar HLS color conversion.

- NppStatus nppiBGRToHLS_8u_AP4R (const Npp8u ∗const pSrc[4], int nSrcStep, Npp8u ∗pDst[4], int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned planar BGR with alpha to 4 channel 8-bit unsigned planar HLS with alpha color conversion.

HLSToBGR

HLS to BGR color conversion.

- NppStatus nppiHLSToBGR_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed HLS to 3 channel 8-bit unsigned planar BGR color conversion.

- NppStatus nppiHLSToBGR_8u_AC4P4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[4], int nDstStep, NppiSize oSizeROI)

4 channel 8-bit unsigned packed HLS with alpha to 4 channel 8-bit unsigned planar BGR with alpha color conversion.

- NppStatus nppiHLSToBGR_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar HLS to 3 channel 8-bit unsigned planar BGR color conversion.

- NppStatus nppiHLSToBGR_8u_AP4R (const Npp8u ∗const pSrc[4], int nSrcStep, Npp8u ∗pDst[4], int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned planar HLS with alpha to 4 channel 8-bit unsigned planar BGR with alpha color conversion.

- NppStatus nppiHLSToBGR_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed HLS with alpha to 4 channel 8-bit unsigned packed BGR with alpha color conversion.

- NppStatus nppiHLSToBGR_8u_P3C3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar HLS to 3 channel 8-bit unsigned packed BGR color conversion.

- NppStatus nppiHLSToBGR_8u_AP4C4R (const Npp8u ∗const pSrc[4], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned planar HLS with alpha to 4 channel 8-bit unsigned packed BGR with alpha color conversion.

RGBToHSV

RGB to HSV color conversion.

This is how NPP converts gamma corrected RGB or BGR to HSV. This code uses the fmaxf() and fminf() 32 bit floating point math functions.

```
Npp32f nNormalizedR = (Npp32f)R * 0.003921569F; // / 255.0F
Npp32f nNormalizedG = (Npp32f)G * 0.003921569F;
Npp32f nNormalizedB = (Npp32f)B * 0.003921569F;
Npp32f nS;
Npp32f nH;
// Value
Npp32f nV = fmaxf(nNormalizedR, nNormalizedG);
       nV = fmaxf(nV, nNormalizedB);
// Saturation
Npp32f nTemp = fminf(nNormalizedR, nNormalizedG);
       nTemp = fminf(nTemp, nNormalizedB);
Npp32f nDivisor = nV - nTemp;
if (nV == 0.0F) // achromatics case
{
    nS = 0.0F;
    nH = 0.0F;
}
else // chromatics case
    nS = nDivisor / nV;
// Hue:
Npp32f nCr = (nV - nNormalizedR) / nDivisor;
Npp32f nCg = (nV - nNormalizedG) / nDivisor;
Npp32f nCb = (nV - nNormalizedB) / nDivisor;
```

```
if (nNormalizedR == nV)
    nH = nCb - nCg;
else if (nNormalizedG == nV)
    nH = 2.0F + nCr - nCb;
else if (nNormalizedB == nV)
    nH = 4.0F + nCg - nCr;
nH = nH * 0.166667F; // / 6.0F
if (nH < 0.0F)
    nH = nH + 1.0F;
H = (Npp8u)(nH * 255.0F);
S = (Npp8u)(nS * 255.0F);
V = (Npp8u)(nV * 255.0F);
```

- NppStatus nppiRGBToHSV_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed HSV color conversion.

- NppStatus nppiRGBToHSV_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed HSV with alpha color conversion.

HSVToRGB

HSV to RGB color conversion.

This is how NPP converts HSV to gamma corrected RGB or BGR. This code uses the floorf() 32 bit floating point math function.

```
Npp32f nNormalizedH = (Npp32f)H * 0.003921569F; // / 255.0F
Npp32f nNormalizedS = (Npp32f)S * 0.003921569F;
Npp32f nNormalizedV = (Npp32f)V * 0.003921569F;
Npp32f nR;
Npp32f nG;
Npp32f nB;
if (nNormalizedS == 0.0F)
{
    nR = nG = nB = nNormalizedV;
}
else
{
    if (nNormalizedH == 1.0F)
        nNormalizedH = 0.0F;
    else
        nNormalizedH = nNormalizedH * 6.0F; // / 0.1667F
}
Npp32f nI = floorf(nNormalizedH);
Npp32f nF = nNormalizedH - nI;
Npp32f nM = nNormalizedV * (1.0F - nNormalizedS);
Npp32f nN = nNormalizedV * (1.0F - nNormalizedS * nF);
Npp32f nK = nNormalizedV * (1.0F - nNormalizedS * (1.0F - nF));
if (nI == 0.0F)
    { nR = nNormalizedV; nG = nK; nB = nM; }
else if (nI == 1.0F)
    { nR = nN; nG = nNormalizedV; nB = nM; }
else if (nI == 2.0F)
    { nR = nM; nG = nNormalizedV; nB = nK; }
else if (nI == 3.0F)
    { nR = nM; nG = nN; nB = nNormalizedV; }
else if (nI == 4.0F)
    { nR = nK; nG = nM; nB = nNormalizedV; }
```

```
else if (nI == 5.0F)
    { nR = nNormalizedV; nG = nM; nB = nN; }
R = (Npp8u)(nR * 255.0F);
G = (Npp8u)(nG * 255.0F);
B = (Npp8u)(nB * 255.0F);
```

- NppStatus nppiHSVToRGB_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed HSV to 3 channel 8-bit unsigned packed RGB color conversion.

- NppStatus nppiHSVToRGB_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed HSV with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

RGBToGray

RGB to CCIR601 Gray conversion.

Here is how NPP converts gamma corrected RGB to CCIR601 Gray.

```
nGray =  0.299F * R + 0.587F * G + 0.114F * B;
```

- NppStatus nppiRGBToGray_8u_C3C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed RGB to 1 channel 8-bit unsigned packed Gray conversion.

- NppStatus nppiRGBToGray_8u_AC4C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed RGB with alpha to 1 channel 8-bit unsigned packed Gray conversion.

- NppStatus nppiRGBToGray_16u_C3C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 16-bit unsigned packed RGB to 1 channel 16-bit unsigned packed Gray conversion.

- NppStatus nppiRGBToGray_16u_AC4C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit unsigned packed RGB with alpha to 1 channel 16-bit unsigned packed Gray conversion.

- NppStatus nppiRGBToGray_16s_C3C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 16-bit signed packed RGB to 1 channel 16-bit signed packed Gray conversion.

- NppStatus nppiRGBToGray_16s_AC4C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit signed packed RGB with alpha to 1 channel 16-bit signed packed Gray conversion.

- NppStatus nppiRGBToGray_32f_C3C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 32-bit floating point packed RGB to 1 channel 32-bit floating point packed Gray conversion.

- NppStatus nppiRGBToGray_32f_AC4C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit floating point packed RGB with alpha to 1 channel 32-bit floating point packed Gray conversion.

ColorToGray

RGB Color to Gray conversion using user supplied conversion coefficients.

Here is how NPP converts gamma corrected RGB Color to Gray using user supplied conversion coefficients.

```
nGray =  aCoeffs[0] * R + aCoeffs[1] * G + aCoeffs[2] * B;
```

- NppStatus nppiColorToGray_8u_C3C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aCoeffs[3])

  3 channel 8-bit unsigned packed RGB to 1 channel 8-bit unsigned packed Gray conversion.

- NppStatus nppiColorToGray_8u_AC4C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aCoeffs[3])

  4 channel 8-bit unsigned packed RGB with alpha to 1 channel 8-bit unsigned packed Gray conversion.

- NppStatus nppiColorToGray_16u_C3C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aCoeffs[3])

  3 channel 16-bit unsigned packed RGB to 1 channel 16-bit unsigned packed Gray conversion.

- NppStatus nppiColorToGray_16u_AC4C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aCoeffs[3])

  4 channel 16-bit unsigned packed RGB with alpha to 1 channel 16-bit unsigned packed Gray conversion.

- NppStatus nppiColorToGray_16s_C3C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aCoeffs[3])

  3 channel 16-bit signed packed RGB to 1 channel 16-bit signed packed Gray conversion.

- NppStatus nppiColorToGray_16s_AC4C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aCoeffs[3])

  4 channel 16-bit signed packed RGB with alpha to 1 channel 16-bit signed packed Gray conversion.

- NppStatus nppiColorToGray_32f_C3C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aCoeffs[3])

  3 channel 32-bit floating point packed RGB to 1 channel 32-bit floating point packed Gray conversion.

- NppStatus nppiColorToGray_32f_AC4C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aCoeffs[3])

  4 channel 32-bit floating point packed RGB with alpha to 1 channel 32-bit floating point packed Gray conversion.

7.44.1 Detailed Description

Routines for converting between various image color models.

7.44.2 Function Documentation

7.44.2.1 NppStatus nppiBGRToCbYCr422_709HDTV_8u_AC4C2R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 2 channel 8-bit unsigned packed CbYCr422_-709HDTV color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.2 NppStatus nppiBGRToCbYCr422_709HDTV_8u_C3C2R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 2 channel 8-bit unsigned packed CbYCr422_709HDTV color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.3 NppStatus nppiBGRToCbYCr422_8u_AC4C2R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 2 channel 8-bit unsigned packed CbYCr422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.4 NppStatus nppiBGRToHLS_8u_AC4P4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 4 channel 8-bit unsigned planar HLS with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.5 NppStatus nppiBGRToHLS_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 4 channel 8-bit unsigned packed HLS with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.6 NppStatus nppiBGRToHLS_8u_AP4C4R (const Npp8u *const *pSrc*[4], int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned planar BGR with alpha to 4 channel 8-bit unsigned packed HLS with alpha color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.7 NppStatus nppiBGRToHLS_8u_AP4R (const Npp8u *const *pSrc*[4], int *nSrcStep*, Npp8u * *pDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned planar BGR with alpha to 4 channel 8-bit unsigned planar HLS with alpha color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.8 NppStatus nppiBGRToHLS_8u_C3P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar HLS color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.9 NppStatus nppiBGRToHLS_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar BGR to 3 channel 8-bit unsigned packed HLS color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.10 NppStatus nppiBGRToHLS_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar BGR to 3 channel 8-bit unsigned planar HLS color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.11 NppStatus nppiBGRToLab_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned packed Lab color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.12 NppStatus nppiBGRToYCbCr411_8u_AC4P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr411 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.13 NppStatus nppiBGRToYCbCr411_8u_C3P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCbCr411 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.14 NppStatus nppiBGRToYCbCr420_709CSC_8u_AC4P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr420_709CSC color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.15 NppStatus nppiBGRToYCbCr420_709CSC_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCbCr420_709CSC color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.16 NppStatus nppiBGRToYCbCr420_709HDTV_8u_AC4P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr420_709HDTV color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.17 NppStatus nppiBGRToYCbCr420_8u_AC4P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr420 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.18 NppStatus nppiBGRToYCbCr420_8u_C3P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCbCr420 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.19 NppStatus nppiBGRToYCbCr422_8u_AC4C2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 2 channel 8-bit unsigned packed YCrCb422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.20 NppStatus nppiBGRToYCbCr422_8u_AC4P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCbCr422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.21 NppStatus nppiBGRToYCbCr422_8u_C3C2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 2 channel 8-bit unsigned packed YCrCb422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.22 NppStatus nppiBGRToYCbCr422_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCbCr422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.23 NppStatus nppiBGRToYCrCb420_709CSC_8u_AC4P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCrCb420_709CSC color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.24 NppStatus nppiBGRToYCrCb420_709CSC_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCrCb420_709CSC color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.25 NppStatus nppiBGRToYCrCb420_8u_AC4P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed BGR with alpha to 3 channel 8-bit unsigned planar YCrCb420 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.26 NppStatus nppiBGRToYCrCb420_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed BGR to 3 channel 8-bit unsigned planar YCrCb420 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.27 NppStatus nppiBGRToYUV420_8u_AC4P3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned pacmed BGR with alpha to 3 channel 8-bit unsigned planar YUV420 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.28 NppStatus nppiCbYCr422ToBGR_709HDTV_8u_C2C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned packed BGR_709HDTV color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.29 NppStatus nppiCbYCr422ToBGR_709HDTV_8u_C2C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

2 channel 8-bit unsigned packed CbYCr422 to 4 channel 8-bit unsigned packed BGR_709HDTV color conversion with constant alpha.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.30 NppStatus nppiCbYCr422ToBGR_8u_C2C4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

2 channel 8-bit unsigned packed CbYCr422 to 4 channel 8-bit unsigned packed BGR color conversion with alpha.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.31 NppStatus nppiCbYCr422ToRGB_8u_C2C3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed CbYCrC22 to 3 channel 8-bit unsigned packed RGB color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.32 NppStatus nppiColorToGray_16s_AC4C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aCoeffs*[3])

4 channel 16-bit signed packed RGB with alpha to 1 channel 16-bit signed packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
aCoeffs fixed size array of constant floating point conversion coefficient values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.33 NppStatus nppiColorToGray_16s_C3C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aCoeffs*[3])

3 channel 16-bit signed packed RGB to 1 channel 16-bit signed packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
aCoeffs fixed size array of constant floating point conversion coefficient values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.34 NppStatus nppiColorToGray_16u_AC4C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aCoeffs*[3])

4 channel 16-bit unsigned packed RGB with alpha to 1 channel 16-bit unsigned packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
aCoeffs fixed size array of constant floating point conversion coefficient values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.35 NppStatus nppiColorToGray_16u_C3C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aCoeffs*[3])

3 channel 16-bit unsigned packed RGB to 1 channel 16-bit unsigned packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCoeffs fixed size array of constant floating point conversion coefficient values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.36 NppStatus nppiColorToGray_32f_AC4C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aCoeffs*[3])

4 channel 32-bit floating point packed RGB with alpha to 1 channel 32-bit floating point packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCoeffs fixed size array of constant floating point conversion coefficient values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.37 NppStatus nppiColorToGray_32f_C3C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aCoeffs*[3])

3 channel 32-bit floating point packed RGB to 1 channel 32-bit floating point packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCoeffs fixed size array of constant floating point conversion coefficient values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.38 NppStatus nppiColorToGray_8u_AC4C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aCoeffs*[3])

4 channel 8-bit unsigned packed RGB with alpha to 1 channel 8-bit unsigned packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCoeffs fixed size array of constant floating point conversion coefficient values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.39 NppStatus nppiColorToGray_8u_C3C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aCoeffs*[3])

3 channel 8-bit unsigned packed RGB to 1 channel 8-bit unsigned packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCoeffs fixed size array of constant floating point conversion coefficient values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.40 NppStatus nppiHLSToBGR_8u_AC4P4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed HLS with alpha to 4 channel 8-bit unsigned planar BGR with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.41 NppStatus nppiHLSToBGR_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed HLS with alpha to 4 channel 8-bit unsigned packed BGR with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.42 NppStatus nppiHLSToBGR_8u_AP4C4R (const Npp8u ∗const *pSrc*[4], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned planar HLS with alpha to 4 channel 8-bit unsigned packed BGR with alpha color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.43 NppStatus nppiHLSToBGR_8u_AP4R (const Npp8u ∗const *pSrc*[4], int *nSrcStep*, Npp8u ∗ *pDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned planar HLS with alpha to 4 channel 8-bit unsigned planar BGR with alpha color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.44 NppStatus nppiHLSToBGR_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed HLS to 3 channel 8-bit unsigned planar BGR color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.45 NppStatus nppiHLSToBGR_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar HLS to 3 channel 8-bit unsigned packed BGR color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.46 NppStatus nppiHLSToBGR_8u_P3R (const Npp8u *const *pSrc*[3], int *nSrcStep*, Npp8u * *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar HLS to 3 channel 8-bit unsigned planar BGR color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.47 NppStatus nppiHLSToRGB_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed HLS with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.48 NppStatus nppiHLSToRGB_8u_C3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed HLS to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.49 NppStatus nppiHSVToRGB_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed HSV with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.50 NppStatus nppiHSVToRGB_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed HSV to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.51 NppStatus nppiLabToBGR_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed Lab to 3 channel 8-bit unsigned packed BGR color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.52 NppStatus nppiLUVToRGB_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed LUV with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.53 NppStatus nppiLUVToRGB_8u_C3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed LUV to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.54 NppStatus nppiRGBToCbYCr422_8u_C3C2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 2 channel 8-bit unsigned packed CbYCr422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.55 NppStatus nppiRGBToCbYCr422Gamma_8u_C3C2R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB first gets forward gamma corrected then converted to 2 channel 8-bit unsigned packed CbYCr422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.56 NppStatus nppiRGBToGray_16s_AC4C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit signed packed RGB with alpha to 1 channel 16-bit signed packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.57 NppStatus nppiRGBToGray_16s_C3C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 16-bit signed packed RGB to 1 channel 16-bit signed packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.58 NppStatus nppiRGBToGray_16u_AC4C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit unsigned packed RGB with alpha to 1 channel 16-bit unsigned packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.59 NppStatus nppiRGBToGray_16u_C3C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 16-bit unsigned packed RGB to 1 channel 16-bit unsigned packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.60 NppStatus nppiRGBToGray_32f_AC4C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit floating point packed RGB with alpha to 1 channel 32-bit floating point packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.61 NppStatus nppiRGBToGray_32f_C3C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 32-bit floating point packed RGB to 1 channel 32-bit floating point packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.62 NppStatus nppiRGBToGray_8u_AC4C1R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 1 channel 8-bit unsigned packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.63 NppStatus nppiRGBToGray_8u_C3C1R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 1 channel 8-bit unsigned packed Gray conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.64 NppStatus nppiRGBToHLS_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed HLS with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.65 NppStatus nppiRGBToHLS_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed HLS color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.66 NppStatus nppiRGBToHSV_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed HSV with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.67 NppStatus nppiRGBToHSV_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed HSV color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.68 NppStatus nppiRGBToLUV_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed LUV with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.69 NppStatus nppiRGBToLUV_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed LUV color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.70 NppStatus nppiRGBToXYZ_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed XYZ with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.71 NppStatus nppiRGBToXYZ_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed XYZ color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.72 NppStatus nppiRGBToYCbCr420_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YCbCr420 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.73 NppStatus nppiRGBToYCbCr422_8u_C3C2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 2 channel 8-bit unsigned packed YCbCr422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.74 NppStatus nppiRGBToYCbCr422_8u_C3P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YCbCr422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.75 NppStatus nppiRGBToYCbCr422_8u_P3C2R (const Npp8u *const *pSrc*[3], int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar RGB to 2 channel 8-bit unsigned packed YCbCr422 color conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.76 NppStatus nppiRGBToYCbCr_8u_AC4P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 3 channel 8-bit unsigned planar YCbCr color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.77 NppStatus nppiRGBToYCbCr_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 4 channel unsigned 8-bit packed YCbCr with alpha color conversion, not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.78 NppStatus nppiRGBToYCbCr_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel unsigned 8-bit planar YCbCr color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.79 NppStatus nppiRGBToYCbCr_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel unsigned 8-bit packed YCbCr color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.80 NppStatus nppiRGBToYCbCr_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel planar 8-bit unsigned RGB to 3 channel planar 8-bit YCbCr color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.81 NppStatus nppiRGBToYCC_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed YCC with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.82 NppStatus nppiRGBToYCC_8u_C3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed YCC color conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.83 NppStatus nppiRGBToYCrCb420_8u_AC4P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 3 channel 8-bit unsigned planar YCrCb420 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Planar-Image Pointer Array.
rDstStep Destination-Planar-Image Line Step Array.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.84 NppStatus nppiRGBToYCrCb422_8u_C3C2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 2 channel 8-bit unsigned packed YCrCb422 color conversion.

images.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.85 NppStatus nppiRGBToYCrCb422_8u_P3C2R (const Npp8u *const *pSrc*[3], int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar RGB to 2 channel 8-bit unsigned packed YCrCb422 color conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.86 NppStatus nppiRGBToYUV420_8u_C3P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YUV420 color conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Planar-Image Pointer Array.
rDstStep Destination-Planar-Image Line Step Array.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.87 NppStatus nppiRGBToYUV420_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar RGB to 3 channel 8-bit unsigned planar YUV420 color conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.
nSrcStep Source-Image Line Step.
pDst Destination-Planar-Image Pointer Array.
rDstStep Destination-Planar-Image Line Step Array.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.88 NppStatus nppiRGBToYUV422_8u_C3C2R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 2 channel 8-bit unsigned packed YUV422 color conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.89 NppStatus nppiRGBToYUV422_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YUV422 color conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Planar-Image Pointer Array.
rDstStep Destination-Planar-Image Line Step Array.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.90 NppStatus nppiRGBToYUV422_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar RGB to 3 channel 8-bit unsigned planar YUV422 color conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.91 NppStatus nppiRGBToYUV_8u_AC4P4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned planar YUV color conversion with alpha.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.92 NppStatus nppiRGBToYUV_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed RGB with alpha to 4 channel 8-bit unsigned packed YUV color conversion with alpha, not affecting alpha.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.93 NppStatus nppiRGBToYUV_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned planar YUV color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.94 NppStatus nppiRGBToYUV_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed RGB to 3 channel 8-bit unsigned packed YUV color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.95 NppStatus nppiRGBToYUV_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar RGB to 3 channel 8-bit unsigned planar YUV color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.96 NppStatus nppiXYZToRGB_8u_AC4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed XYZ with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.97 NppStatus nppiXYZToRGB_8u_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed XYZ to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.98 NppStatus nppiYCbCr411ToBGR_8u_P3C3R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned packed BGR color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.
rSrcStep Source-Planar-Image Line Step Array.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.99 NppStatus nppiYCbCr411ToBGR_8u_P3C4R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

3 channel 8-bit unsigned planar YCbCr411 to 4 channel 8-bit unsigned packed BGR color conversion with constant alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.
rSrcStep Source-Planar-Image Line Step Array.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.100 NppStatus nppiYCbCr420ToBGR_709CSC_8u_P3C3R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned packed BGR_709CSC color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.
rSrcStep Source-Planar-Image Line Step Array.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.101 NppStatus nppiYCbCr420ToBGR_709HDTV_8u_P3C4R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

3 channel 8-bit unsigned planar YCbCr420 to 4 channel 8-bit unsigned packed BGR_709HDTV color conversion with constant alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.102 NppStatus nppiYCbCr420ToBGR_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned packed BGR color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.103 NppStatus nppiYCbCr420ToBGR_8u_P3C4R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

3 channel 8-bit unsigned planar YCbCr420 to 4 channel 8-bit unsigned packed BGR color conversion with constant alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.104 NppStatus nppiYCbCr420ToRGB_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.105 NppStatus nppiYCbCr422ToBGR_8u_C2C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned packed BGR color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.106 NppStatus nppiYCbCr422ToBGR_8u_C2C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

2 channel 8-bit unsigned packed YCrCb422 to 4 channel 8-bit unsigned packed BGR color conversion with constant alpha.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.107 NppStatus nppiYCbCr422ToBGR_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr422 to 3 channel 8-bit unsigned packed BGR color conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.108 NppStatus nppiYCbCr422ToRGB_8u_C2C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned packed RGB color conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.109 NppStatus nppiYCbCr422ToRGB_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar RGB color conversion.

images.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Planar-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.110 NppStatus nppiYCbCr422ToRGB_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr422 to 3 channel 8-bit unsigned packed RGB color conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.
rSrcStep Source-Planar-Image Line Step Array.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.111 NppStatus nppiYCbCrToBGR_709CSC_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr to 3 channel 8-bit unsigned packed BGR_709CSC color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.112 NppStatus nppiYCbCrToBGR_709CSC_8u_P3C4R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

3 channel 8-bit unsigned planar YCbCr to 4 channel 8-bit unsigned packed BGR_709CSC color conversion with constant alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.113 NppStatus nppiYCbCrToBGR_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr to 3 channel 8-bit unsigned packed BGR color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.114 NppStatus nppiYCbCrToBGR_8u_P3C4R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

3 channel 8-bit unsigned planar YCbCr to 4 channel 8-bit unsigned packed BGR color conversion with constant alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.115 NppStatus nppiYCbCrToRGB_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed YCbCr with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion, not affecting alpha.

Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.116 NppStatus nppiYCbCrToRGB_8u_C3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed YCbCr to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.117 NppStatus nppiYCbCrToRGB_8u_P3C3R (const Npp8u *const *pSrc*[3], int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.118 NppStatus nppiYCbCrToRGB_8u_P3C4R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

3 channel 8-bit unsigned planar YCbCr to 4 channel 8-bit unsigned packed RGB color conversion with constant alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.119 NppStatus nppiYCbCrToRGB_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr to 3 channel 8-bit unsigned planar RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.120 NppStatus nppiYCCToRGB_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed YCC with alpha to 4 channel 8-bit unsigned packed RGB with alpha color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.121 NppStatus nppiYCCToRGB_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed YCC to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.122 NppStatus nppiYCrCb420ToRGB_8u_P3C4R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nAval*)

3 channel 8-bit unsigned planar YCrCb420 to 4 channel 8-bit unsigned packed RGB color conversion with constant alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nAval 8-bit unsigned alpha constant.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.123 NppStatus nppiYCrCb422ToRGB_8u_C2C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned packed RGB color conversion.

images.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.124 NppStatus nppiYCrCb422ToRGB_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned planar RGB color conversion.

images.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Planar-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.125 NppStatus nppiYUV420ToBGR_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV420 to 3 channel 8-bit unsigned packed BGR color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.
rSrcStep Source-Planar-Image Line Step Array.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.126 NppStatus nppiYUV420ToRGB_8u_P3AC4R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV420 to 4 channel 8-bit unsigned packed RGB color conversion with alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.127 NppStatus nppiYUV420ToRGB_8u_P3C3R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV420 to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.128 NppStatus nppiYUV420ToRGB_8u_P3R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV420 to 3 channel 8-bit unsigned planar RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.129 NppStatus nppiYUV422ToRGB_8u_C2C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YUV422 to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.130 NppStatus nppiYUV422ToRGB_8u_P3AC4R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV422 to 4 channel 8-bit unsigned packed RGB color conversion with alpha.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.131 NppStatus nppiYUV422ToRGB_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV422 to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.132 NppStatus nppiYUV422ToRGB_8u_P3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV422 to 3 channel 8-bit unsigned planar RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.133 NppStatus nppiYUVToRGB_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit packed YUV with alpha to 4 channel 8-bit unsigned packed RGB color conversion with alpha, not affecting alpha.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.134 NppStatus nppiYUVToRGB_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed YUV to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.135 NppStatus nppiYUVToRGB_8u_P3C3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV to 3 channel 8-bit unsigned packed RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.44.2.136 NppStatus nppiYUVToRGB_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YUV to 3 channel 8-bit unsigned planar RGB color conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45 Color Sampling Format Conversion

Routines for converting between various image color sampling formats.

YCbCr420ToYCbCr411

YCbCr420 to YCbCr411 sampling format conversion.

- NppStatus nppiYCbCr420ToYCbCr411_8u_P3P2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr420 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

- NppStatus nppiYCbCr420ToYCbCr411_8u_P2P3R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

YCbCr422ToYCbCr422

YCbCr422 to YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr422_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr422_8u_P3C2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr422 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

YCbCr422ToYCrCb422

YCbCr422 to YCrCb422 sampling format conversion.

- NppStatus nppiYCbCr422ToYCrCb422_8u_C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 2 channel 8-bit unsigned packed YCrCb422 sampling format conversion.

- NppStatus nppiYCbCr422ToYCrCb422_8u_P3C2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr422 to 2 channel 8-bit unsigned packed YCrCb422 sampling format conversion.

YCbCr422ToCbYCr422

YCbCr422 to CbYCr422 sampling format conversion.

- NppStatus nppiYCbCr422ToCbYCr422_8u_C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 2 channel 8-bit unsigned packed CbYCr422 sampling format conversion.

CbYCr422ToYCbCr411

CbYCr422 to YCbCr411 sampling format conversion.

- NppStatus nppiCbYCr422ToYCbCr411_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

YCbCr422ToYCbCr420

YCbCr422 to YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr422ToYCbCr420_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int nDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr422 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr422ToYCbCr420_8u_P3P2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr422 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr422ToYCbCr420_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr422ToYCbCr420_8u_C2P2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

YCrCb420ToYCbCr422

YCrCb420 to YCbCr422 sampling format conversion.

- NppStatus nppiYCrCb420ToYCbCr422_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

3 channel 8-bit unsigned planar YCrCb420 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

- NppStatus nppiYCrCb420ToYCbCr422_8u_P3C2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCrCb420 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

YCbCr422ToYCrCb420

YCbCr422 to YCrCb420 sampling format conversion.

- NppStatus nppiYCbCr422ToYCrCb420_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar YCrCb420 sampling format conversion.

YCbCr422ToYCbCr411

YCbCr422 to YCbCr411 sampling format conversion.

- NppStatus nppiYCbCr422ToYCbCr411_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr422 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

- NppStatus nppiYCbCr422ToYCbCr411_8u_P3P2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr422 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

- NppStatus nppiYCbCr422ToYCbCr411_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

- NppStatus nppiYCbCr422ToYCbCr411_8u_C2P2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCbCr422 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

YCrCb422ToYCbCr422

YCrCb422 to YCbCr422 sampling format conversion.

- NppStatus nppiYCrCb422ToYCbCr422_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

YCrCb422ToYCbCr420

YCrCb422 to YCbCr420 sampling format conversion.

- NppStatus nppiYCrCb422ToYCbCr420_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

YCrCb422ToYCbCr411

YCrCb422 to YCbCr411 sampling format conversion.

- NppStatus nppiYCrCb422ToYCbCr411_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

CbYCr422ToYCbCr422

CbYCr422 to YCbCr422 sampling format conversion.

- NppStatus nppiCbYCr422ToYCbCr422_8u_C2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned packed CbYCr422 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

- NppStatus nppiCbYCr422ToYCbCr422_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

CbYCr422ToYCbCr420

CbYCr422 to YCbCr420 sampling format conversion.

- NppStatus nppiCbYCr422ToYCbCr420_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

- NppStatus nppiCbYCr422ToYCbCr420_8u_C2P2R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

2 channel 8-bit unsigned packed CbYCr422 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

CbYCr422ToYCrCb420

CbYCr422 to YCrCb420 sampling format conversion.

- NppStatus nppiCbYCr422ToYCrCb420_8u_C2P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned planar YCrCb420 sampling format conversion.

YCbCr420ToYCbCr420

YCbCr420 to YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr420_8u_P3P2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr420 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr420_8u_P2P3R (const Npp8u ∗const pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

YCbCr420ToYCbCr422

YCbCr420 to YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr420ToYCbCr422_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int nDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr420ToYCbCr422_8u_P2P3R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr420ToYCbCr422_8u_P2C2R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr420 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

YCbCr420ToCbYCr422

YCbCr420 to CbYCr422 sampling format conversion.

- NppStatus nppiYCbCr420ToCbYCr422_8u_P2C2R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr420 to 2 channel 8-bit unsigned packed CbYCr422 sampling format conversion.

YCbCr420ToYCrCb420

YCbCr420 to YCrCb420 sampling format conversion.

- NppStatus nppiYCbCr420ToYCrCb420_8u_P2P3R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCrCb420 sampling format conversion.

YCrCb420ToCbYCr422

YCrCb420 to CbYCr422 sampling format conversion.

- NppStatus nppiYCrCb420ToCbYCr422_8u_P3C2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCrCb420 to 2 channel 8-bit unsigned packed CbYCr422 sampling format conversion.

YCrCb420ToYCbCr420

YCrCb420 to YCbCr420 sampling format conversion.

- NppStatus nppiYCrCb420ToYCbCr420_8u_P3P2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCrCb420 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

YCrCb420ToYCbCr411

YCrCb420 to YCbCr411 sampling format conversion.

- NppStatus nppiYCrCb420ToYCbCr411_8u_P3P2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCrCb420 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

YCbCr411ToYCbCr411

YCbCr411 to YCbCr411 sampling format conversion.

- NppStatus nppiYCbCr411_8u_P3P2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

- NppStatus nppiYCbCr411_8u_P2P3R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

YCbCr411ToYCbCr422

YCbCr411 to YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr411ToYCbCr422_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int nDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr411ToYCbCr422_8u_P3C2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr411ToYCbCr422_8u_P2P3R (const Npp8u ∗const pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

- NppStatus nppiYCbCr411ToYCbCr422_8u_P2C2R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

YCbCr411ToYCrCb422

YCbCr411 to YCrCb422 sampling format conversion.

- NppStatus nppiYCbCr411ToYCrCb422_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int nDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCrCb422 sampling format conversion.

- NppStatus nppiYCbCr411ToYCrCb422_8u_P3C2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

3 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned packed YCrCb422 sampling format conversion.

YCbCr411ToYCbCr420

YCbCr411 to YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr411ToYCbCr420_8u_P3R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDst[3], int nDstStep[3], NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr411ToYCbCr420_8u_P3P2R (const Npp8u ∗const pSrc[3], int rSrcStep[3], Npp8u ∗pDstY, int nDstYStep, Npp8u ∗pDstCbCr, int nDstCbCrStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

- NppStatus nppiYCbCr411ToYCbCr420_8u_P2P3R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

YCbCr411ToYCrCb420

YCbCr411 to YCrCb420 sampling format conversion.

- NppStatus nppiYCbCr411ToYCrCb420_8u_P2P3R (const Npp8u ∗pSrcY, int nSrcYStep, const Npp8u ∗pSrcCbCr, int nSrcCbCrStep, Npp8u ∗pDst[3], int rDstStep[3], NppiSize oSizeROI)

  2 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCrCb420 sampling format conversion.

7.45.1 Detailed Description

Routines for converting between various image color sampling formats.

7.45.2 Function Documentation

7.45.2.1 NppStatus nppiCbYCr422ToYCbCr411_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.2 NppStatus nppiCbYCr422ToYCbCr420_8u_C2P2R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDstY*, int *nDstYStep*, Npp8u ∗ *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed CbYCr422 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.3 NppStatus nppiCbYCr422ToYCbCr420_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.4 NppStatus nppiCbYCr422ToYCbCr422_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.5 NppStatus nppiCbYCr422ToYCbCr422_8u_C2R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed CbYCr422 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.6 NppStatus nppiCbYCr422ToYCrCb420_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed CbYCr422 to 3 channel 8-bit unsigned planar YCrCb420 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.7 NppStatus nppiYCbCr411_8u_P2P3R (const Npp8u ∗ *pSrcY*, int *nSrcYStep*, const Npp8u ∗ *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.8 NppStatus nppiYCbCr411_8u_P3P2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDstY*, int *nDstYStep*, Npp8u ∗ *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.9 NppStatus nppiYCbCr411ToYCbCr420_8u_P2P3R (const Npp8u ∗ *pSrcY*, int *nSrcYStep*, const Npp8u ∗ *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.10 NppStatus nppiYCbCr411ToYCbCr420_8u_P3P2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDstY*, int *nDstYStep*, Npp8u ∗ *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.11 NppStatus nppiYCbCr411ToYCbCr420_8u_P3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*[3], int *nDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.
rSrcStep Source-Planar-Image Line Step Array.
pDst Destination-Planar-Image Pointer Array.
nDstStep Destination-Planar-Image Line Step Array.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.12 NppStatus nppiYCbCr411ToYCbCr422_8u_P2C2R (const Npp8u ∗ *pSrcY*, int *nSrcYStep*, const Npp8u ∗ *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.
nSrcYStep Source-Planar-Image Line Step.
pSrcCbCr Source-Planar-Image Pointer.
nSrcCbCrStep Source-Planar-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.13 NppStatus nppiYCbCr411ToYCbCr422_8u_P2P3R (const Npp8u ∗const *pSrcY*, int *nSrcYStep*, const Npp8u ∗ *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.
nSrcYStep Source-Planar-Image Line Step.
pSrcCbCr Source-Planar-Image Pointer.
nSrcCbCrStep Source-Planar-Image Line Step.
pDst Destination-Planar-Image Pointer Array.
rDstStep Destination-Planar-Image Line Step Array.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.14 NppStatus nppiYCbCr411ToYCbCr422_8u_P3C2R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.15 NppStatus nppiYCbCr411ToYCbCr422_8u_P3R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*[3], int *nDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.16 NppStatus nppiYCbCr411ToYCrCb420_8u_P2P3R (const Npp8u * *pSrcY*, int *nSrcYStep*, const Npp8u * *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCrCb420 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.17 NppStatus nppiYCbCr411ToYCrCb422_8u_P3C2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr411 to 2 channel 8-bit unsigned packed YCrCb422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.18 NppStatus nppiYCbCr411ToYCrCb422_8u_P3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*[3], int *nDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr411 to 3 channel 8-bit unsigned planar YCrCb422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.19 NppStatus nppiYCbCr420_8u_P2P3R (const Npp8u ∗const *pSrcY*, int *nSrcYStep*, const Npp8u ∗ *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.20 NppStatus nppiYCbCr420_8u_P3P2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDstY*, int *nDstYStep*, Npp8u ∗ *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr420 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.21 NppStatus nppiYCbCr420ToCbYCr422_8u_P2C2R (const Npp8u ∗ *pSrcY*, int *nSrcYStep*, const Npp8u ∗ *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr420 to 2 channel 8-bit unsigned packed CbYCr422 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.22 NppStatus nppiYCbCr420ToYCbCr411_8u_P2P3R (const Npp8u * *pSrcY*, int *nSrcYStep*, const Npp8u * *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.23 NppStatus nppiYCbCr420ToYCbCr411_8u_P3P2R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDstY*, int *nDstYStep*, Npp8u * *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr420 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.24 NppStatus nppiYCbCr420ToYCbCr422_8u_P2C2R (const Npp8u ∗ *pSrcY*, int *nSrcYStep*, const Npp8u ∗ *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr420 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.25 NppStatus nppiYCbCr420ToYCbCr422_8u_P2P3R (const Npp8u ∗ *pSrcY*, int *nSrcYStep*, const Npp8u ∗ *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.26 NppStatus nppiYCbCr420ToYCbCr422_8u_P3R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*[3], int *nDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.27 NppStatus nppiYCbCr420ToYCrCb420_8u_P2P3R (const Npp8u * *pSrcY*, int *nSrcYStep*, const Npp8u * *pSrcCbCr*, int *nSrcCbCrStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned planar YCbCr420 to 3 channel 8-bit unsigned planar YCrCb420 sampling format conversion.

Parameters:

pSrcY Source-Planar-Image Pointer.

nSrcYStep Source-Planar-Image Line Step.

pSrcCbCr Source-Planar-Image Pointer.

nSrcCbCrStep Source-Planar-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.28 NppStatus nppiYCbCr422_8u_C2P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.29 NppStatus nppiYCbCr422_8u_P3C2R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr422 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.30 NppStatus nppiYCbCr422ToCbYCr422_8u_C2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 2 channel 8-bit unsigned packed CbYCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.31 NppStatus nppiYCbCr422ToYCbCr411_8u_C2P2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDstY*, int *nDstYStep*, Npp8u * *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.32 NppStatus nppiYCbCr422ToYCbCr411_8u_C2P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.33 NppStatus nppiYCbCr422ToYCbCr411_8u_P3P2R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDstY*, int *nDstYStep*, Npp8u * *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr422 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.34 NppStatus nppiYCbCr422ToYCbCr411_8u_P3R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr422 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.35 NppStatus nppiYCbCr422ToYCbCr420_8u_C2P2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDstY*, int *nDstYStep*, Npp8u * *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.36 NppStatus nppiYCbCr422ToYCbCr420_8u_C2P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.37 NppStatus nppiYCbCr422ToYCbCr420_8u_P3P2R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDstY*, int *nDstYStep*, Npp8u * *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr422 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.38 NppStatus nppiYCbCr422ToYCbCr420_8u_P3R (const Npp8u *const *pSrc*[3], int *rSrcStep*[3], Npp8u * *pDst*[3], int *nDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr422 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

- ***pSrc*** Source-Planar-Image Pointer Array.
- ***rSrcStep*** Source-Planar-Image Line Step Array.
- ***pDst*** Destination-Planar-Image Pointer Array.
- ***nDstStep*** Destination-Planar-Image Line Step Array.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.39 NppStatus nppiYCbCr422ToYCrCb420_8u_C2P3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 3 channel 8-bit unsigned planar YCrCb420 sampling format conversion.

images.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Planar-Image Pointer Array.
- ***rDstStep*** Destination-Planar-Image Line Step Array.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.40 NppStatus nppiYCbCr422ToYCrCb422_8u_C2R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCbCr422 to 2 channel 8-bit unsigned packed YCrCb422 sampling format conversion.

images.

Parameters:

- ***pSrc*** Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.41 NppStatus nppiYCbCr422ToYCrCb422_8u_P3C2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCbCr422 to 2 channel 8-bit unsigned packed YCrCb422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.42 NppStatus nppiYCrCb420ToCbYCr422_8u_P3C2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCrCb420 to 2 channel 8-bit unsigned packed CbYCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.43 NppStatus nppiYCrCb420ToYCbCr411_8u_P3P2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDstY*, int *nDstYStep*, Npp8u ∗ *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCrCb420 to 2 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.44 NppStatus nppiYCrCb420ToYCbCr420_8u_P3P2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDstY*, int *nDstYStep*, Npp8u ∗ *pDstCbCr*, int *nDstCbCrStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCrCb420 to 2 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDstY Destination-Planar-Image Pointer.

nDstYStep Destination-Planar-Image Line Step.

pDstCbCr Destination-Planar-Image Pointer.

nDstCbCrStep Destination-Planar-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.45 NppStatus nppiYCrCb420ToYCbCr422_8u_P3C2R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCrCb420 to 2 channel 8-bit unsigned packed YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.46 NppStatus nppiYCrCb420ToYCbCr422_8u_P3R (const Npp8u ∗const *pSrc*[3], int *rSrcStep*[3], Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar YCrCb420 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Planar-Image Pointer Array.

rSrcStep Source-Planar-Image Line Step Array.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.47 NppStatus nppiYCrCb422ToYCbCr411_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned planar YCbCr411 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.48 NppStatus nppiYCrCb422ToYCbCr420_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned planar YCbCr420 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.45.2.49 NppStatus nppiYCrCb422ToYCbCr422_8u_C2P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*[3], int *rDstStep*[3], NppiSize *oSizeROI*)

2 channel 8-bit unsigned packed YCrCb422 to 3 channel 8-bit unsigned planar YCbCr422 sampling format conversion.

images.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Planar-Image Pointer Array.

rDstStep Destination-Planar-Image Line Step Array.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46 Color Gamma Correction

Routines for correcting image color gamma.

GammaFwd

Forward gamma correction.

- NppStatus nppiGammaFwd_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed color not in place forward gamma correction.

- NppStatus nppiGammaFwd_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed color in place forward gamma correction.

- NppStatus nppiGammaFwd_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed color with alpha not in place forward gamma correction.

- NppStatus nppiGammaFwd_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed color with alpha in place forward gamma correction.

- NppStatus nppiGammaFwd_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar color not in place forward gamma correction.

- NppStatus nppiGammaFwd_8u_IP3R (Npp8u ∗const pSrcDst[3], int nSrcDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar color in place forward gamma correction.

GammaInv

Inverse gamma correction.

- NppStatus nppiGammaInv_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed color not in place inverse gamma correction.

- NppStatus nppiGammaInv_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned packed color in place inverse gamma correction.

- NppStatus nppiGammaInv_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed color with alpha not in place inverse gamma correction.

- NppStatus nppiGammaInv_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned packed color with alpha in place inverse gamma correction.

- NppStatus nppiGammaInv_8u_P3R (const Npp8u ∗const pSrc[3], int nSrcStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar color not in place inverse gamma correction.

- NppStatus nppiGammaInv_8u_IP3R (Npp8u ∗const pSrcDst[3], int nSrcDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned planar color in place inverse gamma correction.

7.46.1 Detailed Description

Routines for correcting image color gamma.

7.46.2 Function Documentation

7.46.2.1 NppStatus nppiGammaFwd_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed color with alpha in place forward gamma correction.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.2 NppStatus nppiGammaFwd_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed color with alpha not in place forward gamma correction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.3 NppStatus nppiGammaFwd_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed color in place forward gamma correction.

Parameters:

pSrcDst in place packed pixel image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.4 NppStatus nppiGammaFwd_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed color not in place forward gamma correction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.5 NppStatus nppiGammaFwd_8u_IP3R (Npp8u ∗const *pSrcDst*[3], int *nSrcDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar color in place forward gamma correction.

Parameters:

pSrcDst in place planar pixel format image pointer array.

nSrcDstStep in place planar pixel format image line step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.6 NppStatus nppiGammaFwd_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar color not in place forward gamma correction.

Parameters:

pSrc source planar pixel format image pointer array.

nSrcStep source planar pixel format image line step.

pDst destination planar pixel format image pointer array.

nDstStep destination planar pixel format image line step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.7 NppStatus nppiGammaInv_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed color with alpha in place inverse gamma correction.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.8 NppStatus nppiGammaInv_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned packed color with alpha not in place inverse gamma correction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.9 NppStatus nppiGammaInv_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed color in place inverse gamma correction.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.10 NppStatus nppiGammaInv_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned packed color not in place inverse gamma correction.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.11 NppStatus nppiGammaInv_8u_IP3R (Npp8u ∗const *pSrcDst*[3], int *nSrcDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar color in place inverse gamma correction.

Parameters:

pSrcDst in place planar pixel format image pointer array.

nSrcDstStep in place planar pixel format image line step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.46.2.12 NppStatus nppiGammaInv_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned planar color not in place inverse gamma correction.

Parameters:

pSrc source planar pixel format image pointer array.

nSrcStep source planar pixel format image line step.

pDst destination planar pixel format image pointer array.

nDstStep destination planar pixel format image line step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.47 Complement Color Key

Routines for performing complement color key replacement.

CompColorKey

Complement color key replacement.

- NppStatus nppiCompColorKey_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nColorKeyConst)

  1 channel 8-bit unsigned packed color complement color key replacement of source image 1 by source image 2.

- NppStatus nppiCompColorKey_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nColorKeyConst[3])

  3 channel 8-bit unsigned packed color complement color key replacement of source image 1 by source image 2.

- NppStatus nppiCompColorKey_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nColorKeyConst[4])

  4 channel 8-bit unsigned packed color complement color key replacement of source image 1 by source image 2.

- NppStatus nppiAlphaCompColorKey_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, Npp8u nAlpha1, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u nAlpha2, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp8u nColorKeyConst[4], NppiAlphaOp nppAlphaOp)

  4 channel 8-bit unsigned packed color complement color key replacement of source image 1 by source image 2 with alpha blending.

7.47.1 Detailed Description

Routines for performing complement color key replacement.

7.47.2 Function Documentation

7.47.2.1 NppStatus nppiAlphaCompColorKey_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, Npp8u *nAlpha1*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u *nAlpha2*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nColorKeyConst*[4], NppiAlphaOp *nppAlphaOp*)

4 channel 8-bit unsigned packed color complement color key replacement of source image 1 by source image 2 with alpha blending.

Parameters:

pSrc1 source1 packed pixel format image pointer.

nSrc1Step source1 packed pixel format image line step.

nAlpha1 source1 image alpha opacity (0 - max channel pixel value).

pSrc2 source2 packed pixel format image pointer.

nSrc2Step source2 packed pixel format image line step.

nAlpha2 source2 image alpha opacity (0 - max channel pixel value).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nColorKeyConst color key constant array

nppAlphaOp NppiAlphaOp alpha compositing operation selector (excluding premul ops).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.47.2.2 NppStatus nppiCompColorKey_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nColorKeyConst*)

1 channel 8-bit unsigned packed color complement color key replacement of source image 1 by source image 2.

Parameters:

pSrc1 source1 packed pixel format image pointer.

nSrc1Step source1 packed pixel format image line step.

pSrc2 source2 packed pixel format image pointer.

nSrc2Step source2 packed pixel format image line step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nColorKeyConst color key constant

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.47.2.3 NppStatus nppiCompColorKey_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nColorKeyConst*[3])

3 channel 8-bit unsigned packed color complement color key replacement of source image 1 by source image 2.

Parameters:

pSrc1 source1 packed pixel format image pointer.

nSrc1Step source1 packed pixel format image line step.

pSrc2 source2 packed pixel format image pointer.

nSrc2Step source2 packed pixel format image line step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nColorKeyConst color key constant array

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.47.2.4 NppStatus nppiCompColorKey_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp8u *nColorKeyConst*[4])

4 channel 8-bit unsigned packed color complement color key replacement of source image 1 by source image 2.

Parameters:

pSrc1 source1 packed pixel format image pointer.

nSrc1Step source1 packed pixel format image line step.

pSrc2 source2 packed pixel format image pointer.

nSrc2Step source2 packed pixel format image line step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nColorKeyConst color key constant array

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48 Color Processing

Routines for performing image color manipulation.

ColorTwist

Perform color twist pixel processing.

Color twist consists of applying the following formula to each image pixel using coefficients from the user supplied color twist host matrix array as follows where dst[x] and src[x] represent destination pixel and source pixel channel or plane x.

```
dst[0] = aTwist[0][0] * src[0] + aTwist[0][1] * src[1] + aTwist[0][2] * src[2] + aTwist[0][3]
dst[1] = aTwist[1][0] * src[0] + aTwist[1][1] * src[1] + aTwist[1][2] * src[2] + aTwist[1][3]
dst[2] = aTwist[2][0] * src[0] + aTwist[2][1] * src[1] + aTwist[2][2] * src[2] + aTwist[2][3]
```

- NppStatus nppiColorTwist32f_8u_C3R (const Npp8u *pSrc, int nSrcStep, Npp8u *pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 8-bit unsigned color twist.

- NppStatus nppiColorTwist32f_8u_C3IR (Npp8u *pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 8-bit unsigned in place color twist.

- NppStatus nppiColorTwist32f_8u_AC4R (const Npp8u *pSrc, int nSrcStep, Npp8u *pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 8-bit unsigned color twist, not affecting Alpha.

- NppStatus nppiColorTwist32f_8u_AC4IR (Npp8u *pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 8-bit unsigned in place color twist, not affecting Alpha.

- NppStatus nppiColorTwist32f_8u_P3R (const Npp8u *const pSrc[3], int nSrcStep, Npp8u *const pDst[3], int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 8-bit unsigned planar color twist.

- NppStatus nppiColorTwist32f_8u_IP3R (Npp8u *const pSrcDst[3], int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 8-bit unsigned planar in place color twist.

- NppStatus nppiColorTwist32f_8s_C3R (const Npp8s *pSrc, int nSrcStep, Npp8s *pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 8-bit signed color twist.

- NppStatus nppiColorTwist32f_8s_C3IR (Npp8s *pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 8-bit signed in place color twist.

- NppStatus nppiColorTwist32f_8s_AC4R (const Npp8s *pSrc, int nSrcStep, Npp8s *pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 8-bit signed color twist, not affecting Alpha.

- NppStatus nppiColorTwist32f_8s_AC4IR (Npp8s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 8-bit signed in place color twist, not affecting Alpha.

- NppStatus nppiColorTwist32f_8s_P3R (const Npp8s ∗const pSrc[3], int nSrcStep, Npp8s ∗const pDst[3], int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 8-bit signed planar color twist.

- NppStatus nppiColorTwist32f_8s_IP3R (Npp8s ∗const pSrcDst[3], int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 8-bit signed planar in place color twist.

- NppStatus nppiColorTwist32f_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 16-bit unsigned color twist.

- NppStatus nppiColorTwist32f_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 16-bit unsigned in place color twist.

- NppStatus nppiColorTwist32f_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 16-bit unsigned color twist, not affecting Alpha.

- NppStatus nppiColorTwist32f_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 16-bit unsigned in place color twist, not affecting Alpha.

- NppStatus nppiColorTwist32f_16u_P3R (const Npp16u ∗const pSrc[3], int nSrcStep, Npp16u ∗const pDst[3], int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 16-bit unsigned planar color twist.

- NppStatus nppiColorTwist32f_16u_IP3R (Npp16u ∗const pSrcDst[3], int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 16-bit unsigned planar in place color twist.

- NppStatus nppiColorTwist32f_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 16-bit signed color twist.

- NppStatus nppiColorTwist32f_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 16-bit signed in place color twist.

- NppStatus nppiColorTwist32f_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 16-bit signed color twist, not affecting Alpha.

- NppStatus nppiColorTwist32f_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

4 channel 16-bit signed in place color twist, not affecting Alpha.

- NppStatus nppiColorTwist32f_16s_P3R (const Npp16s ∗const pSrc[3], int nSrcStep, Npp16s ∗const pDst[3], int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 16-bit signed planar color twist.

- NppStatus nppiColorTwist32f_16s_IP3R (Npp16s ∗const pSrcDst[3], int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 16-bit signed planar in place color twist.

- NppStatus nppiColorTwist_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 32-bit floating point color twist.

- NppStatus nppiColorTwist_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 32-bit floating point in place color twist.

- NppStatus nppiColorTwist_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 32-bit floating point color twist, not affecting Alpha.

- NppStatus nppiColorTwist_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  4 channel 32-bit floating point in place color twist, not affecting Alpha.

- NppStatus nppiColorTwist_32f_P3R (const Npp32f ∗const pSrc[3], int nSrcStep, Npp32f ∗const pDst[3], int nDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 32-bit floating point planar color twist.

- NppStatus nppiColorTwist_32f_IP3R (Npp32f ∗const pSrcDst[3], int nSrcDstStep, NppiSize oSizeROI, const Npp32f aTwist[3][4])

  3 channel 32-bit floating point planar in place color twist.

ColorLUT

Perform image color processing using members of various types of color look up tables.

- NppStatus nppiLUT_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  8-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  8-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 8-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 8-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 8-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_8u_C4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 8-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 8-bit unsigned look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 8-bit unsigned look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_16u_C4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit unsigned look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

4 channel 16-bit unsigned look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_16s_C4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit signed look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit signed look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues, const Npp32f ∗pLevels, int nLevels)

  32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues, const Npp32f ∗pLevels, int nLevels)

  32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  3 channel 32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  3 channel 32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[4], const Npp32f ∗pLevels[4], int nLevels[4])

  4 channel 32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_32f_C4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[4], const Npp32f ∗pLevels[4], int nLevels[4])

  4 channel 32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  4 channel 32-bit floating point look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  4 channel 32-bit floating point look-up-table in place color conversion, not affecting Alpha.

ColorLUT_Linear

Perform image color processing using linear interpolation between members of various types of color look up tables.

- NppStatus nppiLUT_Linear_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  8-bit unsigned linear interpolated look-up-table color conversion.

- NppStatus nppiLUT_Linear_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  8-bit unsigned linear interpolated look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 8-bit unsigned linear interpolated look-up-table color conversion.

- NppStatus nppiLUT_Linear_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 8-bit unsigned linear interpolated look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 8-bit unsigned linear interpolated look-up-table color conversion.

- NppStatus nppiLUT_Linear_8u_C4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 8-bit unsigned linear interpolated look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 8-bit unsigned linear interpolated look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_Linear_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 8-bit unsigned linear interpolated look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_Linear_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_Linear_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_Linear_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_Linear_16u_C4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit unsigned look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_Linear_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit unsigned look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_Linear_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_Linear_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_Linear_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_Linear_16s_C4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit signed look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_Linear_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit signed look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_Linear_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues, const Npp32f ∗pLevels, int nLevels)

  32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_Linear_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues, const Npp32f ∗pLevels, int nLevels)

  32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  3 channel 32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_Linear_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  3 channel 32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[4], const Npp32f ∗pLevels[4], int nLevels[4])

  4 channel 32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_Linear_32f_C4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[4], const Npp32f ∗pLevels[4], int nLevels[4])

  4 channel 32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_Linear_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  4 channel 32-bit floating point look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_Linear_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  4 channel 32-bit floating point look-up-table in place color conversion, not affecting Alpha.

ColorLUT_Cubic

Perform image color processing using linear interpolation between members of various types of color look up tables.

- NppStatus nppiLUT_Cubic_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  8-bit unsigned cubic interpolated look-up-table color conversion.

- NppStatus nppiLUT_Cubic_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  8-bit unsigned cubic interpolated look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 8-bit unsigned cubic interpolated look-up-table color conversion.

- NppStatus nppiLUT_Cubic_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 8-bit unsigned cubic interpolated look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 8-bit unsigned cubic interpolated look-up-table color conversion.

- NppStatus nppiLUT_Cubic_8u_C4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 8-bit unsigned cubic interpolated look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 8-bit unsigned cubic interpolated look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_Cubic_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 8-bit unsigned cubic interpolated look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_Cubic_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_Cubic_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_Cubic_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

3 channel 16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit unsigned look-up-table color conversion.

- NppStatus nppiLUT_Cubic_16u_C4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit unsigned look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit unsigned look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_Cubic_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit unsigned look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_Cubic_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_Cubic_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues, const Npp32s ∗pLevels, int nLevels)

  16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_Cubic_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  3 channel 16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit signed look-up-table color conversion.

- NppStatus nppiLUT_Cubic_16s_C4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[4], const Npp32s ∗pLevels[4], int nLevels[4])

  4 channel 16-bit signed look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit signed look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_Cubic_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32s ∗pValues[3], const Npp32s ∗pLevels[3], int nLevels[3])

  4 channel 16-bit signed look-up-table in place color conversion, not affecting Alpha.

- NppStatus nppiLUT_Cubic_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues, const Npp32f ∗pLevels, int nLevels)

  32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_Cubic_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues, const Npp32f ∗pLevels, int nLevels)

  32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  3 channel 32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_Cubic_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  3 channel 32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[4], const Npp32f ∗pLevels[4], int nLevels[4])

  4 channel 32-bit floating point look-up-table color conversion.

- NppStatus nppiLUT_Cubic_32f_C4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[4], const Npp32f ∗pLevels[4], int nLevels[4])

  4 channel 32-bit floating point look-up-table in place color conversion.

- NppStatus nppiLUT_Cubic_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  4 channel 32-bit floating point look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUT_Cubic_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f ∗pValues[3], const Npp32f ∗pLevels[3], int nLevels[3])

  4 channel 32-bit floating point look-up-table in place color conversion, not affecting Alpha.

ColorLUTPalette

Perform image color processing using various types of bit range restricted palette color look up tables.

- NppStatus nppiLUTPalette_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pTable, int nBitSize)

  One channel 8-bit unsigned bit range restricted palette look-up-table color conversion.

- NppStatus nppiLUTPalette_8u24u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pTable, int nBitSize)

  One channel 8-bit unsigned bit range restricted 24-bit palette look-up-table color conversion with 24-bit destination output per pixel.

- NppStatus nppiLUTPalette_8u32u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32u ∗pTable, int nBitSize)

  One channel 8-bit unsigned bit range restricted 32-bit palette look-up-table color conversion with 32-bit destination output per pixel.

- NppStatus nppiLUTPalette_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pTables[3], int nBitSize)

  Three channel 8-bit unsigned bit range restricted palette look-up-table color conversion.

- NppStatus nppiLUTPalette_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pTables[4], int nBitSize)

  Four channel 8-bit unsigned bit range restricted palette look-up-table color conversion.

- NppStatus nppiLUTPalette_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pTables[3], int nBitSize)

  Four channel 8-bit unsigned bit range restricted palette look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUTPalette_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u ∗pTable, int nBitSize)

  One channel 16-bit unsigned bit range restricted palette look-up-table color conversion.

- NppStatus nppiLUTPalette_16u8u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pTable, int nBitSize)

  One channel 16-bit unsigned bit range restricted 8-bit unsigned palette look-up-table color conversion with 8-bit unsigned destination output per pixel.

- NppStatus nppiLUTPalette_16u24u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pTable, int nBitSize)

  One channel 16-bit unsigned bit range restricted 24-bit unsigned palette look-up-table color conversion with 24-bit unsigned destination output per pixel.

- NppStatus nppiLUTPalette_16u32u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32u ∗pTable, int nBitSize)

  One channel 16-bit unsigned bit range restricted 32-bit palette look-up-table color conversion with 32-bit unsigned destination output per pixel.

- NppStatus nppiLUTPalette_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u ∗pTables[3], int nBitSize)

  Three channel 16-bit unsigned bit range restricted palette look-up-table color conversion.

- NppStatus nppiLUTPalette_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u ∗pTables[4], int nBitSize)

  Four channel 16-bit unsigned bit range restricted palette look-up-table color conversion.

- NppStatus nppiLUTPalette_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u ∗pTables[3], int nBitSize)

  Four channel 16-bit unsigned bit range restricted palette look-up-table color conversion, not affecting Alpha.

- NppStatus nppiLUTPaletteSwap_8u_C3A0C4R (const Npp8u ∗pSrc, int nSrcStep, int nAlphaValue, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pTables[3], int nBitSize)

  Three channel 8-bit unsigned source bit range restricted palette look-up-table color conversion to four channel 8-bit unsigned destination output with alpha.

- NppStatus nppiLUTPaletteSwap_16u_C3A0C4R (const Npp16u ∗pSrc, int nSrcStep, int nAlphaValue, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u ∗pTables[3], int nBitSize)

  Three channel 16-bit unsigned source bit range restricted palette look-up-table color conversion to four channel 16-bit unsigned destination output with alpha.

7.48.1 Detailed Description

Routines for performing image color manipulation.

7.48.2 Function Documentation

7.48.2.1 NppStatus nppiColorTwist32f_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 16-bit signed in place color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.2 NppStatus nppiColorTwist32f_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 16-bit signed color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.3 NppStatus nppiColorTwist32f_16s_C3IR (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 16-bit signed in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place packed pixel format image pointer.
nSrcDstStep in place packed pixel format image line step.
oSizeROI Region-of-Interest (ROI).
aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.4 NppStatus nppiColorTwist32f_16s_C3R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 16-bit signed color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.5 NppStatus nppiColorTwist32f_16s_IP3R (Npp16s *const *pSrcDst*[3], int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 16-bit signed planar in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place planar pixel format image pointer array, one pointer per plane.
nSrcDstStep in place planar pixel format image line step.
oSizeROI Region-of-Interest (ROI).
aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.6 NppStatus nppiColorTwist32f_16s_P3R (const Npp16s ∗const *pSrc*[3], int *nSrcStep*, Npp16s ∗const *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 16-bit signed planar color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.7 NppStatus nppiColorTwist32f_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 16-bit unsigned in place color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.8 NppStatus nppiColorTwist32f_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 16-bit unsigned color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.9 NppStatus nppiColorTwist32f_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 16-bit unsigned in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.10 NppStatus nppiColorTwist32f_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 16-bit unsigned color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.11 NppStatus nppiColorTwist32f_16u_IP3R (Npp16u ∗const *pSrcDst*[3], int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 16-bit unsigned planar in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place planar pixel format image pointer array, one pointer per plane.

nSrcDstStep in place planar pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.12 NppStatus nppiColorTwist32f_16u_P3R (const Npp16u ∗const *pSrc*[3], int *nSrcStep*, Npp16u ∗const *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 16-bit unsigned planar color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.13 NppStatus nppiColorTwist32f_8s_AC4IR (Npp8s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 8-bit signed in place color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.14 NppStatus nppiColorTwist32f_8s_AC4R (const Npp8s * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 8-bit signed color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.15 NppStatus nppiColorTwist32f_8s_C3IR (Npp8s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 8-bit signed in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.16 NppStatus nppiColorTwist32f_8s_C3R (const Npp8s * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 8-bit signed color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.17 NppStatus nppiColorTwist32f_8s_IP3R (Npp8s ∗const *pSrcDst*[3], int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 8-bit signed planar in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place planar pixel format image pointer array, one pointer per plane.

nSrcDstStep in place planar pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.18 NppStatus nppiColorTwist32f_8s_P3R (const Npp8s ∗const *pSrc*[3], int *nSrcStep*, Npp8s ∗const *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 8-bit signed planar color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.19 NppStatus nppiColorTwist32f_8u_AC4IR (Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 8-bit unsigned in place color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.20 NppStatus nppiColorTwist32f_8u_AC4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 8-bit unsigned color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.21 NppStatus nppiColorTwist32f_8u_C3IR (Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 8-bit unsigned in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.22 NppStatus nppiColorTwist32f_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 8-bit unsigned color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.23 NppStatus nppiColorTwist32f_8u_IP3R (Npp8u ∗const *pSrcDst*[3], int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 8-bit unsigned planar in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place planar pixel format image pointer array, one pointer per plane.

nSrcDstStep in place planar pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.24 NppStatus nppiColorTwist32f_8u_P3R (const Npp8u ∗const *pSrc*[3], int *nSrcStep*, Npp8u ∗const *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 8-bit unsigned planar color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.25 NppStatus nppiColorTwist_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 32-bit floating point in place color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.26 NppStatus nppiColorTwist_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

4 channel 32-bit floating point color twist, not affecting Alpha.

An input color twist matrix with floating-point coefficient values is applied with in ROI. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.27 NppStatus nppiColorTwist_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 32-bit floating point in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place packed pixel format image pointer.

nSrcDstStep in place packed pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.28 NppStatus nppiColorTwist_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 32-bit floating point color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.29 NppStatus nppiColorTwist_32f_IP3R (Npp32f ∗const *pSrcDst*[3], int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 32-bit floating point planar in place color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrcDst in place planar pixel format image pointer array, one pointer per plane.

nSrcDstStep in place planar pixel format image line step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.30 NppStatus nppiColorTwist_32f_P3R (const Npp32f ∗const *pSrc*[3], int *nSrcStep*, Npp32f ∗const *pDst*[3], int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *aTwist*[3][4])

3 channel 32-bit floating point planar color twist.

An input color twist matrix with floating-point coefficient values is applied within ROI.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aTwist The color twist matrix with floating-point coefficient values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.48.2.31 NppStatus nppiLUT_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 16-bit signed look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.32 NppStatus nppiLUT_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 16-bit signed look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.33 NppStatus nppiLUT_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.34 NppStatus nppiLUT_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.35 NppStatus nppiLUT_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.36 NppStatus nppiLUT_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.37 NppStatus nppiLUT_16s_C4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.38 NppStatus nppiLUT_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.39 NppStatus nppiLUT_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 16-bit unsigned look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.40 NppStatus nppiLUT_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 16-bit unsigned look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.41 NppStatus nppiLUT_16u_C1IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.42 NppStatus nppiLUT_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.43 NppStatus nppiLUT_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.44 NppStatus nppiLUT_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.45 NppStatus nppiLUT_16u_C4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.46 NppStatus nppiLUT_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.47 NppStatus nppiLUT_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[3], const Npp32f ∗ *pLevels*[3], int *nLevels*[3])

4 channel 32-bit floating point look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.48 NppStatus nppiLUT_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[3], const Npp32f ∗ *pLevels*[3], int *nLevels*[3])

4 channel 32-bit floating point look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.49 NppStatus nppiLUT_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*, const Npp32f ∗ *pLevels*, int *nLevels*)

32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.50 NppStatus nppiLUT_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*, const Npp32f ∗ *pLevels*, int *nLevels*)

32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.51 NppStatus nppiLUT_32f_C3IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f * *pValues*[3], const Npp32f * *pLevels*[3], int *nLevels*[3])

3 channel 32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.52 NppStatus nppiLUT_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f * *pValues*[3], const Npp32f * *pLevels*[3], int *nLevels*[3])

3 channel 32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.53 NppStatus nppiLUT_32f_C4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[4], const Npp32f ∗ *pLevels*[4], int *nLevels*[4])

4 channel 32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.54 NppStatus nppiLUT_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[4], const Npp32f ∗ *pLevels*[4], int *nLevels*[4])

4 channel 32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.55 NppStatus nppiLUT_8u_AC4IR (Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s $*$ *pValues*[3], const Npp32s $*$ *pLevels*[3], int *nLevels*[3])

4 channel 8-bit unsigned look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.56 NppStatus nppiLUT_8u_AC4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s $*$ *pValues*[3], const Npp32s $*$ *pLevels*[3], int *nLevels*[3])

4 channel 8-bit unsigned look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.57 NppStatus nppiLUT_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

8-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.58 NppStatus nppiLUT_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

8-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.59 NppStatus nppiLUT_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 8-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.60 NppStatus nppiLUT_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 8-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.61 NppStatus nppiLUT_8u_C4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 8-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.62 NppStatus nppiLUT_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 8-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points with no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.63 NppStatus nppiLUT_Cubic_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 16-bit signed look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.64 NppStatus nppiLUT_Cubic_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 16-bit signed look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.65 NppStatus nppiLUT_Cubic_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.66 NppStatus nppiLUT_Cubic_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.67 NppStatus nppiLUT_Cubic_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.68 NppStatus nppiLUT_Cubic_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.69 NppStatus nppiLUT_Cubic_16s_C4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.70 NppStatus nppiLUT_Cubic_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.71 NppStatus nppiLUT_Cubic_16u_AC4IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s * *pValues*[3], const Npp32s * *pLevels*[3], int *nLevels*[3])

4 channel 16-bit unsigned look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.72 NppStatus nppiLUT_Cubic_16u_AC4R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s * *pValues*[3], const Npp32s * *pLevels*[3], int *nLevels*[3])

4 channel 16-bit unsigned look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.73 NppStatus nppiLUT_Cubic_16u_C1IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.74 NppStatus nppiLUT_Cubic_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.75 NppStatus nppiLUT_Cubic_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.76 NppStatus nppiLUT_Cubic_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.77 NppStatus nppiLUT_Cubic_16u_C4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.78 NppStatus nppiLUT_Cubic_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.79 NppStatus nppiLUT_Cubic_32f_AC4IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f * *pValues*[3], const Npp32f * *pLevels*[3], int *nLevels*[3])

4 channel 32-bit floating point look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.80 NppStatus nppiLUT_Cubic_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f * *pValues*[3], const Npp32f * *pLevels*[3], int *nLevels*[3])

4 channel 32-bit floating point look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.81 NppStatus nppiLUT_Cubic_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*, const Npp32f ∗ *pLevels*, int *nLevels*)

32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.82 NppStatus nppiLUT_Cubic_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*, const Npp32f ∗ *pLevels*, int *nLevels*)

32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.83 NppStatus nppiLUT_Cubic_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[3], const Npp32f ∗ *pLevels*[3], int *nLevels*[3])

3 channel 32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.84 NppStatus nppiLUT_Cubic_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[3], const Npp32f ∗ *pLevels*[3], int *nLevels*[3])

3 channel 32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.85 NppStatus nppiLUT_Cubic_32f_C4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[4], const Npp32f ∗ *pLevels*[4], int *nLevels*[4])

4 channel 32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.86 NppStatus nppiLUT_Cubic_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[4], const Npp32f ∗ *pLevels*[4], int *nLevels*[4])

4 channel 32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.87 NppStatus nppiLUT_Cubic_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 8-bit unsigned cubic interpolated look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points through cubic interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.88 NppStatus nppiLUT_Cubic_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 8-bit unsigned cubic interpolated look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points through cubic interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.89 NppStatus nppiLUT_Cubic_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

8-bit unsigned cubic interpolated look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.90 NppStatus nppiLUT_Cubic_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

8-bit unsigned cubic interpolated look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.91 NppStatus nppiLUT_Cubic_8u_C3IR (Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s $*$ *pValues*[3], const Npp32s $*$ *pLevels*[3], int *nLevels*[3])

3 channel 8-bit unsigned cubic interpolated look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.92 NppStatus nppiLUT_Cubic_8u_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s $*$ *pValues*[3], const Npp32s $*$ *pLevels*[3], int *nLevels*[3])

3 channel 8-bit unsigned cubic interpolated look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.93 NppStatus nppiLUT_Cubic_8u_C4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 8-bit unsigned cubic interpolated look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.94 NppStatus nppiLUT_Cubic_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 8-bit unsigned cubic interpolated look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through cubic interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.95 NppStatus nppiLUT_Linear_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 16-bit signed look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.96 NppStatus nppiLUT_Linear_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

4 channel 16-bit signed look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.97 NppStatus nppiLUT_Linear_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.98 NppStatus nppiLUT_Linear_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.99 NppStatus nppiLUT_Linear_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.100 NppStatus nppiLUT_Linear_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.101 NppStatus nppiLUT_Linear_16s_C4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit signed look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.102 NppStatus nppiLUT_Linear_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit signed look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.103 NppStatus nppiLUT_Linear_16u_AC4IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s * *pValues*[3], const Npp32s * *pLevels*[3], int *nLevels*[3])

4 channel 16-bit unsigned look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.104 NppStatus nppiLUT_Linear_16u_AC4R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s * *pValues*[3], const Npp32s * *pLevels*[3], int *nLevels*[3])

4 channel 16-bit unsigned look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.105 NppStatus nppiLUT_Linear_16u_C1IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.106 NppStatus nppiLUT_Linear_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.107 NppStatus nppiLUT_Linear_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.108 NppStatus nppiLUT_Linear_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.109 NppStatus nppiLUT_Linear_16u_C4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit unsigned look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.110 NppStatus nppiLUT_Linear_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4])

4 channel 16-bit unsigned look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.111 NppStatus nppiLUT_Linear_32f_AC4IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f * *pValues*[3], const Npp32f * *pLevels*[3], int *nLevels*[3])

4 channel 32-bit floating point look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.112 NppStatus nppiLUT_Linear_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f * *pValues*[3], const Npp32f * *pLevels*[3], int *nLevels*[3])

4 channel 32-bit floating point look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points using no interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.113 NppStatus nppiLUT_Linear_32f_C1IR (Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f $*$ *pValues*, const Npp32f $*$ *pLevels*, int *nLevels*)

32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.114 NppStatus nppiLUT_Linear_32f_C1R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f $*$ *pValues*, const Npp32f $*$ *pLevels*, int *nLevels*)

32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.115 NppStatus nppiLUT_Linear_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[3], const Npp32f ∗ *pLevels*[3], int *nLevels*[3])

3 channel 32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.116 NppStatus nppiLUT_Linear_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[3], const Npp32f ∗ *pLevels*[3], int *nLevels*[3])

3 channel 32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.117 NppStatus nppiLUT_Linear_32f_C4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[4], const Npp32f ∗ *pLevels*[4], int *nLevels*[4])

4 channel 32-bit floating point look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points using no interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.118 NppStatus nppiLUT_Linear_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pValues*[4], const Npp32f ∗ *pLevels*[4], int *nLevels*[4])

4 channel 32-bit floating point look-up-table color conversion.

The LUT is derived from a set of user defined mapping points using linear interpolation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 1024 (the current size limit).

7.48.2.119 NppStatus nppiLUT_Linear_8u_AC4IR (Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s * *pValues*[3], const Npp32s * *pLevels*[3], int *nLevels*[3])

4 channel 8-bit unsigned linear interpolated look-up-table in place color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points through linear interpolation. Alpha channel is the last channel and is not processed.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.120 NppStatus nppiLUT_Linear_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s * *pValues*[3], const Npp32s * *pLevels*[3], int *nLevels*[3])

4 channel 8-bit unsigned linear interpolated look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points through linear interpolation. Alpha channel is the last channel and is not processed.

>>>>>>> ATTENTION ATTENTION <<<<<<<

NOTE: As of the 5.0 release of NPP, the pValues and pLevels pointers need to be host memory pointers to arrays of device memory pointers.

>>>>>>> <<<<<<<

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.121 NppStatus nppiLUT_Linear_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

8-bit unsigned linear interpolated look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.122 NppStatus nppiLUT_Linear_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*, const Npp32s ∗ *pLevels*, int *nLevels*)

8-bit unsigned linear interpolated look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through linear interpolation.

>>>>>>> ATTENTION ATTENTION <<<<<<<

NOTE: As of the 5.0 release of NPP, the pValues and pLevels pointers need to be device memory pointers.

>>>>>>> <<<<<<<

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Pointer to an array of user defined OUTPUT values (this is now a device memory pointer)

pLevels Pointer to an array of user defined INPUT values (this is now a device memory pointer)

nLevels Number of user defined number of input/output mapping points (levels)

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.123 NppStatus nppiLUT_Linear_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 8-bit unsigned linear interpolated look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.124 NppStatus nppiLUT_Linear_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pValues*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3])

3 channel 8-bit unsigned linear interpolated look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through linear interpolation.

>>>>>>> ATTENTION ATTENTION <<<<<<<

NOTE: As of the 5.0 release of NPP, the pValues and pLevels pointers need to be host memory pointers to arrays of device memory pointers.

>>>>>>> <<<<<<<

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 3 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.125 NppStatus nppiLUT_Linear_8u_C4IR (Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32s * *pValues*[4], const Npp32s * *pLevels*[4], int *nLevels*[4])

4 channel 8-bit unsigned linear interpolated look-up-table in place color conversion.

The LUT is derived from a set of user defined mapping points through linear interpolation.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.126 NppStatus nppiLUT_Linear_8u_C4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32s * *pValues*[4], const Npp32s * *pLevels*[4], int *nLevels*[4])

4 channel 8-bit unsigned linear interpolated look-up-table color conversion.

The LUT is derived from a set of user defined mapping points through linear interpolation.

>>>>>>> ATTENTION ATTENTION <<<<<<<

NOTE: As of the 5.0 release of NPP, the pValues and pLevels pointers need to be host memory pointers to arrays of device memory pointers.

>>>>>>> <<<<<<<

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pValues Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT values.

pLevels Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined INPUT values.

nLevels Host pointer to an array of 4 user defined number of input/output mapping points, one per color CHANNEL.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_NUMBER_OF_LEVELS_ERROR if the number of levels is less than 2 or greater than 256.

7.48.2.127 NppStatus nppiLUTPalette_16u24u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pTable*, int *nBitSize*)

One channel 16-bit unsigned bit range restricted 24-bit unsigned palette look-up-table color conversion with 24-bit unsigned destination output per pixel.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step (3 unsigned bytes per pixel).

oSizeROI Region-of-Interest (ROI).

pTable Pointer to an array of user defined OUTPUT palette values (this is a device memory pointer)

nBitSize Number of least significant bits (must be $>$ 0 and $<=$ 16) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is $<$ 1 or $>$ 16.

7.48.2.128 NppStatus nppiLUTPalette_16u32u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32u ∗ *pTable*, int *nBitSize*)

One channel 16-bit unsigned bit range restricted 32-bit palette look-up-table color conversion with 32-bit unsigned destination output per pixel.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step (4 bytes per pixel).

oSizeROI Region-of-Interest (ROI).

pTable Pointer to an array of user defined OUTPUT palette values (this is a device memory pointer)

nBitSize Number of least significant bits (must be > 0 and <= 16) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is < 1 or > 16.

7.48.2.129 NppStatus nppiLUTPalette_16u8u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pTable*, int *nBitSize*)

One channel 16-bit unsigned bit range restricted 8-bit unsigned palette look-up-table color conversion with 8-bit unsigned destination output per pixel.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step (1 unsigned byte per pixel).

oSizeROI Region-of-Interest (ROI).

pTable Pointer to an array of user defined OUTPUT palette values (this is a device memory pointer)

nBitSize Number of least significant bits (must be > 0 and <= 16) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is < 1 or > 16.

7.48.2.130 NppStatus nppiLUTPalette_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u ∗ *pTables*[3], int *nBitSize*)

Four channel 16-bit unsigned bit range restricted palette look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pTables Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT palette values.

nBitSize Number of least significant bits (must be $>$ 0 and $<=$ 16) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is $<$ 1 or $>$ 16.

7.48.2.131 NppStatus nppiLUTPalette_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u ∗ *pTable*, int *nBitSize*)

One channel 16-bit unsigned bit range restricted palette look-up-table color conversion.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pTable Pointer to an array of user defined OUTPUT palette values (this is a device memory pointer)

nBitSize Number of least significant bits (must be $>$ 0 and $<=$ 16) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is $<$ 1 or $>$ 16.

7.48.2.132 NppStatus nppiLUTPalette_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u ∗ *pTables*[3], int *nBitSize*)

Three channel 16-bit unsigned bit range restricted palette look-up-table color conversion.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pTables Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT palette values.

nBitSize Number of least significant bits (must be $>$ 0 and $<=$ 16) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is $<$ 1 or $>$ 16.

7.48.2.133 NppStatus nppiLUTPalette_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u ∗ *pTables*[4], int *nBitSize*)

Four channel 16-bit unsigned bit range restricted palette look-up-table color conversion.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pTables Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT palette values.

nBitSize Number of least significant bits (must be $>$ 0 and $<=$ 16) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is $<$ 1 or $>$ 16.

7.48.2.134 NppStatus nppiLUTPalette_8u24u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pTable*, int *nBitSize*)

One channel 8-bit unsigned bit range restricted 24-bit palette look-up-table color conversion with 24-bit destination output per pixel.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step (3 bytes per pixel).

oSizeROI Region-of-Interest (ROI).

pTable Pointer to an array of user defined OUTPUT palette values (this is a device memory pointer)

nBitSize Number of least significant bits (must be > 0 and <= 8) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is < 1 or > 8.

7.48.2.135 NppStatus nppiLUTPalette_8u32u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32u ∗ *pTable*, int *nBitSize*)

One channel 8-bit unsigned bit range restricted 32-bit palette look-up-table color conversion with 32-bit destination output per pixel.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step (4 bytes per pixel).

oSizeROI Region-of-Interest (ROI).

pTable Pointer to an array of user defined OUTPUT palette values (this is a device memory pointer)

nBitSize Number of least significant bits (must be > 0 and <= 8) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is < 1 or > 8.

7.48.2.136 NppStatus nppiLUTPalette_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pTables*[3], int *nBitSize*)

Four channel 8-bit unsigned bit range restricted palette look-up-table color conversion, not affecting Alpha.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values. Alpha channel is the last channel and is not processed.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pTables Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT palette values.

nBitSize Number of least significant bits (must be $>$ 0 and <= 8) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is $<$ 1 or $>$ 8.

7.48.2.137 NppStatus nppiLUTPalette_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pTable*, int *nBitSize*)

One channel 8-bit unsigned bit range restricted palette look-up-table color conversion.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pTable Pointer to an array of user defined OUTPUT palette values (this is a device memory pointer)

nBitSize Number of least significant bits (must be $>$ 0 and <= 8) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is $<$ 1 or $>$ 8.

7.48.2.138 NppStatus nppiLUTPalette_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pTables*[3], int *nBitSize*)

Three channel 8-bit unsigned bit range restricted palette look-up-table color conversion.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pTables Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT palette values.

nBitSize Number of least significant bits (must be > 0 and <= 8) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is < 1 or > 8.

7.48.2.139 NppStatus nppiLUTPalette_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pTables*[4], int *nBitSize*)

Four channel 8-bit unsigned bit range restricted palette look-up-table color conversion.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pTables Host pointer to an array of 4 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT palette values.

nBitSize Number of least significant bits (must be > 0 and <= 8) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is < 1 or > 8.

7.48.2.140 NppStatus nppiLUTPaletteSwap_16u_C3A0C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, int *nAlphaValue*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u ∗ *pTables*[3], int *nBitSize*)

Three channel 16-bit unsigned source bit range restricted palette look-up-table color conversion to four channel 16-bit unsigned destination output with alpha.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values. This function also reverses the source pixel channel order in the destination so the Alpha channel is the first channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step (3 unsigned short integers per pixel).

nAlphaValue Signed alpha value that will be used to initialize the pixel alpha channel position in all modified destination pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step (4 unsigned short integers per pixel with alpha).

oSizeROI Region-of-Interest (ROI).

pTables Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT palette values. Alpha values < 0 or > 65535 will cause destination pixel alpha channel values to be unmodified.

nBitSize Number of least significant bits (must be > 0 and $<= 16$) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is < 1 or > 16.

7.48.2.141 NppStatus nppiLUTPaletteSwap_8u_C3A0C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, int *nAlphaValue*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pTables*[3], int *nBitSize*)

Three channel 8-bit unsigned source bit range restricted palette look-up-table color conversion to four channel 8-bit unsigned destination output with alpha.

The LUT is derived from a set of user defined mapping points in a palette and source pixels are then processed using a restricted bit range when looking up palette values. This function also reverses the source pixel channel order in the destination so the Alpha channel is the first channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step (3 bytes per pixel).

nAlphaValue Signed alpha value that will be used to initialize the pixel alpha channel position in all modified destination pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step (4 bytes per pixel with alpha).

oSizeROI Region-of-Interest (ROI).

pTables Host pointer to an array of 3 device memory pointers, one per color CHANNEL, pointing to user defined OUTPUT palette values. Alpha values < 0 or > 255 will cause destination pixel alpha channel values to be unmodified.

nBitSize Number of least significant bits (must be > 0 and $<= 8$) of each source pixel value to use as index into palette table during conversion.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

- NPP_LUT_PALETTE_BITSIZE_ERROR if nBitSize is < 1 or > 8.

7.49 Compression

Image compression primitives.

Modules

- Quantization Functions

Functions

- NppStatus nppiDecodeHuffmanScanHost_JPEG_8u16s_P1R (const Npp8u ∗pSrc, Npp32s nLength, Npp32s restartInterval, Npp32s Ss, Npp32s Se, Npp32s Ah, Npp32s Al, Npp16s ∗pDst, Npp32s nDstStep, Npp8u ∗pHuffmanTableDC, Npp8u ∗pHuffmanTableAC, NppiSize oSizeROI)

  Huffman Decoding of the JPEG decoding on the host.

- NppStatus nppiDecodeHuffmanScanHost_JPEG_8u16s_P3R (const Npp8u ∗pSrc, Npp32s nLength, Npp32s nRestartInterval, Npp32s nSs, Npp32s nSe, Npp32s nAh, Npp32s nAl, Npp16s ∗apDst[3], Npp32s aDstStep[3], Npp8u ∗apHuffmanDCTable[3], Npp8u ∗apHuffmanACTable[3], NppiSize aSizeROI[3])

  Huffman Decoding of the JPEG decoding on the host.

7.49.1 Detailed Description

Image compression primitives.

The JPEG standard defines a flow of level shift, DCT and quantization for forward JPEG transform and inverse level shift, IDCT and de-quantization for inverse JPEG transform. This group has the functions for both forward and inverse functions.

7.49.2 Function Documentation

7.49.2.1 NppStatus nppiDecodeHuffmanScanHost_JPEG_8u16s_P1R (const Npp8u ∗ *pSrc*, Npp32s *nLength*, Npp32s *restartInterval*, Npp32s *Ss*, Npp32s *Se*, Npp32s *Ah*, Npp32s *Al*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, Npp8u ∗ *pHuffmanTableDC*, Npp8u ∗ *pHuffmanTableAC*, NppiSize *oSizeROI*)

Huffman Decoding of the JPEG decoding on the host.

Input is expected in byte stuffed huffman encoded JPEG scan and output is expected to be 64x1 macro blocks.

Parameters:

pSrc Byte-stuffed huffman encoded JPEG scan.

nLength Byte length of the input.

restartInterval Restart Interval, see JPEG standard.

Ss Start Coefficient, see JPEG standard.

Se End Coefficient, see JPEG standard.

Ah Bit Approximation High, see JPEG standard.

Al Bit Approximation Low, see JPEG standard.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pHuffmanTableDC DC Huffman table for JPEG decoding, format as specified in the JPEG standard.

pHuffmanTableAC AC Huffman table for JPEG decoding, format as specified in the JPEG standard.

oSizeROI Region-of-Interest (ROI).

Returns:

Error codes:

- NPP_SIZE_ERROR For negative input height/width or not a multiple of 8 width/height.
- NPP_STEP_ERROR If input image width is not multiple of 8 or does not match ROI.
- NPP_NULL_POINTER_ERROR If the destination pointer is 0.

7.49.2.2 NppStatus nppiDecodeHuffmanScanHost_JPEG_8u16s_P3R (const Npp8u ∗ *pSrc*, Npp32s *nLength*, Npp32s *nRestartInterval*, Npp32s *nSs*, Npp32s *nSe*, Npp32s *nAh*, Npp32s *nAl*, Npp16s ∗ *apDst*[3], Npp32s *aDstStep*[3], Npp8u ∗ *apHuffmanDCTable*[3], Npp8u ∗ *apHuffmanACTable*[3], NppiSize *aSizeROI*[3])

Huffman Decoding of the JPEG decoding on the host.

Input is expected in byte stuffed huffman encoded JPEG scan and output is expected to be 64x1 macro blocks.

Parameters:

pSrc Byte-stuffed huffman encoded JPEG scan.

nLength Byte length of the input.

nRestartInterval Restart Interval, see JPEG standard.

nSs Start Coefficient, see JPEG standard.

nSe End Coefficient, see JPEG standard.

nAh Bit Approximation High, see JPEG standard.

nAl Bit Approximation Low, see JPEG standard.

apDst Destination-Image Pointer.

aDstStep Destination-Image Line Step.

apHuffmanDCTable DC Huffman tables for JPEG decoding, format as specified in the JPEG standard.

apHuffmanACTable AC Huffman tables for JPEG decoding, format as specified in the JPEG standard.

aSizeROI Region-of-Interest (ROI).

Returns:

Error codes:

- NPP_SIZE_ERROR For negative input height/width or not a multiple of 8 width/height.
- NPP_STEP_ERROR If input image width is not multiple of 8 or does not match ROI.
- NPP_NULL_POINTER_ERROR If the destination pointer is 0.

7.50 Quantization Functions

Typedefs

- typedef struct NppiDCTState NppiDCTState

Functions

- NppStatus nppiQuantFwdRawTableInit_JPEG_8u (Npp8u ∗hpQuantRawTable, int nQualityFactor)

  Apply quality factor to raw 8-bit quantization table.

- NppStatus nppiQuantFwdTableInit_JPEG_8u16u (const Npp8u ∗hpQuantRawTable, Npp16u ∗hpQuantFwdRawTable)

  Initializes a quantization table for nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R().

- NppStatus nppiQuantInvTableInit_JPEG_8u16u (const Npp8u ∗hpQuantRawTable, Npp16u ∗hpQuantFwdRawTable)

  Initializes a quantization table for nppiDCTQuantInv8x8LS_JPEG_16s8u_C1R().

- NppStatus nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, const Npp16u ∗pQuantFwdTable, NppiSize oSizeROI)

  Forward DCT, quantization and level shift part of the JPEG encoding.

- NppStatus nppiDCTQuantInv8x8LS_JPEG_16s8u_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, const Npp16u ∗pQuantInvTable, NppiSize oSizeROI)

  Inverse DCT, de-quantization and level shift part of the JPEG decoding.

- NppStatus nppiDCTInitAlloc (NppiDCTState ∗∗ppState)

  Initializes DCT state structure and allocates additional resources.

- NppStatus nppiDCTFree (NppiDCTState ∗pState)

  Frees the additional resources of the DCT state structure.

- NppStatus nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R_NEW (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, const Npp8u ∗pQuantizationTable, NppiSize oSizeROI, NppiDCTState ∗pState)

  Forward DCT, quantization and level shift part of the JPEG encoding.

- NppStatus nppiDCTQuantInv8x8LS_JPEG_16s8u_C1R_NEW (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, const Npp8u ∗pQuantizationTable, NppiSize oSizeROI, NppiDCTState ∗pState)

  Inverse DCT, de-quantization and level shift part of the JPEG decoding.

7.50.1 Typedef Documentation

7.50.1.1 typedef struct NppiDCTState NppiDCTState

7.50.2 Function Documentation

7.50.2.1 NppStatus nppiDCTFree (NppiDCTState ∗ *pState*)

Frees the additional resources of the DCT state structure.

See also:

nppiDCTInitAlloc

Parameters:

pState Pointer to DCT state structure.

Returns:

NPP_SUCCESS Indicates no error. Any other value indicates an error or a warning
NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
NPP_NULL_POINTER_ERROR Indicates an error condition if pState pointer is NULL

7.50.2.2 NppStatus nppiDCTInitAlloc (NppiDCTState ∗∗ *ppState*)

Initializes DCT state structure and allocates additional resources.

See also:

nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R_NEW(), nppiDCTQuantInv8x8LS_JPEG_16s8u_C1R_NEW.

Parameters:

ppState Pointer to pointer to DCT state structure.

Returns:

NPP_SUCCESS Indicates no error. Any other value indicates an error or a warning
NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
NPP_NULL_POINTER_ERROR Indicates an error condition if pBufSize pointer is NULL

7.50.2.3 NppStatus nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, const Npp16u ∗ *pQuantFwdTable*, NppiSize *oSizeROI*)

Forward DCT, quantization and level shift part of the JPEG encoding.

Input is expected in 8x8 macro blocks and output is expected to be in 64x1 macro blocks.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pQuantFwdTable Forward quantization tables for JPEG encoding created using nppiQuantInvTableInit_JPEG_8u16u().

oSizeROI Region-of-Interest (ROI).

Returns:

Error codes:

- NPP_SIZE_ERROR For negative input height/width or not a multiple of 8 width/height.
- NPP_STEP_ERROR If input image width is not multiple of 8 or does not match ROI.
- NPP_NULL_POINTER_ERROR If the destination pointer is 0.

7.50.2.4 NppStatus nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R_NEW (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, const Npp8u ∗ *pQuantizationTable*, NppiSize *oSizeROI*, NppiDCTState ∗ *pState*)

Forward DCT, quantization and level shift part of the JPEG encoding.

Input is expected in 8x8 macro blocks and output is expected to be in 64x1 macro blocks. The new version of the primitive takes the ROI in image pixel size and works with DCT coefficients that are in zig-zag order.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Image width in pixels x 8 x sizeof(Npp16s).

pQuantizationTable Quantization Table in zig-zag order.

oSizeROI Region-of-Interest (ROI).

pState Pointer to DCT state structure. This structure must be initialized allocated and initialized using nppiDCTInitAlloc().

Returns:

Error codes:

- NPP_SIZE_ERROR For negative input height/width or not a multiple of 8 width/height.
- NPP_STEP_ERROR If input image width is not multiple of 8 or does not match ROI.
- NPP_NULL_POINTER_ERROR If the destination pointer is 0.

7.50.2.5 NppStatus nppiDCTQuantInv8x8LS_JPEG_16s8u_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, const Npp16u ∗ *pQuantInvTable*, NppiSize *oSizeROI*)

Inverse DCT, de-quantization and level shift part of the JPEG decoding.

Input is expected in 64x1 macro blocks and output is expected to be in 8x8 macro blocks.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Image width in pixels x 8 x sizeof(Npp16s).

pDst Destination-Image Pointer.

nDstStep Image width in pixels x 8 x sizeof(Npp16s).

pQuantInvTable Inverse quantization tables for JPEG decoding created using nppiQuantInvTableInit_JPEG_8u16u().

oSizeROI Region-of-Interest (ROI).

Returns:

Error codes:

- NPP_SIZE_ERROR For negative input height/width or not a multiple of 8 width/height.
- NPP_STEP_ERROR If input image width is not multiple of 8 or does not match ROI.
- NPP_NULL_POINTER_ERROR If the destination pointer is 0.

7.50.2.6 NppStatus nppiDCTQuantInv8x8LS_JPEG_16s8u_C1R_NEW (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, const Npp8u ∗ *pQuantizationTable*, NppiSize *oSizeROI*, NppiDCTState ∗ *pState*)

Inverse DCT, de-quantization and level shift part of the JPEG decoding.

Input is expected in 64x1 macro blocks and output is expected to be in 8x8 macro blocks. The new version of the primitive takes the ROI in image pixel size and works with DCT coefficients that are in zig-zag order.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Image width in pixels x 8 x sizeof(Npp16s).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pQuantizationTable Quantization Table in zig-zag order.

oSizeROI Region-of-Interest (ROI).

pState Pointer to DCT state structure. This structure must be initialized allocated and initialized using nppiDCTInitAlloc().

Returns:

Error codes:

- NPP_SIZE_ERROR For negative input height/width or not a multiple of 8 width/height.
- NPP_STEP_ERROR If input image width is not multiple of 8 or does not match ROI.
- NPP_NULL_POINTER_ERROR If the destination pointer is 0.

7.50.2.7 NppStatus nppiQuantFwdRawTableInit_JPEG_8u (Npp8u ∗ *hpQuantRawTable*, int *nQualityFactor*)

Apply quality factor to raw 8-bit quantization table.

This is effectively and in-place method that modifies a given raw quantization table based on a quality factor. Note that this method is a host method and that the pointer to the raw quantization table is a host pointer.

Parameters:

hpQuantRawTable Raw quantization table.

nQualityFactor Quality factor for the table. Range is [1:100].

Returns:

Error code: NPP_NULL_POINTER_ERROR is returned if hpQuantRawTable is 0.

7.50.2.8 NppStatus nppiQuantFwdTableInit_JPEG_8u16u (const Npp8u ∗ *hpQuantRawTable*, Npp16u ∗ *hpQuantFwdRawTable*)

Initializes a quantization table for nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R().

The method creates a 16-bit version of the raw table and converts the data order from zigzag layout to original row-order layout since raw quantization tables are typically stored in zigzag format.

This method is a host method. It consumes and produces host data. I.e. the pointers passed to this function must be host pointers. The resulting table needs to be transferred to device memory in order to be used with nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R() function.

Parameters:

hpQuantRawTable Host pointer to raw quantization table as returned by nppiQuantFwdRawTableInit_JPEG_8u(). The raw quantization table is assumed to be in zigzag order.

hpQuantFwdRawTable Forward quantization table for use with nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R().

Returns:

Error code: NPP_NULL_POINTER_ERROR pQuantRawTable is 0.

7.50.2.9 NppStatus nppiQuantInvTableInit_JPEG_8u16u (const Npp8u ∗ *hpQuantRawTable*, Npp16u ∗ *hpQuantFwdRawTable*)

Initializes a quantization table for nppiDCTQuantInv8x8LS_JPEG_16s8u_C1R().

The nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R() method uses a quantization table in a 16-bit format allowing for faster processing. In addition it converts the data order from zigzag layout to original row-order layout. Typically raw quantization tables are stored in zigzag format.

This method is a host method and consumes and produces host data. I.e. the pointers passed to this function must be host pointers. The resulting table needs to be transferred to device memory in order to be used with nppiDCTQuantFwd8x8LS_JPEG_8u16s_C1R() function.

Parameters:

hpQuantRawTable Raw quantization table.

hpQuantFwdRawTable Inverse quantization table.

Returns:

NPP_NULL_POINTER_ERROR pQuantRawTable or pQuantFwdRawTable is0.

7.51 Labeling and Segmentation

Pixel labeling and image segementation operations.

Modules

- GraphCut

Typedefs

- typedef struct NppiGraphcutState NppiGraphcutState

7.51.1 Detailed Description

Pixel labeling and image segementation operations.

7.51.2 Typedef Documentation

7.51.2.1 typedef struct NppiGraphcutState NppiGraphcutState

7.52 GraphCut

Graphcut

- NppStatus nppiGraphcutGetSize (NppiSize oSize, int ∗pBufSize)

  Calculates the size of the temporary buffer for graph-cut with 4 neighborhood labeling.

- NppStatus nppiGraphcut8GetSize (NppiSize oSize, int ∗pBufSize)

  Calculates the size of the temporary buffer for graph-cut with 8 neighborhood labeling.

- NppStatus nppiGraphcutInitAlloc (NppiSize oSize, NppiGraphcutState ∗∗ppState, Npp8u ∗pDeviceMem)

  Initializes graph-cut state structure and allocates additional resources for graph-cut with 8 neighborhood labeling.

- NppStatus nppiGraphcut8InitAlloc (NppiSize oSize, NppiGraphcutState ∗∗ppState, Npp8u ∗pDeviceMem)

  Allocates and initializes the graph-cut state structure and additional resources for graph-cut with 8 neighborhood labeling.

- NppStatus nppiGraphcutFree (NppiGraphcutState ∗pState)

  Frees the additional resources of the graph-cut state structure.

- NppStatus nppiGraphcut_32s8u (Npp32s ∗pTerminals, Npp32s ∗pLeftTransposed, Npp32s ∗pRightTransposed, Npp32s ∗pTop, Npp32s ∗pBottom, int nStep, int nTransposedStep, NppiSize size, Npp8u ∗pLabel, int nLabelStep, NppiGraphcutState ∗pState)

  Graphcut of a flow network (32bit signed integer edge capacities).

- NppStatus nppiGraphcut8_32s8u (Npp32s ∗pTerminals, Npp32s ∗pLeftTransposed, Npp32s ∗pRightTransposed, Npp32s ∗pTop, Npp32s ∗pTopLeft, Npp32s ∗pTopRight, Npp32s ∗pBottom, Npp32s ∗pBottomLeft, Npp32s ∗pBottomRight, int nStep, int nTransposedStep, NppiSize size, Npp8u ∗pLabel, int nLabelStep, NppiGraphcutState ∗pState)

  Graphcut of a flow network (32bit signed integer edge capacities).

- NppStatus nppiGraphcut_32f8u (Npp32f ∗pTerminals, Npp32f ∗pLeftTransposed, Npp32f ∗pRightTransposed, Npp32f ∗pTop, Npp32f ∗pBottom, int nStep, int nTransposedStep, NppiSize size, Npp8u ∗pLabel, int nLabelStep, NppiGraphcutState ∗pState)

  Graphcut of a flow network (32bit float edge capacities).

- NppStatus nppiGraphcut8_32f8u (Npp32f ∗pTerminals, Npp32f ∗pLeftTransposed, Npp32f ∗pRightTransposed, Npp32f ∗pTop, Npp32f ∗pTopLeft, Npp32f ∗pTopRight, Npp32f ∗pBottom, Npp32f ∗pBottomLeft, Npp32f ∗pBottomRight, int nStep, int nTransposedStep, NppiSize size, Npp8u ∗pLabel, int nLabelStep, NppiGraphcutState ∗pState)

  Graphcut of a flow network (32bit float edge capacities).

7.52.1 Function Documentation

7.52.1.1 NppStatus nppiGraphcut8_32f8u (Npp32f ∗ *pTerminals*, Npp32f ∗ *pLeftTransposed*, Npp32f ∗ *pRightTransposed*, Npp32f ∗ *pTop*, Npp32f ∗ *pTopLeft*, Npp32f ∗ *pTopRight*, Npp32f ∗ *pBottom*, Npp32f ∗ *pBottomLeft*, Npp32f ∗ *pBottomRight*, int *nStep*, int *nTransposedStep*, NppiSize *size*, Npp8u ∗ *pLabel*, int *nLabelStep*, NppiGraphcutState ∗ *pState*)

Graphcut of a flow network (32bit float edge capacities).

The function computes the minimal cut (graphcut) of a 2D regular 8-connected graph. The inputs are the capacities of the horizontal (in transposed form), vertical and terminal (source and sink) edges. The capacities to source and sink are stored as capacity differences in the terminals array (terminals(x) = source(x) - sink(x)). The implementation assumes that the edge capacities for boundary edges that would connect to nodes outside the specified domain are set to 0 (for example left(0,∗) == 0). If this is not fulfilled the computed labeling may be wrong! The computed binary labeling is encoded as unsigned 8bit values (0 and >0).

See also:

nppiGraphcut8InitAlloc(), nppiGraphcutFree(), nppiGraphcut8GetSize().

Parameters:

pTerminals Pointer to differences of terminal edge capacities (terminal(x) = source(x) - sink(x))

pLeftTransposed Pointer to transposed left edge capacities (left(0,∗) must be 0)

pRightTransposed Pointer to transposed right edge capacities (right(width-1,∗) must be 0)

pTop Pointer to top edge capacities (top(∗,0) must be 0)

pTopLeft Pointer to top left edge capacities (topleft(∗,0) & topleft(0,∗) must be 0)

pTopRight Pointer to top right edge capacities (topright(∗,0) & topright(width-1,∗) must be 0)

pBottom Pointer to bottom edge capacities (bottom(∗,height-1) must be 0)

pBottomLeft Pointer to bottom left edge capacities (bottomleft(∗,height-1) && bottomleft(0,∗) must be 0)

pBottomRight Pointer to bottom right edge capacities (bottomright(∗,height-1) && bottomright(width-1,∗) must be 0)

nStep Step in bytes between any pair of sequential rows of edge capacities

nTransposedStep Step in bytes between any pair of sequential rows of tranposed edge capacities

size Graph size

pLabel Pointer to destination label image

nLabelStep Step in bytes between any pair of sequential rows of label image

pState Pointer to graph-cut state structure. This structure must be initialized allocated and initialized using nppiGraphcut8InitAlloc().

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.52.1.2 NppStatus nppiGraphcut8_32s8u (Npp32s ∗ *pTerminals*, Npp32s ∗ *pLeftTransposed*, Npp32s ∗ *pRightTransposed*, Npp32s ∗ *pTop*, Npp32s ∗ *pTopLeft*, Npp32s ∗ *pTopRight*, Npp32s ∗ *pBottom*, Npp32s ∗ *pBottomLeft*, Npp32s ∗ *pBottomRight*, int *nStep*, int *nTransposedStep*, NppiSize *size*, Npp8u ∗ *pLabel*, int *nLabelStep*, NppiGraphcutState ∗ *pState*)

Graphcut of a flow network (32bit signed integer edge capacities).

The function computes the minimal cut (graphcut) of a 2D regular 8-connected graph. The inputs are the capacities of the horizontal (in transposed form), vertical and terminal (source and sink) edges. The capacities to source and sink are stored as capacity differences in the terminals array (terminals(x) = source(x) - sink(x)). The implementation assumes that the edge capacities for boundary edges that would connect to nodes outside the specified domain are set to 0 (for example left(0,∗) == 0). If this is not fulfilled the computed labeling may be wrong! The computed binary labeling is encoded as unsigned 8bit values (0 and >0).

See also:

nppiGraphcut8InitAlloc(), nppiGraphcutFree(), nppiGraphcut8GetSize().

Parameters:

pTerminals Pointer to differences of terminal edge capacities (terminal(x) = source(x) - sink(x))

pLeftTransposed Pointer to transposed left edge capacities (left(0,∗) must be 0)

pRightTransposed Pointer to transposed right edge capacities (right(width-1,∗) must be 0)

pTop Pointer to top edge capacities (top(∗,0) must be 0)

pTopLeft Pointer to top left edge capacities (topleft(∗,0) & topleft(0,∗) must be 0)

pTopRight Pointer to top right edge capacities (topright(∗,0) & topright(width-1,∗) must be 0)

pBottom Pointer to bottom edge capacities (bottom(∗,height-1) must be 0)

pBottomLeft Pointer to bottom left edge capacities (bottomleft(∗,height-1) && bottomleft(0,∗) must be 0)

pBottomRight Pointer to bottom right edge capacities (bottomright(∗,height-1) && bottomright(width-1,∗) must be 0)

nStep Step in bytes between any pair of sequential rows of edge capacities

nTransposedStep Step in bytes between any pair of sequential rows of tranposed edge capacities

size Graph size

pLabel Pointer to destination label image

nLabelStep Step in bytes between any pair of sequential rows of label image

pState Pointer to graph-cut state structure. This structure must be initialized allocated and initialized using nppiGraphcut8InitAlloc().

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.52.1.3 NppStatus nppiGraphcut8GetSize (NppiSize *oSize*, int ∗ *pBufSize*)

Calculates the size of the temporary buffer for graph-cut with 8 neighborhood labeling.

See also:

nppiGraphcut8InitAlloc(), nppiGraphcut8_32s8u().

Parameters:

oSize Graph size.

pBufSize Pointer to variable that returns the size of the temporary buffer.

Returns:

NPP_SUCCESS Indicates no error. Any other value indicates an error or a warning
NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
NPP_NULL_POINTER_ERROR Indicates an error condition if pBufSize pointer is NULL

7.52.1.4 NppStatus nppiGraphcut8InitAlloc (NppiSize *oSize*, NppiGraphcutState ∗∗ *ppState*, Npp8u ∗ *pDeviceMem*)

Allocates and initializes the graph-cut state structure and additional resources for graph-cut with 8 neighborhood labeling.

See also:

nppiGraphcut8_32s8u(), nppiGraphcut8GetSize().

Parameters:

oSize Graph size

ppState Pointer to pointer to graph-cut state structure.

pDeviceMem to the sufficient amount of device memory. The CUDA runtime or NPP memory allocators must be used to allocate this memory. The minimum amount of device memory required to run graph-cut on a for a specific image size is computed by nppiGraphcut8GetSize().

Returns:

NPP_SUCCESS Indicates no error. Any other value indicates an error or a warning
NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
NPP_NULL_POINTER_ERROR Indicates an error condition if pBufSize pointer is NULL

7.52.1.5 NppStatus nppiGraphcut_32f8u (Npp32f ∗ *pTerminals*, Npp32f ∗ *pLeftTransposed*, Npp32f ∗ *pRightTransposed*, Npp32f ∗ *pTop*, Npp32f ∗ *pBottom*, int *nStep*, int *nTransposedStep*, NppiSize *size*, Npp8u ∗ *pLabel*, int *nLabelStep*, NppiGraphcutState ∗ *pState*)

Graphcut of a flow network (32bit float edge capacities).

The function computes the minimal cut (graphcut) of a 2D regular 4-connected graph. The inputs are the capacities of the horizontal (in transposed form), vertical and terminal (source and sink) edges. The capacities to source and sink are stored as capacity differences in the terminals array (terminals(x) = source(x) - sink(x)). The implementation assumes that the edge capacities for boundary edges that would connect to nodes outside the specified domain are set to 0 (for example left(0,∗) == 0). If this is not fulfilled the computed labeling may be wrong! The computed binary labeling is encoded as unsigned 8bit values (0 and >0).

See also:

nppiGraphcutInitAlloc(), nppiGraphcutFree(), nppiGraphcutGetSize().

Parameters:

pTerminals Pointer to differences of terminal edge capacities (terminal(x) = source(x) - sink(x))

pLeftTransposed Pointer to transposed left edge capacities (left(0,∗) must be 0)

pRightTransposed Pointer to transposed right edge capacities (right(width-1,∗) must be 0)

pTop Pointer to top edge capacities (top(∗,0) must be 0)

pBottom Pointer to bottom edge capacities (bottom(∗,height-1) must be 0)

nStep Step in bytes between any pair of sequential rows of edge capacities

nTransposedStep Step in bytes between any pair of sequential rows of tranposed edge capacities

size Graph size

pLabel Pointer to destination label image

nLabelStep Step in bytes between any pair of sequential rows of label image

pState Pointer to graph-cut state structure. This structure must be initialized allocated and initialized using nppiGraphcutInitAlloc().

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.52.1.6 NppStatus nppiGraphcut_32s8u (Npp32s ∗ *pTerminals*, Npp32s ∗ *pLeftTransposed*, Npp32s ∗ *pRightTransposed*, Npp32s ∗ *pTop*, Npp32s ∗ *pBottom*, int *nStep*, int *nTransposedStep*, NppiSize *size*, Npp8u ∗ *pLabel*, int *nLabelStep*, NppiGraphcutState ∗ *pState*)

Graphcut of a flow network (32bit signed integer edge capacities).

The function computes the minimal cut (graphcut) of a 2D regular 4-connected graph. The inputs are the capacities of the horizontal (in transposed form), vertical and terminal (source and sink) edges. The capacities to source and sink are stored as capacity differences in the terminals array (terminals(x) = source(x) - sink(x)). The implementation assumes that the edge capacities for boundary edges that would connect to nodes outside the specified domain are set to 0 (for example left(0,∗) == 0). If this is not fulfilled the computed labeling may be wrong! The computed binary labeling is encoded as unsigned 8bit values (0 and >0).

See also:

nppiGraphcutInitAlloc(), nppiGraphcutFree(), nppiGraphcutGetSize().

Parameters:

pTerminals Pointer to differences of terminal edge capacities (terminal(x) = source(x) - sink(x))

pLeftTransposed Pointer to transposed left edge capacities (left(0,∗) must be 0)

pRightTransposed Pointer to transposed right edge capacities (right(width-1,∗) must be 0)

pTop Pointer to top edge capacities (top(∗,0) must be 0)

pBottom Pointer to bottom edge capacities (bottom(∗,height-1) must be 0)

nStep Step in bytes between any pair of sequential rows of edge capacities

nTransposedStep Step in bytes between any pair of sequential rows of tranposed edge capacities

size Graph size

pLabel Pointer to destination label image

nLabelStep Step in bytes between any pair of sequential rows of label image

pState Pointer to graph-cut state structure. This structure must be initialized allocated and initialized using nppiGraphcutInitAlloc().

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.52.1.7 NppStatus nppiGraphcutFree (NppiGraphcutState * *pState*)

Frees the additional resources of the graph-cut state structure.

See also:

nppiGraphcutInitAlloc
nppiGraphcut8InitAlloc

Parameters:

pState Pointer to graph-cut state structure.

Returns:

NPP_SUCCESS Indicates no error. Any other value indicates an error or a warning
NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
NPP_NULL_POINTER_ERROR Indicates an error condition if pState pointer is NULL

7.52.1.8 NppStatus nppiGraphcutGetSize (NppiSize *oSize*, int * *pBufSize*)

Calculates the size of the temporary buffer for graph-cut with 4 neighborhood labeling.

See also:

nppiGraphcutInitAlloc(), nppiGraphcut_32s8u().

Parameters:

oSize Graph size.

pBufSize Pointer to variable that returns the size of the temporary buffer.

Returns:

NPP_SUCCESS Indicates no error. Any other value indicates an error or a warning
NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
NPP_NULL_POINTER_ERROR Indicates an error condition if pBufSize pointer is NULL

7.52.1.9 NppStatus nppiGraphcutInitAlloc (NppiSize *oSize*, NppiGraphcutState $**$ *ppState*, Npp8u $*$ *pDeviceMem*)

Initializes graph-cut state structure and allocates additional resources for graph-cut with 8 neighborhood labeling.

See also:

nppiGraphcut_32s8u(), nppiGraphcutGetSize().

Parameters:

oSize Graph size

ppState Pointer to pointer to graph-cut state structure.

pDeviceMem pDeviceMem to the sufficient amount of device memory. The CUDA runtime or NPP memory allocators must be used to allocate this memory. The minimum amount of device memory required to run graph-cut on a for a specific image size is computed by nppiGraphcutGetSize().

Returns:

NPP_SUCCESS Indicates no error. Any other value indicates an error or a warning
NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
NPP_NULL_POINTER_ERROR Indicates an error condition if pBufSize pointer is NULL

7.53 Data Exchange and Initialization

Primitives for initializting, copying and converting image data.

Modules

- Set

  Primitives for setting pixels to a specific value.

- Copy
- Convert
- Scale
- Copy Constant Border
- Copy Replicate Border
- Copy Wrap Border
- Copy Sub-Pixel
- Duplicate Channel
- Transpose
- Swap Channels

7.53.1 Detailed Description

Primitives for initializting, copying and converting image data.

7.54 Set

Primitives for setting pixels to a specific value.

Set

Set all pixels within the ROI to a specific value.

- NppStatus nppiSet_8s_C1R (Npp8s nValue, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  8-bit image set.

- NppStatus nppiSet_8s_C2R (Npp8s aValue[2], Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  8-bit two-channel image set.

- NppStatus nppiSet_8s_C3R (Npp8s aValue[3], Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  8-bit three-channel image set.

- NppStatus nppiSet_8s_C4R (Npp8s aValue[4], Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  8-bit four-channel image set.

- NppStatus nppiSet_8s_AC4R (Npp8s aValue[3], Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  8-bit four-channel image set ignoring alpha channel.

- NppStatus nppiSet_8u_C1R (Npp8u nValue, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  8-bit unsigned image set.

- NppStatus nppiSet_8u_C3R (const Npp8u aValue[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned image set.

- NppStatus nppiSet_8u_C4R (const Npp8u aValue[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned image set.

- NppStatus nppiSet_8u_AC4R (const Npp8u aValue[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned image set method, not affecting Alpha channel.

- NppStatus nppiSet_16u_C1R (Npp16u nValue, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit unsigned image set.

- NppStatus nppiSet_16u_C2R (const Npp16u aValue[2], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 16-bit unsigned image set.

- NppStatus nppiSet_16u_C3R (const Npp16u aValue[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 16-bit unsigned image set.

- NppStatus nppiSet_16u_C4R (const Npp16u aValue[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit unsigned image set.

- NppStatus nppiSet_16u_AC4R (const Npp16u aValue[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit unsigned image set method, not affecting Alpha channel.

- NppStatus nppiSet_16s_C1R (Npp16s nValue, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit image set.

- NppStatus nppiSet_16s_C2R (const Npp16s aValue[2], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  2 channel 16-bit image set.

- NppStatus nppiSet_16s_C3R (const Npp16s aValue[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 16-bit image set.

- NppStatus nppiSet_16s_C4R (const Npp16s aValue[4], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit image set.

- NppStatus nppiSet_16s_AC4R (const Npp16s aValue[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit image set method, not affecting Alpha channel.

- NppStatus nppiSet_16sc_C1R (Npp16sc oValue, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit complex integer image set.

- NppStatus nppiSet_16sc_C2R (Npp16sc aValue[2], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit complex integer two-channel image set.

- NppStatus nppiSet_16sc_C3R (Npp16sc aValue[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit complex integer three-channel image set.

- NppStatus nppiSet_16sc_C4R (Npp16sc aValue[4], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit complex integer four-channel image set.

- NppStatus nppiSet_16sc_AC4R (Npp16sc aValue[3], Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit complex integer four-channel image set ignoring alpha.

- NppStatus nppiSet_32s_C1R (Npp32s nValue, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit image set.

- NppStatus nppiSet_32s_C3R (const Npp32s aValue[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 32-bit image set.

- NppStatus nppiSet_32s_C4R (const Npp32s aValue[4], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit image set.

- NppStatus nppiSet_32s_AC4R (const Npp32s aValue[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit image set method, not affecting Alpha channel.

- NppStatus nppiSet_32sc_C1R (Npp32sc oValue, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 32-bit complex integer image set.

- NppStatus nppiSet_32sc_C2R (Npp32sc aValue[2], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Two channel 32-bit complex integer image set.

- NppStatus nppiSet_32sc_C3R (Npp32sc aValue[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 32-bit complex integer image set.

- NppStatus nppiSet_32sc_C4R (Npp32sc aValue[4], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 32-bit complex integer image set.

- NppStatus nppiSet_32sc_AC4R (Npp32sc aValue[3], Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit complex integer four-channel image set ignoring alpha.

- NppStatus nppiSet_32f_C1R (Npp32f nValue, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit floating point image set.

- NppStatus nppiSet_32f_C3R (const Npp32f aValue[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 32-bit floating point image set.

- NppStatus nppiSet_32f_C4R (const Npp32f aValue[4], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit floating point image set.

- NppStatus nppiSet_32f_AC4R (const Npp32f aValue[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit floating point image set method, not affecting Alpha channel.

- NppStatus nppiSet_32fc_C1R (Npp32fc oValue, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 32-bit complex image set.

- NppStatus nppiSet_32fc_C2R (Npp32fc aValue[2], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Two channel 32-bit complex image set.

- NppStatus nppiSet_32fc_C3R (Npp32fc aValue[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 32-bit complex image set.

- NppStatus nppiSet_32fc_C4R (Npp32fc aValue[4], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 32-bit complex image set.

- NppStatus nppiSet_32fc_AC4R (Npp32fc aValue[3], Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit complex four-channel image set ignoring alpha.

Masked Set

The masked set primitives have an additional "mask image" input.

The mask controls which pixels within the ROI are set. For details see Masked Operation.

- NppStatus nppiSet_8u_C1MR (Npp8u nValue, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 8-bit unsigned image set.

- NppStatus nppiSet_8u_C3MR (const Npp8u aValue[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 3 channel 8-bit unsigned image set.

- NppStatus nppiSet_8u_C4MR (const Npp8u aValue[4], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 8-bit unsigned image set.

- NppStatus nppiSet_8u_AC4MR (const Npp8u aValue[3], Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 8-bit unsigned image set method, not affecting Alpha channel.

- NppStatus nppiSet_16u_C1MR (Npp16u nValue, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 16-bit unsigned image set.

- NppStatus nppiSet_16u_C3MR (const Npp16u aValue[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 3 channel 16-bit unsigned image set.

- NppStatus nppiSet_16u_C4MR (const Npp16u aValue[4], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 16-bit unsigned image set.

- NppStatus nppiSet_16u_AC4MR (const Npp16u aValue[3], Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 16-bit unsigned image set method, not affecting Alpha channel.

- NppStatus nppiSet_16s_C1MR (Npp16s nValue, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 16-bit image set.

- NppStatus nppiSet_16s_C3MR (const Npp16s aValue[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 3 channel 16-bit image set.

- NppStatus nppiSet_16s_C4MR (const Npp16s aValue[4], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 16-bit image set.

- NppStatus nppiSet_16s_AC4MR (const Npp16s aValue[3], Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 16-bit image set method, not affecting Alpha channel.

- NppStatus nppiSet_32s_C1MR (Npp32s nValue, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 32-bit image set.

- NppStatus nppiSet_32s_C3MR (const Npp32s aValue[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 3 channel 32-bit image set.

- NppStatus nppiSet_32s_C4MR (const Npp32s aValue[4], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 32-bit image set.

- NppStatus nppiSet_32s_AC4MR (const Npp32s aValue[3], Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 16-bit image set method, not affecting Alpha channel.

- NppStatus nppiSet_32f_C1MR (Npp32f nValue, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 32-bit floating point image set.

- NppStatus nppiSet_32f_C3MR (const Npp32f aValue[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 3 channel 32-bit floating point image set.

- NppStatus nppiSet_32f_C4MR (const Npp32f aValue[4], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 32-bit floating point image set.

- NppStatus nppiSet_32f_AC4MR (const Npp32f aValue[3], Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked 4 channel 32-bit floating point image set method, not affecting Alpha channel.

Channel Set

The select-channel set primitives set a single color channel in multi-channel images to a given value.

The channel is selected by adjusting the pDst pointer to point to the desired color channel (see Channel-of-Interest API).

- NppStatus nppiSet_8u_C3CR (Npp8u nValue, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 8-bit unsigned image set affecting only single channel.

- NppStatus nppiSet_8u_C4CR (Npp8u nValue, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned image set affecting only single channel.

- NppStatus nppiSet_16u_C3CR (Npp16u nValue, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 16-bit unsigned image set affecting only single channel.

- NppStatus nppiSet_16u_C4CR (Npp16u nValue, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit unsigned image set affecting only single channel.

- NppStatus nppiSet_16s_C3CR (Npp16s nValue, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 16-bit signed image set affecting only single channel.

- NppStatus nppiSet_16s_C4CR (Npp16s nValue, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit signed image set affecting only single channel.

- NppStatus nppiSet_32s_C3CR (Npp32s nValue, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 32-bit unsigned image set affecting only single channel.

- NppStatus nppiSet_32s_C4CR (Npp32s nValue, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit unsigned image set affecting only single channel.

- NppStatus nppiSet_32f_C3CR (Npp32f nValue, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  3 channel 32-bit floating point image set affecting only single channel.

- NppStatus nppiSet_32f_C4CR (Npp32f nValue, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit floating point image set affecting only single channel.

7.54.1 Detailed Description

Primitives for setting pixels to a specific value.

7.54.2 Function Documentation

7.54.2.1 NppStatus nppiSet_16s_AC4MR (const Npp16s *aValue*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 16-bit image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.2 NppStatus nppiSet_16s_AC4R (const Npp16s *aValue*[3], Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.3 NppStatus nppiSet_16s_C1MR (Npp16s *nValue*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u * *pMask*, int *nMaskStep*)

Masked 16-bit image set.

Parameters:

nValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.4 NppStatus nppiSet_16s_C1R (Npp16s *nValue*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit image set.

Parameters:

nValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.5 NppStatus nppiSet_16s_C2R (const Npp16s *aValue*[2], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 16-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.6 NppStatus nppiSet_16s_C3CR (Npp16s *nValue*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 16-bit signed image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.7 NppStatus nppiSet_16s_C3MR (const Npp16s *aValue*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 3 channel 16-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.8 NppStatus nppiSet_16s_C3R (const Npp16s *aValue*[3], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 16-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.9 NppStatus nppiSet_16s_C4CR (Npp16s *nValue*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit signed image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.10 NppStatus nppiSet_16s_C4MR (const Npp16s *aValue*[4], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 16-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.11 NppStatus nppiSet_16s_C4R (const Npp16s *aValue*[4], Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.12 NppStatus nppiSet_16sc_AC4R (Npp16sc *aValue*[3], Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit complex integer four-channel image set ignoring alpha.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.13 NppStatus nppiSet_16sc_C1R (Npp16sc *oValue*, Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit complex integer image set.

Parameters:

oValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.14 NppStatus nppiSet_16sc_C2R (Npp16sc *aValue*[2], Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit complex integer two-channel image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.15 NppStatus nppiSet_16sc_C3R (Npp16sc *aValue*[3], Npp16sc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit complex integer three-channel image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.16 NppStatus nppiSet_16sc_C4R (Npp16sc *aValue*[4], Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit complex integer four-channel image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.17 NppStatus nppiSet_16u_AC4MR (const Npp16u *aValue*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 16-bit unsigned image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.18 NppStatus nppiSet_16u_AC4R (const Npp16u *aValue*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit unsigned image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.19 NppStatus nppiSet_16u_C1MR (Npp16u *nValue*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 16-bit unsigned image set.

Parameters:

nValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.20 NppStatus nppiSet_16u_C1R (Npp16u *nValue*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit unsigned image set.

Parameters:

nValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.21 NppStatus nppiSet_16u_C2R (const Npp16u *aValue*[2], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

2 channel 16-bit unsigned image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.22 NppStatus nppiSet_16u_C3CR (Npp16u *nValue*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 16-bit unsigned image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.23 NppStatus nppiSet_16u_C3MR (const Npp16u *aValue*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 3 channel 16-bit unsigned image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.24 NppStatus nppiSet_16u_C3R (const Npp16u *aValue*[3], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 16-bit unsigned image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.25 NppStatus nppiSet_16u_C4CR (Npp16u *nValue*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit unsigned image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.26 NppStatus nppiSet_16u_C4MR (const Npp16u *aValue*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 16-bit unsigned image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.27 NppStatus nppiSet_16u_C4R (const Npp16u *aValue*[4], Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit unsigned image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.28 NppStatus nppiSet_32f_AC4MR (const Npp32f *aValue*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 32-bit floating point image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.29 NppStatus nppiSet_32f_AC4R (const Npp32f *aValue*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit floating point image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.30 NppStatus nppiSet_32f_C1MR (Npp32f *nValue*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 32-bit floating point image set.

Parameters:

nValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.31 NppStatus nppiSet_32f_C1R (Npp32f *nValue*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit floating point image set.

Parameters:

nValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.32 NppStatus nppiSet_32f_C3CR (Npp32f *nValue*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 32-bit floating point image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.33 NppStatus nppiSet_32f_C3MR (const Npp32f *aValue*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 3 channel 32-bit floating point image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.34 NppStatus nppiSet_32f_C3R (const Npp32f *aValue*[3], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 32-bit floating point image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.35 NppStatus nppiSet_32f_C4CR (Npp32f *nValue*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit floating point image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.36 NppStatus nppiSet_32f_C4MR (const Npp32f *aValue*[4], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 32-bit floating point image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.37 NppStatus nppiSet_32f_C4R (const Npp32f *aValue*[4], Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit floating point image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.38 NppStatus nppiSet_32fc_AC4R (Npp32fc *aValue*[3], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit complex four-channel image set ignoring alpha.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.39 NppStatus nppiSet_32fc_C1R (Npp32fc *oValue*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit complex image set.

Parameters:

oValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.40 NppStatus nppiSet_32fc_C2R (Npp32fc *aValue*[2], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Two channel 32-bit complex image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.41 NppStatus nppiSet_32fc_C3R (Npp32fc *aValue*[3], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit complex image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.42 NppStatus nppiSet_32fc_C4R (Npp32fc *aValue*[4], Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit complex image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.43 NppStatus nppiSet_32s_AC4MR (const Npp32s *aValue*[3], Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u * *pMask*, int *nMaskStep*)

Masked 4 channel 16-bit image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.44 NppStatus nppiSet_32s_AC4R (const Npp32s *aValue*[3], Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.45 NppStatus nppiSet_32s_C1MR (Npp32s *nValue*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u * *pMask*, int *nMaskStep*)

Masked 32-bit image set.

Parameters:

nValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.46 NppStatus nppiSet_32s_C1R (Npp32s *nValue*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit image set.

Parameters:

nValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.47 NppStatus nppiSet_32s_C3CR (Npp32s *nValue*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 32-bit unsigned image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.48 NppStatus nppiSet_32s_C3MR (const Npp32s *aValue*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 3 channel 32-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.49 NppStatus nppiSet_32s_C3R (const Npp32s *aValue*[3], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 32-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.50 NppStatus nppiSet_32s_C4CR (Npp32s *nValue*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit unsigned image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.51 NppStatus nppiSet_32s_C4MR (const Npp32s *aValue*[4], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 32-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.52 NppStatus nppiSet_32s_C4R (const Npp32s *aValue*[4], Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.53 NppStatus nppiSet_32sc_AC4R (Npp32sc *aValue*[3], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit complex integer four-channel image set ignoring alpha.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.54 NppStatus nppiSet_32sc_C1R (Npp32sc *oValue*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit complex integer image set.

Parameters:

oValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.55 NppStatus nppiSet_32sc_C2R (Npp32sc *aValue*[2], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Two channel 32-bit complex integer image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.56 NppStatus nppiSet_32sc_C3R (Npp32sc *aValue*[3], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit complex integer image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.57 NppStatus nppiSet_32sc_C4R (Npp32sc *aValue*[4], Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit complex integer image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.58 NppStatus nppiSet_8s_AC4R (Npp8s *aValue*[3], Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

8-bit four-channel image set ignoring alpha channel.

Parameters:

aValue The pixel value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.59 NppStatus nppiSet_8s_C1R (Npp8s *nValue*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

8-bit image set.

Parameters:

nValue The pixel value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.60 NppStatus nppiSet_8s_C2R (Npp8s *aValue*[2], Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

8-bit two-channel image set.

Parameters:

aValue The pixel value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.61 NppStatus nppiSet_8s_C3R (Npp8s *aValue*[3], Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

8-bit three-channel image set.

Parameters:

aValue The pixel value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.62 NppStatus nppiSet_8s_C4R (Npp8s *aValue*[4], Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

8-bit four-channel image set.

Parameters:

aValue The pixel value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.63 NppStatus nppiSet_8u_AC4MR (const Npp8u *aValue*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 8-bit unsigned image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.64 NppStatus nppiSet_8u_AC4R (const Npp8u *aValue*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned image set method, not affecting Alpha channel.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.65 NppStatus nppiSet_8u_C1MR (Npp8u *nValue*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 8-bit unsigned image set.

Parameters:

nValue The pixel value to be set.

pDst Pointer Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.66 NppStatus nppiSet_8u_C1R (Npp8u *nValue*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

8-bit unsigned image set.

Parameters:

nValue The pixel value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.67 NppStatus nppiSet_8u_C3CR (Npp8u *nValue*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.68 NppStatus nppiSet_8u_C3MR (const Npp8u *aValue*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 3 channel 8-bit unsigned image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.69 NppStatus nppiSet_8u_C3R (const Npp8u *aValue*[3], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

3 channel 8-bit unsigned image set.

Parameters:

aValue The pixel value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.70 NppStatus nppiSet_8u_C4CR (Npp8u *nValue*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned image set affecting only single channel.

Parameters:

nValue The pixel-value to be set.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.71 NppStatus nppiSet_8u_C4MR (const Npp8u *aValue*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked 4 channel 8-bit unsigned image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.54.2.72 NppStatus nppiSet_8u_C4R (const Npp8u *aValue*[4], Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned image set.

Parameters:

aValue The pixel-value to be set.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55 Copy

Copy

Copy pixels from one image to another.

- NppStatus nppiCopy_8s_C1R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  8-bit image copy.

- NppStatus nppiCopy_8s_C2R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Two-channel 8-bit image copy.

- NppStatus nppiCopy_8s_C3R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 8-bit image copy.

- NppStatus nppiCopy_8s_C4R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 8-bit image copy.

- NppStatus nppiCopy_8s_AC4R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 8-bit image copy, ignoring alpha channel.

- NppStatus nppiCopy_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  8-bit unsigned image copy.

- NppStatus nppiCopy_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned image copy.

- NppStatus nppiCopy_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned image copy.

- NppStatus nppiCopy_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 8-bit unsigned image copy, not affecting Alpha channel.

- NppStatus nppiCopy_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit unsigned image copy.

- NppStatus nppiCopy_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 16-bit unsigned image copy.

- NppStatus nppiCopy_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit unsigned image copy.

- NppStatus nppiCopy_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit unsigned image copy, not affecting Alpha channel.

- NppStatus nppiCopy_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit image copy.

- NppStatus nppiCopy_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 16-bit image copy.

- NppStatus nppiCopy_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit image copy.

- NppStatus nppiCopy_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 16-bit image copy, not affecting Alpha.

- NppStatus nppiCopy_16sc_C1R (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  16-bit complex image copy.

- NppStatus nppiCopy_16sc_C2R (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Two-channel 16-bit complex image copy.

- NppStatus nppiCopy_16sc_C3R (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 16-bit complex image copy.

- NppStatus nppiCopy_16sc_C4R (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit complex image copy.

- NppStatus nppiCopy_16sc_AC4R (const Npp16sc ∗pSrc, int nSrcStep, Npp16sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit complex image copy, ignoring alpha.

- NppStatus nppiCopy_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit image copy.

- NppStatus nppiCopy_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 32-bit image copy.

- NppStatus nppiCopy_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit image copy.

- NppStatus nppiCopy_32s_AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit image copy, not affecting Alpha.

- NppStatus nppiCopy_32sc_C1R (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit complex image copy.

- NppStatus nppiCopy_32sc_C2R (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Two-channel 32-bit complex image copy.

- NppStatus nppiCopy_32sc_C3R (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 32-bit complex image copy.

- NppStatus nppiCopy_32sc_C4R (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit complex image copy.

- NppStatus nppiCopy_32sc_AC4R (const Npp32sc ∗pSrc, int nSrcStep, Npp32sc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit complex image copy, ignoring alpha.

- NppStatus nppiCopy_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit floating point image copy.

- NppStatus nppiCopy_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 32-bit floating point image copy.

- NppStatus nppiCopy_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit floating point image copy.

- NppStatus nppiCopy_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  4 channel 32-bit floating point image copy, not affecting Alpha.

- NppStatus nppiCopy_32fc_C1R (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit floating-point complex image copy.

- NppStatus nppiCopy_32fc_C2R (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

Two-channel 32-bit floating-point complex image copy.

- NppStatus nppiCopy_32fc_C3R (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 32-bit floating-point complex image copy.

- NppStatus nppiCopy_32fc_C4R (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating-point complex image copy.

- NppStatus nppiCopy_32fc_AC4R (const Npp32fc ∗pSrc, int nSrcStep, Npp32fc ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating-point complex image copy, ignoring alpha.

Masked Copy

The masked copy primitives have an additional "mask image" input.

The mask controls which pixels within the ROI are copied. For details see Masked Operation.

- NppStatus nppiCopy_8u_C1MR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation 8-bit unsigned image copy.

- NppStatus nppiCopy_8u_C3MR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation three channel 8-bit unsigned image copy.

- NppStatus nppiCopy_8u_C4MR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 8-bit unsigned image copy.

- NppStatus nppiCopy_8u_AC4MR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 8-bit unsigned image copy, ignoring alpha.

- NppStatus nppiCopy_16u_C1MR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation 16-bit unsigned image copy.

- NppStatus nppiCopy_16u_C3MR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation three channel 16-bit unsigned image copy.

- NppStatus nppiCopy_16u_C4MR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 16-bit unsigned image copy.

- NppStatus nppiCopy_16u_AC4MR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

Masked Operation four channel 16-bit unsigned image copy, ignoring alpha.

- NppStatus nppiCopy_16s_C1MR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation 16-bit signed image copy.

- NppStatus nppiCopy_16s_C3MR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation three channel 16-bit signed image copy.

- NppStatus nppiCopy_16s_C4MR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 16-bit signed image copy.

- NppStatus nppiCopy_16s_AC4MR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 16-bit signed image copy, ignoring alpha.

- NppStatus nppiCopy_32s_C1MR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation 32-bit signed image copy.

- NppStatus nppiCopy_32s_C3MR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation three channel 32-bit signed image copy.

- NppStatus nppiCopy_32s_C4MR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 32-bit signed image copy.

- NppStatus nppiCopy_32s_AC4MR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 32-bit signed image copy, ignoring alpha.

- NppStatus nppiCopy_32f_C1MR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation 32-bit float image copy.

- NppStatus nppiCopy_32f_C3MR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation three channel 32-bit float image copy.

- NppStatus nppiCopy_32f_C4MR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 32-bit float image copy.

- NppStatus nppiCopy_32f_AC4MR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, int nMaskStep)

  Masked Operation four channel 32-bit float image copy, ignoring alpha.

Channel Copy

The channel copy primitives copy a single color channel from a multi-channel source image to any other color channel in a multi-channel destination image.

The channel is selected by adjusting the respective image pointers to point to the desired color channel (see Channel-of-Interest API).

- NppStatus nppiCopy_8u_C3CR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 8-bit unsigned image copy for three-channel images.

- NppStatus nppiCopy_8u_C4CR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 8-bit unsigned image copy for four-channel images.

- NppStatus nppiCopy_16s_C3CR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 16-bit signed image copy for three-channel images.

- NppStatus nppiCopy_16s_C4CR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 16-bit signed image copy for four-channel images.

- NppStatus nppiCopy_16u_C3CR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 16-bit unsigned image copy for three-channel images.

- NppStatus nppiCopy_16u_C4CR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 16-bit unsigned image copy for four-channel images.

- NppStatus nppiCopy_32s_C3CR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 32-bit signed image copy for three-channel images.

- NppStatus nppiCopy_32s_C4CR (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 32-bit signed image copy for four-channel images.

- NppStatus nppiCopy_32f_C3CR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 32-bit float image copy for three-channel images.

- NppStatus nppiCopy_32f_C4CR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Select-channel 32-bit float image copy for four-channel images.

Extract Channel Copy

The channel extract primitives copy a single color channel from a multi-channel source image to singl-channel destination image.

The channel is selected by adjusting the source image pointer to point to the desired color channel (see Channel-of-Interest API).

- NppStatus nppiCopy_8u_C3C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel to single-channel 8-bit unsigned image copy.

- NppStatus nppiCopy_8u_C4C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel to single-channel 8-bit unsigned image copy.

- NppStatus nppiCopy_16s_C3C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel to single-channel 16-bit signed image copy.

- NppStatus nppiCopy_16s_C4C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel to single-channel 16-bit signed image copy.

- NppStatus nppiCopy_16u_C3C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel to single-channel 16-bit unsigned image copy.

- NppStatus nppiCopy_16u_C4C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel to single-channel 16-bit unsigned image copy.

- NppStatus nppiCopy_32s_C3C1R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel to single-channel 32-bit signed image copy.

- NppStatus nppiCopy_32s_C4C1R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel to single-channel 32-bit signed image copy.

- NppStatus nppiCopy_32f_C3C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel to single-channel 32-bit float image copy.

- NppStatus nppiCopy_32f_C4C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel to single-channel 32-bit float image copy.

Insert Channel Copy

The channel insert primitives copy a single-channel source image into one of the color channels in a multi-channel destination image.

The channel is selected by adjusting the destination image pointer to point to the desired color channel (see Channel-of-Interest API).

- NppStatus nppiCopy_8u_C1C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to three-channel 8-bit unsigned image copy.

- NppStatus nppiCopy_8u_C1C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to four-channel 8-bit unsigned image copy.

- NppStatus nppiCopy_16s_C1C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to three-channel 16-bit signed image copy.

- NppStatus nppiCopy_16s_C1C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to four-channel 16-bit signed image copy.

- NppStatus nppiCopy_16u_C1C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to three-channel 16-bit unsigned image copy.

- NppStatus nppiCopy_16u_C1C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to four-channel 16-bit unsigned image copy.

- NppStatus nppiCopy_32s_C1C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to three-channel 32-bit signed image copy.

- NppStatus nppiCopy_32s_C1C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to four-channel 32-bit signed image copy.

- NppStatus nppiCopy_32f_C1C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to three-channel 32-bit float image copy.

- NppStatus nppiCopy_32f_C1C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single-channel to four-channel 32-bit float image copy.

Packed-to-Planar Copy

Split a packed multi-channel image into a planar image.

E.g. copy the three channels of an RGB image into three separate single-channel images.

- NppStatus nppiCopy_8u_C3P3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗const aDst[3], int nDstStep, NppiSize oSizeROI)

  Three-channel 8-bit unsigned packed to planar image copy.

- NppStatus nppiCopy_8u_C4P4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗const aDst[4], int nDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned packed to planar image copy.

- NppStatus nppiCopy_16s_C3P3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗const aDst[3], int nDstStep, NppiSize oSizeROI)

  Three-channel 16-bit signed packed to planar image copy.

- NppStatus nppiCopy_16s_C4P4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗const aDst[4], int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit signed packed to planar image copy.

- NppStatus nppiCopy_16u_C3P3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗const aDst[3], int nDstStep, NppiSize oSizeROI)

  Three-channel 16-bit unsigned packed to planar image copy.

- NppStatus nppiCopy_16u_C4P4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗const aDst[4], int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned packed to planar image copy.

- NppStatus nppiCopy_32s_C3P3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗const aDst[3], int nDstStep, NppiSize oSizeROI)

  Three-channel 32-bit signed packed to planar image copy.

- NppStatus nppiCopy_32s_C4P4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗const aDst[4], int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit signed packed to planar image copy.

- NppStatus nppiCopy_32f_C3P3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗const aDst[3], int nDstStep, NppiSize oSizeROI)

  Three-channel 32-bit float packed to planar image copy.

- NppStatus nppiCopy_32f_C4P4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗const aDst[4], int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit float packed to planar image copy.

Planar-to-Packed Copy

Combine multiple image planes into a packed multi-channel image.

E.g. copy three single-channel images into a single 3-channel image.

- NppStatus nppiCopy_8u_P3C3R (const Npp8u ∗const aSrc[3], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 8-bit unsigned planar to packed image copy.

- NppStatus nppiCopy_8u_P4C4R (const Npp8u ∗const aSrc[4], int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned planar to packed image copy.

- NppStatus nppiCopy_16u_P3C3R (const Npp16u ∗const aSrc[3], int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 16-bit unsigned planar to packed image copy.

- NppStatus nppiCopy_16u_P4C4R (const Npp16u ∗const aSrc[4], int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned planar to packed image copy.

- NppStatus nppiCopy_16s_P3C3R (const Npp16s ∗const aSrc[3], int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 16-bit signed planar to packed image copy.

- NppStatus nppiCopy_16s_P4C4R (const Npp16s ∗const aSrc[4], int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit signed planar to packed image copy.

- NppStatus nppiCopy_32s_P3C3R (const Npp32s ∗const aSrc[3], int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 32-bit signed planar to packed image copy.

- NppStatus nppiCopy_32s_P4C4R (const Npp32s ∗const aSrc[4], int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit signed planar to packed image copy.

- NppStatus nppiCopy_32f_P3C3R (const Npp32f ∗const aSrc[3], int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three-channel 32-bit float planar to packed image copy.

- NppStatus nppiCopy_32f_P4C4R (const Npp32f ∗const aSrc[4], int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit float planar to packed image copy.

7.55.1 Function Documentation

7.55.1.1 NppStatus nppiCopy_16s_AC4MR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 16-bit signed image copy, ignoring alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.2 NppStatus nppiCopy_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit image copy, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.3 NppStatus nppiCopy_16s_C1C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to three-channel 16-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.4 NppStatus nppiCopy_16s_C1C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to four-channel 16-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.5 NppStatus nppiCopy_16s_C1MR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation 16-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.6 NppStatus nppiCopy_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.7 NppStatus nppiCopy_16s_C3C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel to single-channel 16-bit signed image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.8 NppStatus nppiCopy_16s_C3CR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 16-bit signed image copy for three-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.9 NppStatus nppiCopy_16s_C3MR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation three channel 16-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.10 NppStatus nppiCopy_16s_C3P3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗const *aDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit signed packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

aDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.11 NppStatus nppiCopy_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.12 NppStatus nppiCopy_16s_C4C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel to single-channel 16-bit signed image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.13 NppStatus nppiCopy_16s_C4CR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 16-bit signed image copy for four-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Select-Channel Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.14 NppStatus nppiCopy_16s_C4MR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 16-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
pMask Mask-Image Pointer.
nMaskStep Mask-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.15 NppStatus nppiCopy_16s_C4P4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗const *aDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit signed packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
aDst Destination-Planar-Image Pointer Array.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.16 NppStatus nppiCopy_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.17 NppStatus nppiCopy_16s_P3C3R (const Npp16s ∗const *aSrc*[3], int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit signed planar to packed image copy.

Parameters:

aSrc Planar Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.18 NppStatus nppiCopy_16s_P4C4R (const Npp16s ∗const *aSrc*[4], int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit signed planar to packed image copy.

Parameters:

aSrc Planar Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.19 NppStatus nppiCopy_16sc_AC4R (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit complex image copy, ignoring alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.20 NppStatus nppiCopy_16sc_C1R (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.21 NppStatus nppiCopy_16sc_C2R (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Two-channel 16-bit complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.22 NppStatus nppiCopy_16sc_C3R (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit complex image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.23 NppStatus nppiCopy_16sc_C4R (const Npp16sc ∗ *pSrc*, int *nSrcStep*, Npp16sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit complex image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.24 NppStatus nppiCopy_16u_AC4MR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 16-bit unsigned image copy, ignoring alpha.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
pMask Mask-Image Pointer.
nMaskStep Mask-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.25 NppStatus nppiCopy_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit unsigned image copy, not affecting Alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.26 NppStatus nppiCopy_16u_C1C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to three-channel 16-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.27 NppStatus nppiCopy_16u_C1C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to four-channel 16-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.28 NppStatus nppiCopy_16u_C1MR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation 16-bit unsigned image copy.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***pMask*** Mask-Image Pointer.
- ***nMaskStep*** Mask-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.29 NppStatus nppiCopy_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

16-bit unsigned image copy.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.30 NppStatus nppiCopy_16u_C3C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel to single-channel 16-bit unsigned image copy.

Parameters:

- ***pSrc*** Select-Channel Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.31 NppStatus nppiCopy_16u_C3CR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 16-bit unsigned image copy for three-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.32 NppStatus nppiCopy_16u_C3MR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation three channel 16-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.33 NppStatus nppiCopy_16u_C3P3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗const *aDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit unsigned packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

aDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.34 NppStatus nppiCopy_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.35 NppStatus nppiCopy_16u_C4C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel to single-channel 16-bit unsigned image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.36 NppStatus nppiCopy_16u_C4CR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 16-bit unsigned image copy for four-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.37 NppStatus nppiCopy_16u_C4MR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 16-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
pMask Mask-Image Pointer.
nMaskStep Mask-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.38 NppStatus nppiCopy_16u_C4P4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗const *aDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
aDst Destination-Planar-Image Pointer Array.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.39 NppStatus nppiCopy_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 16-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.40 NppStatus nppiCopy_16u_P3C3R (const Npp16u ∗const *aSrc*[3], int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit unsigned planar to packed image copy.

Parameters:

- ***aSrc*** Planar Source-Planar-Image Pointer Array.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.41 NppStatus nppiCopy_16u_P4C4R (const Npp16u ∗const *aSrc*[4], int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned planar to packed image copy.

Parameters:

- ***aSrc*** Planar Source-Planar-Image Pointer Array.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.42 NppStatus nppiCopy_32f_AC4MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 32-bit float image copy, ignoring alpha.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***pMask*** Mask-Image Pointer.
- ***nMaskStep*** Mask-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.43 NppStatus nppiCopy_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit floating point image copy, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.44 NppStatus nppiCopy_32f_C1C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to three-channel 32-bit float image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.45 NppStatus nppiCopy_32f_C1C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to four-channel 32-bit float image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.46 NppStatus nppiCopy_32f_C1MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation 32-bit float image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
pMask Mask-Image Pointer.
nMaskStep Mask-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.47 NppStatus nppiCopy_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit floating point image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.48 NppStatus nppiCopy_32f_C3C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel to single-channel 32-bit float image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.49 NppStatus nppiCopy_32f_C3CR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 32-bit float image copy for three-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.50 NppStatus nppiCopy_32f_C3MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation three channel 32-bit float image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.51 NppStatus nppiCopy_32f_C3P3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗const *aDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit float packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

aDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.52 NppStatus nppiCopy_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit floating point image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.53 NppStatus nppiCopy_32f_C4C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel to single-channel 32-bit float image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.54 NppStatus nppiCopy_32f_C4CR (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 32-bit float image copy for four-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.55 NppStatus nppiCopy_32f_C4MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 32-bit float image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.56 NppStatus nppiCopy_32f_C4P4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗const *aDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit float packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

aDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.57 NppStatus nppiCopy_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit floating point image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.58 NppStatus nppiCopy_32f_P3C3R (const Npp32f *const *aSrc*[3], int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit float planar to packed image copy.

Parameters:

aSrc Planar Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.59 NppStatus nppiCopy_32f_P4C4R (const Npp32f *const *aSrc*[4], int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit float planar to packed image copy.

Parameters:

aSrc Planar Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.60 NppStatus nppiCopy_32fc_AC4R (const Npp32fc * *pSrc*, int *nSrcStep*, Npp32fc * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating-point complex image copy, ignoring alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.61 NppStatus nppiCopy_32fc_C1R (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit floating-point complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.62 NppStatus nppiCopy_32fc_C2R (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Two-channel 32-bit floating-point complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.63 NppStatus nppiCopy_32fc_C3R (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit floating-point complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.64 NppStatus nppiCopy_32fc_C4R (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32fc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating-point complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.65 NppStatus nppiCopy_32s_AC4MR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 32-bit signed image copy, ignoring alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.66 NppStatus nppiCopy_32s_AC4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit image copy, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.67 NppStatus nppiCopy_32s_C1C3R (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to three-channel 32-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.68 NppStatus nppiCopy_32s_C1C4R (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to four-channel 32-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.69 NppStatus nppiCopy_32s_C1MR (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u * *pMask*, int *nMaskStep*)

Masked Operation 32-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.70 NppStatus nppiCopy_32s_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.71 NppStatus nppiCopy_32s_C3C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel to single-channel 32-bit signed image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.72 NppStatus nppiCopy_32s_C3CR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 32-bit signed image copy for three-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.73 NppStatus nppiCopy_32s_C3MR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation three channel 32-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.74 NppStatus nppiCopy_32s_C3P3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗const *aDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit signed packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

aDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.75 NppStatus nppiCopy_32s_C3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.76 NppStatus nppiCopy_32s_C4C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel to single-channel 32-bit signed image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.77 NppStatus nppiCopy_32s_C4CR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 32-bit signed image copy for four-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.78 NppStatus nppiCopy_32s_C4MR (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 32-bit signed image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.79 NppStatus nppiCopy_32s_C4P4R (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s *const *aDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit signed packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

aDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.80 NppStatus nppiCopy_32s_C4R (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 32-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.81 NppStatus nppiCopy_32s_P3C3R (const Npp32s *const *aSrc*[3], int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit signed planar to packed image copy.

Parameters:

aSrc Planar Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.82 NppStatus nppiCopy_32s_P4C4R (const Npp32s ∗const *aSrc*[4], int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit signed planar to packed image copy.

Parameters:

aSrc Planar Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.83 NppStatus nppiCopy_32sc_AC4R (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit complex image copy, ignoring alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.84 NppStatus nppiCopy_32sc_C1R (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.85 NppStatus nppiCopy_32sc_C2R (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Two-channel 32-bit complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.86 NppStatus nppiCopy_32sc_C3R (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.87 NppStatus nppiCopy_32sc_C4R (const Npp32sc ∗ *pSrc*, int *nSrcStep*, Npp32sc ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit complex image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.88 NppStatus nppiCopy_8s_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit image copy, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.89 NppStatus nppiCopy_8s_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

8-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.90 NppStatus nppiCopy_8s_C2R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Two-channel 8-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.91 NppStatus nppiCopy_8s_C3R (const Npp8s * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 8-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.92 NppStatus nppiCopy_8s_C4R (const Npp8s * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.93 NppStatus nppiCopy_8u_AC4MR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u * *pMask*, int *nMaskStep*)

Masked Operation four channel 8-bit unsigned image copy, ignoring alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.94 NppStatus nppiCopy_8u_AC4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned image copy, not affecting Alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.95 NppStatus nppiCopy_8u_C1C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to three-channel 8-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.96 NppStatus nppiCopy_8u_C1C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single-channel to four-channel 8-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.97 NppStatus nppiCopy_8u_C1MR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u * *pMask*, int *nMaskStep*)

Masked Operation 8-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
pMask Mask-Image Pointer.
nMaskStep Mask-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.98 NppStatus nppiCopy_8u_C1R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

8-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.99 NppStatus nppiCopy_8u_C3C1R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel to single-channel 8-bit unsigned image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.100 NppStatus nppiCopy_8u_C3CR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 8-bit unsigned image copy for three-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.101 NppStatus nppiCopy_8u_C3MR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation three channel 8-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.102 NppStatus nppiCopy_8u_C3P3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗const *aDst*[3], int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 8-bit unsigned packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

aDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.103 NppStatus nppiCopy_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.104 NppStatus nppiCopy_8u_C4C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel to single-channel 8-bit unsigned image copy.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.105 NppStatus nppiCopy_8u_C4CR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Select-channel 8-bit unsigned image copy for four-channel images.

Parameters:

pSrc Select-Channel Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Select-Channel Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.106 NppStatus nppiCopy_8u_C4MR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, int *nMaskStep*)

Masked Operation four channel 8-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.107 NppStatus nppiCopy_8u_C4P4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗const *aDst*[4], int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned packed to planar image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

aDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.108 NppStatus nppiCopy_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

4 channel 8-bit unsigned image copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.109 NppStatus nppiCopy_8u_P3C3R (const Npp8u ∗const *aSrc*[3], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three-channel 8-bit unsigned planar to packed image copy.

Parameters:

aSrc Planar Source-Image Pointer.

nSrcStep Source-Planar-Image Pointer Array.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.55.1.110 NppStatus nppiCopy_8u_P4C4R (const Npp8u ∗const *aSrc*[4], int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned planar to packed image copy.

Parameters:

aSrc Planar Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56 Convert

Convert to Increase Bit-Depth

The integer conversion methods do not involve any scaling.

Also, even when increasing the bit-depth loss of information may occur:

- When converting integers (e.g. Npp32u) to float (e.g. Npp32f) integervalue not accurately representable by the float are rounded to the closest floating-point value.
- When converting signed integers to unsigned integers all negative values are lost (saturated to 0).

- NppStatus nppiConvert_8u16u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 16-bit unsigned conversion.

- NppStatus nppiConvert_8u16u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned to 16-bit unsigned conversion.

- NppStatus nppiConvert_8u16u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 16-bit unsigned conversion.

- NppStatus nppiConvert_8u16u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 16-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiConvert_8u16s_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 16-bit signed conversion.

- NppStatus nppiConvert_8u16s_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned to 16-bit signed conversion.

- NppStatus nppiConvert_8u16s_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 16-bit signed conversion.

- NppStatus nppiConvert_8u16s_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 16-bit signed conversion, not affecting Alpha.

- NppStatus nppiConvert_8u32s_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 32-bit signed conversion.

- NppStatus nppiConvert_8u32s_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

Three channel 8-bit unsigned to 32-bit signed conversion.

- NppStatus nppiConvert_8u32s_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 32-bit signed conversion.

- NppStatus nppiConvert_8u32s_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 32-bit signed conversion, not affecting Alpha.

- NppStatus nppiConvert_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiConvert_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiConvert_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiConvert_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 32-bit floating-point conversion, not affecting Alpha.

- NppStatus nppiConvert_8s32s_C1R (const Npp8s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit signed to 32-bit signed conversion.

- NppStatus nppiConvert_8s32s_C3R (const Npp8s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit signed to 32-bit signed conversion.

- NppStatus nppiConvert_8s32s_C4R (const Npp8s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit signed to 32-bit signed conversion.

- NppStatus nppiConvert_8s32s_AC4R (const Npp8s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit signed to 32-bit signed conversion, not affecting Alpha.

- NppStatus nppiConvert_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit signed to 32-bit floating-point conversion.

- NppStatus nppiConvert_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit signed to 32-bit floating-point conversion.

- NppStatus nppiConvert_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit signed to 32-bit floating-point conversion.

- NppStatus nppiConvert_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit signed to 32-bit floating-point conversion, not affecting Alpha.

- NppStatus nppiConvert_16u32s_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit unsigned to 32-bit signed conversion.

- NppStatus nppiConvert_16u32s_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 16-bit unsigned to 32-bit signed conversion.

- NppStatus nppiConvert_16u32s_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit unsigned to 32-bit signed conversion.

- NppStatus nppiConvert_16u32s_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit unsigned to 32-bit signed conversion, not affecting Alpha.

- NppStatus nppiConvert_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiConvert_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 16-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiConvert_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiConvert_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit unsigned to 32-bit floating-point conversion, not affecting Alpha.

- NppStatus nppiConvert_16s32s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed to 32-bit signed conversion.

- NppStatus nppiConvert_16s32s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed to 32-bit signed conversion.

- NppStatus nppiConvert_16s32s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed to 32-bit signed conversion.

- NppStatus nppiConvert_16s32s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed to 32-bit signed conversion, not affecting Alpha.

- NppStatus nppiConvert_16s32f_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed to 32-bit floating-point conversion.

- NppStatus nppiConvert_16s32f_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed to 32-bit floating-point conversion.

- NppStatus nppiConvert_16s32f_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed to 32-bit floating-point conversion.

- NppStatus nppiConvert_16s32f_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed to 32-bit floating-point conversion, not affecting Alpha.

- NppStatus nppiConvert_8s8u_C1Rs (const Npp8s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit signed to 8-bit unsigned conversion with saturation.

- NppStatus nppiConvert_8s16u_C1Rs (const Npp8s ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit signed to 16-bit unsigned conversion with saturation.

- NppStatus nppiConvert_8s16s_C1R (const Npp8s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit signed to 16-bit signed conversion.

- NppStatus nppiConvert_8s32u_C1Rs (const Npp8s ∗pSrc, int nSrcStep, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit signed to 32-bit unsigned conversion with saturation.

- NppStatus nppiConvert_16s16u_C1Rs (const Npp16s ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed to 16-bit unsigned conversion with saturation.

- NppStatus nppiConvert_16s32u_C1Rs (const Npp16s ∗pSrc, int nSrcStep, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed to 32-bit unsigned conversion with saturation.

- NppStatus nppiConvert_16u32u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit unsigned to 32-bit unsigned conversion.

- NppStatus nppiConvert_32s32u_C1Rs (const Npp32s ∗pSrc, int nSrcStep, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI)

Single channel 32-bit signed to 32-bit unsigned conversion with saturation.

- NppStatus nppiConvert_32s32f_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 32-bit signed to 32-bit floating-point conversion.

- NppStatus nppiConvert_32u32f_C1R (const Npp32u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 32-bit unsigned to 32-bit floating-point conversion.

Convert to Decrease Bit-Depth

The integer conversion methods do not involve any scaling.

When converting floating-point values to integers the user may choose the most appropriate rounding-mode. Typically information is lost when converting to lower bit depth:

- All converted values are saturated to the destination type's range. E.g. any values larger than the largest value of the destination type are clamped to the destination's maximum.
- Converting floating-point values to integer also involves rounding, effectively loosing all fractional value information in the process.

- NppStatus nppiConvert_16u8u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit unsigned to 8-bit unsigned conversion.

- NppStatus nppiConvert_16u8u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 16-bit unsigned to 8-bit unsigned conversion.

- NppStatus nppiConvert_16u8u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit unsigned to 8-bit unsigned conversion.

- NppStatus nppiConvert_16u8u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit unsigned to 8-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiConvert_16s8u_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed to 8-bit unsigned conversion.

- NppStatus nppiConvert_16s8u_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed to 8-bit unsigned conversion.

- NppStatus nppiConvert_16s8u_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed to 8-bit unsigned conversion.

- NppStatus nppiConvert_16s8u_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed to 8-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiConvert_32s8u_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 32-bit signed to 8-bit unsigned conversion.

- NppStatus nppiConvert_32s8u_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 32-bit signed to 8-bit unsigned conversion.

- NppStatus nppiConvert_32s8u_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 32-bit signed to 8-bit unsigned conversion.

- NppStatus nppiConvert_32s8u_AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 32-bit signed to 8-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiConvert_32s8s_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 32-bit signed to 8-bit signed conversion.

- NppStatus nppiConvert_32s8s_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 32-bit signed to 8-bit signed conversion.

- NppStatus nppiConvert_32s8s_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 32-bit signed to 8-bit signed conversion.

- NppStatus nppiConvert_32s8s_AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 32-bit signed to 8-bit signed conversion, not affecting Alpha.

- NppStatus nppiConvert_8u8s_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 8-bit unsigned to 8-bit signed conversion.

- NppStatus nppiConvert_16u8s_C1RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 16-bit unsigned to 8-bit signed conversion.

- NppStatus nppiConvert_16s8s_C1RSfs (const Npp16s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 16-bit signed to 8-bit signed conversion.

- NppStatus nppiConvert_16u16s_C1RSfs (const Npp16u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

Single channel 16-bit unsigned to 16-bit signed conversion.

- NppStatus nppiConvert_32u8u_C1RSfs (const Npp32u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit unsigned to 8-bit unsigned conversion.

- NppStatus nppiConvert_32u8s_C1RSfs (const Npp32u ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit unsigned to 8-bit signed conversion.

- NppStatus nppiConvert_32u16u_C1RSfs (const Npp32u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit unsigned to 16-bit unsigned conversion.

- NppStatus nppiConvert_32u16s_C1RSfs (const Npp32u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit unsigned to 16-bit signed conversion.

- NppStatus nppiConvert_32u32s_C1RSfs (const Npp32u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit unsigned to 32-bit signed conversion.

- NppStatus nppiConvert_32s16u_C1RSfs (const Npp32s ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit unsigned to 16-bit unsigned conversion.

- NppStatus nppiConvert_32s16s_C1RSfs (const Npp32s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit unsigned to 16-bit signed conversion.

- NppStatus nppiConvert_32f8u_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Single channel 32-bit floating point to 8-bit unsigned conversion.

- NppStatus nppiConvert_32f8u_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Three channel 32-bit floating point to 8-bit unsigned conversion.

- NppStatus nppiConvert_32f8u_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Four channel 32-bit floating point to 8-bit unsigned conversion.

- NppStatus nppiConvert_32f8u_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Four channel 32-bit floating point to 8-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiConvert_32f8s_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Single channel 32-bit floating point to 8-bit signed conversion.

- NppStatus nppiConvert_32f8s_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Three channel 32-bit floating point to 8-bit signed conversion.

- NppStatus nppiConvert_32f8s_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Four channel 32-bit floating point to 8-bit signed conversion.

- NppStatus nppiConvert_32f8s_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Four channel 32-bit floating point to 8-bit signed conversion, not affecting Alpha.

- NppStatus nppiConvert_32f16u_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Single channel 32-bit floating point to 16-bit unsigned conversion.

- NppStatus nppiConvert_32f16u_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Three channel 32-bit floating point to 16-bit unsigned conversion.

- NppStatus nppiConvert_32f16u_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Four channel 32-bit floating point to 16-bit unsigned conversion.

- NppStatus nppiConvert_32f16u_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Four channel 32-bit floating point to 16-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiConvert_32f16s_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Single channel 32-bit floating point to 16-bit signed conversion.

- NppStatus nppiConvert_32f16s_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Three channel 32-bit floating point to 16-bit signed conversion.

- NppStatus nppiConvert_32f16s_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Four channel 32-bit floating point to 16-bit signed conversion.

- NppStatus nppiConvert_32f16s_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode)

  Four channel 32-bit floating point to 16-bit signed conversion.

- NppStatus nppiConvert_32f8u_C1RSfs (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit floating point to 8-bit unsigned conversion.

- NppStatus nppiConvert_32f8s_C1RSfs (const Npp32f ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit floating point to 8-bit signed conversion.

- NppStatus nppiConvert_32f16u_C1RSfs (const Npp32f ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit floating point to 16-bit unsigned conversion.

- NppStatus nppiConvert_32f16s_C1RSfs (const Npp32f ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit floating point to 16-bit signed conversion.

- NppStatus nppiConvert_32f32u_C1RSfs (const Npp32f ∗pSrc, int nSrcStep, Npp32u ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit floating point to 32-bit unsigned conversion.

- NppStatus nppiConvert_32f32s_C1RSfs (const Npp32f ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, NppRoundMode eRoundMode, int nScaleFactor)

  Single channel 32-bit floating point to 32-bit signed conversion.

7.56.1 Function Documentation

7.56.1.1 NppStatus nppiConvert_16s16u_C1Rs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed to 16-bit unsigned conversion with saturation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.2 NppStatus nppiConvert_16s32f_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed to 32-bit floating-point conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.3 NppStatus nppiConvert_16s32f_C1R (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.4 NppStatus nppiConvert_16s32f_C3R (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.5 NppStatus nppiConvert_16s32f_C4R (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.6 NppStatus nppiConvert_16s32s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed to 32-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.7 NppStatus nppiConvert_16s32s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.8 NppStatus nppiConvert_16s32s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.9 NppStatus nppiConvert_16s32s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.10 NppStatus nppiConvert_16s32u_C1Rs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp32u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed to 32-bit unsigned conversion with saturation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.11 NppStatus nppiConvert_16s8s_C1RSfs (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 16-bit signed to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.12 NppStatus nppiConvert_16s8u_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed to 8-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.13 NppStatus nppiConvert_16s8u_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.14 NppStatus nppiConvert_16s8u_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.15 NppStatus nppiConvert_16s8u_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.16 NppStatus nppiConvert_16u16s_C1RSfs (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 16-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eRoundMode Rounding Mode Parameter.
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.17 NppStatus nppiConvert_16u32f_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit unsigned to 32-bit floating-point conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.18 NppStatus nppiConvert_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.19 NppStatus nppiConvert_16u32f_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.20 NppStatus nppiConvert_16u32f_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.21 NppStatus nppiConvert_16u32s_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit unsigned to 32-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.22 NppStatus nppiConvert_16u32s_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.23 NppStatus nppiConvert_16u32s_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.24 NppStatus nppiConvert_16u32s_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.25 NppStatus nppiConvert_16u32u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp32u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit unsigned to 32-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.26 NppStatus nppiConvert_16u8s_C1RSfs (const Npp16u * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 16-bit unsigned to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eRoundMode Rounding Mode Parameter.
nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.27 NppStatus nppiConvert_16u8u_AC4R (const Npp16u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit unsigned to 8-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.28 NppStatus nppiConvert_16u8u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit unsigned to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.29 NppStatus nppiConvert_16u8u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit unsigned to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.30 NppStatus nppiConvert_16u8u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit unsigned to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.31 NppStatus nppiConvert_32f16s_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Four channel 32-bit floating point to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.32 NppStatus nppiConvert_32f16s_C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Single channel 32-bit floating point to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.33 NppStatus nppiConvert_32f16s_C1RSfs (const Npp32f * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit floating point to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.34 NppStatus nppiConvert_32f16s_C3R (const Npp32f * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Three channel 32-bit floating point to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.35 NppStatus nppiConvert_32f16s_C4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Four channel 32-bit floating point to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.36 NppStatus nppiConvert_32f16u_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Four channel 32-bit floating point to 16-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.37 NppStatus nppiConvert_32f16u_C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Single channel 32-bit floating point to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.38 NppStatus nppiConvert_32f16u_C1RSfs (const Npp32f * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit floating point to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.39 NppStatus nppiConvert_32f16u_C3R (const Npp32f * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Three channel 32-bit floating point to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.40 NppStatus nppiConvert_32f16u_C4R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp16u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Four channel 32-bit floating point to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.41 NppStatus nppiConvert_32f32s_C1RSfs (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit floating point to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.42 NppStatus nppiConvert_32f32u_C1RSfs (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit floating point to 32-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.43 NppStatus nppiConvert_32f8s_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Four channel 32-bit floating point to 8-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.44 NppStatus nppiConvert_32f8s_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Single channel 32-bit floating point to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.45 NppStatus nppiConvert_32f8s_C1RSfs (const Npp32f * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit floating point to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.46 NppStatus nppiConvert_32f8s_C3R (const Npp32f * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Three channel 32-bit floating point to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.47 NppStatus nppiConvert_32f8s_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Four channel 32-bit floating point to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.48 NppStatus nppiConvert_32f8u_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Four channel 32-bit floating point to 8-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.49 NppStatus nppiConvert_32f8u_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Single channel 32-bit floating point to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.50 NppStatus nppiConvert_32f8u_C1RSfs (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit floating point to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.51 NppStatus nppiConvert_32f8u_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Three channel 32-bit floating point to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.52 NppStatus nppiConvert_32f8u_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*)

Four channel 32-bit floating point to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Flag specifying how fractional float values are rounded to integer values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.53 NppStatus nppiConvert_32s16s_C1RSfs (const Npp32s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.54 NppStatus nppiConvert_32s16u_C1RSfs (const Npp32s * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit unsigned to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.55 NppStatus nppiConvert_32s32f_C1R (const Npp32s * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit signed to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.56 NppStatus nppiConvert_32s32u_C1Rs (const Npp32s * *pSrc*, int *nSrcStep*, Npp32u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit signed to 32-bit unsigned conversion with saturation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.57 NppStatus nppiConvert_32s8s_AC4R (const Npp32s * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit signed to 8-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.58 NppStatus nppiConvert_32s8s_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit signed to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.59 NppStatus nppiConvert_32s8s_C3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit signed to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.60 NppStatus nppiConvert_32s8s_C4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit signed to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.61 NppStatus nppiConvert_32s8u_AC4R (const Npp32s * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit signed to 8-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.62 NppStatus nppiConvert_32s8u_C1R (const Npp32s * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.63 NppStatus nppiConvert_32s8u_C3R (const Npp32s * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.64 NppStatus nppiConvert_32s8u_C4R (const Npp32s * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.65 NppStatus nppiConvert_32u16s_C1RSfs (const Npp32u * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.66 NppStatus nppiConvert_32u16u_C1RSfs (const Npp32u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit unsigned to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.67 NppStatus nppiConvert_32u32f_C1R (const Npp32u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.68 NppStatus nppiConvert_32u32s_C1RSfs (const Npp32u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.69 NppStatus nppiConvert_32u8s_C1RSfs (const Npp32u ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit unsigned to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.70 NppStatus nppiConvert_32u8u_C1RSfs (const Npp32u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 32-bit unsigned to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.71 NppStatus nppiConvert_8s16s_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit signed to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.72 NppStatus nppiConvert_8s16u_C1Rs (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit signed to 16-bit unsigned conversion with saturation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.73 NppStatus nppiConvert_8s32f_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit signed to 32-bit floating-point conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.74 NppStatus nppiConvert_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit signed to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.75 NppStatus nppiConvert_8s32f_C3R (const Npp8s $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit signed to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.76 NppStatus nppiConvert_8s32f_C4R (const Npp8s $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit signed to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.77 NppStatus nppiConvert_8s32s_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit signed to 32-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.78 NppStatus nppiConvert_8s32s_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit signed to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.79 NppStatus nppiConvert_8s32s_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit signed to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.80 NppStatus nppiConvert_8s32s_C4R (const Npp8s * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit signed to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.81 NppStatus nppiConvert_8s32u_C1Rs (const Npp8s * *pSrc*, int *nSrcStep*, Npp32u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit signed to 32-bit unsigned conversion with saturation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.82 NppStatus nppiConvert_8s8u_C1Rs (const Npp8s * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit signed to 8-bit unsigned conversion with saturation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.83 NppStatus nppiConvert_8u16s_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 16-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.84 NppStatus nppiConvert_8u16s_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.85 NppStatus nppiConvert_8u16s_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.86 NppStatus nppiConvert_8u16s_C4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.87 NppStatus nppiConvert_8u16u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 16-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.88 NppStatus nppiConvert_8u16u_C1R (const Npp8u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.89 NppStatus nppiConvert_8u16u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.90 NppStatus nppiConvert_8u16u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.91 NppStatus nppiConvert_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 32-bit floating-point conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.92 NppStatus nppiConvert_8u32f_C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.93 NppStatus nppiConvert_8u32f_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.94 NppStatus nppiConvert_8u32f_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.95 NppStatus nppiConvert_8u32s_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 32-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.96 NppStatus nppiConvert_8u32s_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.97 NppStatus nppiConvert_8u32s_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.98 NppStatus nppiConvert_8u32s_C4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.56.1.99 NppStatus nppiConvert_8u8s_C1RSfs (const Npp8u * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

Single channel 8-bit unsigned to 8-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eRoundMode Rounding Mode Parameter.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57 Scale

Scaled Bit-Depth Conversion

Scale bit-depth up and down.

To map source pixel srcPixelValue to destination pixel dstPixelValue the following equation is used:

dstPixelValue = dstMinRangeValue + scaleFactor ∗ (srcPixelValue - srcMinRangeValue)

where scaleFactor = (dstMaxRangeValue - dstMinRangeValue) / (srcMaxRangeValue - srcMinRangeValue).

For conversions between integer data types, the entire integer numeric range of the input data type is mapped onto the entire integer numeric range of the output data type.

For conversions to floating point data types the floating point data range is defined by the user supplied floating point values of nMax and nMin which are used as the dstMaxRangeValue and dstMinRangeValue respectively in the scaleFactor and dstPixelValue calculations and also as the saturation values to which output data is clamped.

When converting from floating-point values to integer values, nMax and nMin are used as the srcMaxRangeValue and srcMinRangeValue respectively in the scaleFactor and dstPixelValue calculations. Output values are saturated and clamped to the full output integer pixel value range.

- NppStatus nppiScale_8u16u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 16-bit unsigned conversion.

- NppStatus nppiScale_8u16u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned to 16-bit unsigned conversion.

- NppStatus nppiScale_8u16u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 16-bit unsigned conversion.

- NppStatus nppiScale_8u16u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 16-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiScale_8u16s_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 16-bit signed conversion.

- NppStatus nppiScale_8u16s_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned to 16-bit signed conversion.

- NppStatus nppiScale_8u16s_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 16-bit signed conversion.

- NppStatus nppiScale_8u16s_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI)

Four channel 8-bit unsigned to 16-bit signed conversion, not affecting Alpha.

- NppStatus nppiScale_8u32s_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 32-bit signed conversion.

- NppStatus nppiScale_8u32s_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned to 32-bit signed conversion.

- NppStatus nppiScale_8u32s_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 32-bit signed conversion.

- NppStatus nppiScale_8u32s_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned to 32-bit signed conversion, not affecting Alpha.

- NppStatus nppiScale_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nMin, Npp32f nMax)

  Single channel 8-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiScale_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nMin, Npp32f nMax)

  Three channel 8-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiScale_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nMin, Npp32f nMax)

  Four channel 8-bit unsigned to 32-bit floating-point conversion.

- NppStatus nppiScale_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nMin, Npp32f nMax)

  Four channel 8-bit unsigned to 32-bit floating-point conversion, not affecting Alpha.

- NppStatus nppiScale_16u8u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Single channel 16-bit unsigned to 8-bit unsigned conversion.

- NppStatus nppiScale_16u8u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Three channel 16-bit unsigned to 8-bit unsigned conversion.

- NppStatus nppiScale_16u8u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Four channel 16-bit unsigned to 8-bit unsigned conversion.

- NppStatus nppiScale_16u8u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Four channel 16-bit unsigned to 8-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiScale_16s8u_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Single channel 16-bit signed to 8-bit unsigned conversion.

- NppStatus nppiScale_16s8u_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Three channel 16-bit signed to 8-bit unsigned conversion.

- NppStatus nppiScale_16s8u_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Four channel 16-bit signed to 8-bit unsigned conversion.

- NppStatus nppiScale_16s8u_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Four channel 16-bit signed to 8-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiScale_32s8u_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Single channel 32-bit signed to 8-bit unsigned conversion.

- NppStatus nppiScale_32s8u_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Three channel 32-bit signed to 8-bit unsigned conversion.

- NppStatus nppiScale_32s8u_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Four channel 32-bit signed to 8-bit unsigned conversion.

- NppStatus nppiScale_32s8u_AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppHintAlgorithm hint)

  Four channel 32-bit signed to 8-bit unsigned conversion, not affecting Alpha.

- NppStatus nppiScale_32f8u_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nMin, Npp32f nMax)

  Single channel 32-bit floating point to 8-bit unsigned conversion.

- NppStatus nppiScale_32f8u_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nMin, Npp32f nMax)

  Three channel 32-bit floating point to 8-bit unsigned conversion.

- NppStatus nppiScale_32f8u_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nMin, Npp32f nMax)

  Four channel 32-bit floating point to 8-bit unsigned conversion.

- NppStatus nppiScale_32f8u_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nMin, Npp32f nMax)

  Four channel 32-bit floating point to 8-bit unsigned conversion, not affecting Alpha.

7.57.1 Function Documentation

7.57.1.1 NppStatus nppiScale_16s8u_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Four channel 16-bit signed to 8-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.2 NppStatus nppiScale_16s8u_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Single channel 16-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.3 NppStatus nppiScale_16s8u_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Three channel 16-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.4 NppStatus nppiScale_16s8u_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Four channel 16-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.5 NppStatus nppiScale_16u8u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Four channel 16-bit unsigned to 8-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.6 NppStatus nppiScale_16u8u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Single channel 16-bit unsigned to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.7 NppStatus nppiScale_16u8u_C3R (const Npp16u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Three channel 16-bit unsigned to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.8 NppStatus nppiScale_16u8u_C4R (const Npp16u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Four channel 16-bit unsigned to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.9 NppStatus nppiScale_32f8u_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nMin*, Npp32f *nMax*)

Four channel 32-bit floating point to 8-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nMin specifies the minimum saturation value to which every output value will be clamped.

nMax specifies the maximum saturation value to which every output value will be clamped.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_SCALE_RANGE_ERROR indicates an error condition if nMax <= nMin.

7.57.1.10 NppStatus nppiScale_32f8u_C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nMin*, Npp32f *nMax*)

Single channel 32-bit floating point to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nMin specifies the minimum saturation value to which every output value will be clamped.

nMax specifies the maximum saturation value to which every output value will be clamped.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_SCALE_RANGE_ERROR indicates an error condition if nMax <= nMin.

7.57.1.11 NppStatus nppiScale_32f8u_C3R (const Npp32f * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nMin*, Npp32f *nMax*)

Three channel 32-bit floating point to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nMin specifies the minimum saturation value to which every output value will be clamped.

nMax specifies the maximum saturation value to which every output value will be clamped.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_SCALE_RANGE_ERROR indicates an error condition if nMax <= nMin.

7.57.1.12 NppStatus nppiScale_32f8u_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nMin*, Npp32f *nMax*)

Four channel 32-bit floating point to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nMin specifies the minimum saturation value to which every output value will be clamped.

nMax specifies the maximum saturation value to which every output value will be clamped.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_SCALE_RANGE_ERROR indicates an error condition if nMax <= nMin.

7.57.1.13 NppStatus nppiScale_32s8u_AC4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Four channel 32-bit signed to 8-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.14 NppStatus nppiScale_32s8u_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Single channel 32-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.15 NppStatus nppiScale_32s8u_C3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Three channel 32-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.16 NppStatus nppiScale_32s8u_C4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppHintAlgorithm *hint*)

Four channel 32-bit signed to 8-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
hint algorithm performance or accuracy selector, currently ignored

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.17 NppStatus nppiScale_8u16s_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 16-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.18 NppStatus nppiScale_8u16s_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.19 NppStatus nppiScale_8u16s_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.20 NppStatus nppiScale_8u16s_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 16-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.21 NppStatus nppiScale_8u16u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 16-bit unsigned conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.22 NppStatus nppiScale_8u16u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.23 NppStatus nppiScale_8u16u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.24 NppStatus nppiScale_8u16u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 16-bit unsigned conversion.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.25 NppStatus nppiScale_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nMin*, Npp32f *nMax*)

Four channel 8-bit unsigned to 32-bit floating-point conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
nMin specifies the minimum saturation value to which every output value will be clamped.
nMax specifies the maximum saturation value to which every output value will be clamped.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_SCALE_RANGE_ERROR indicates an error condition if nMax <= nMin.

7.57.1.26 NppStatus nppiScale_8u32f_C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nMin*, Npp32f *nMax*)

Single channel 8-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nMin specifies the minimum saturation value to which every output value will be clamped.

nMax specifies the maximum saturation value to which every output value will be clamped.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_SCALE_RANGE_ERROR indicates an error condition if nMax <= nMin.

7.57.1.27 NppStatus nppiScale_8u32f_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nMin*, Npp32f *nMax*)

Three channel 8-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nMin specifies the minimum saturation value to which every output value will be clamped.

nMax specifies the maximum saturation value to which every output value will be clamped.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_SCALE_RANGE_ERROR indicates an error condition if nMax <= nMin.

7.57.1.28 NppStatus nppiScale_8u32f_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nMin*, Npp32f *nMax*)

Four channel 8-bit unsigned to 32-bit floating-point conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nMin specifies the minimum saturation value to which every output value will be clamped.

nMax specifies the maximum saturation value to which every output value will be clamped.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_SCALE_RANGE_ERROR indicates an error condition if nMax <= nMin.

7.57.1.29 NppStatus nppiScale_8u32s_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 32-bit signed conversion, not affecting Alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.30 NppStatus nppiScale_8u32s_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.31 NppStatus nppiScale_8u32s_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.57.1.32 NppStatus nppiScale_8u32s_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned to 32-bit signed conversion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58 Copy Constant Border

CopyConstBorder

Methods for copying images and padding borders with a constant, user-specifiable color.

- NppStatus nppiCopyConstBorder_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, Npp8u nValue)

  1 channel 8-bit unsigned integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp8u aValue[3])

  3 channel 8-bit unsigned integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp8u aValue[4])

  4 channel 8-bit unsigned integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp8u aValue[3])

  4 channel 8-bit unsigned integer image copy with constant border color with alpha channel unaffected.

- NppStatus nppiCopyConstBorder_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, Npp16u nValue)

  1 channel 16-bit unsigned integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp16u aValue[3])

  3 channel 16-bit unsigned integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp16u aValue[4])

  4 channel 16-bit unsigned integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp16u aValue[3])

  4 channel 16-bit unsigned integer image copy with constant border color with alpha channel unaffected.

- NppStatus nppiCopyConstBorder_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, Npp16s nValue)

  1 channel 16-bit signed integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp16s aValue[3])

  3 channel 16-bit signed integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp16s aValue[4])

  4 channel 16-bit signed integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp16s aValue[3])

  4 channel 16-bit signed integer image copy with constant border color with alpha channel unaffected.

- NppStatus nppiCopyConstBorder_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, Npp32s nValue)

  1 channel 32-bit signed integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp32s aValue[3])

  3 channel 32-bit signed integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp32s aValue[4])

  4 channel 32-bit signed integer image copy with constant border color.

- NppStatus nppiCopyConstBorder_32s_AC4R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp32s aValue[3])

  4 channel 32-bit signed integer image copy with constant border color with alpha channel unaffected.

- NppStatus nppiCopyConstBorder_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, Npp32f nValue)

  1 channel 32-bit floating point image copy with constant border color.

- NppStatus nppiCopyConstBorder_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp32f aValue[3])

  3 channel 32-bit floating point image copy with constant border color.

- NppStatus nppiCopyConstBorder_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp32f aValue[4])

  4 channel 32-bit floating point image copy with constant border color.

- NppStatus nppiCopyConstBorder_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth, const Npp32f aValue[3])

  4 channel 32-bit floating point image copy with constant border color with alpha channel unaffected.

7.58.1 Function Documentation

7.58.1.1 NppStatus nppiCopyConstBorder_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp16s *aValue*[3])

4 channel 16-bit signed integer image copy with constant border color with alpha channel unaffected.

See nppiCopyConstBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGB values of the border pixels. Because this method does not affect the destination image's alpha channel, only three components of the border color are needed.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.2 NppStatus nppiCopyConstBorder_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, Npp16s *nValue*)

1 channel 16-bit signed integer image copy with constant border color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and constant border color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the constant border color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

nValue The pixel value to be set for border pixels.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.3 NppStatus nppiCopyConstBorder_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp16s *aValue*[3])

3 channel 16-bit signed integer image copy with constant border color.

See nppiCopyConstBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.4 NppStatus nppiCopyConstBorder_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp16s *aValue*[4])

4 channel 16-bit signed integer image copy with constant border color.

See nppiCopyConstBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.5 NppStatus nppiCopyConstBorder_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp16u *aValue*[3])

4 channel 16-bit unsigned integer image copy with constant border color with alpha channel unaffected.

See nppiCopyConstBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGB values of the border pixels. Because this method does not affect the destination image's alpha channel, only three components of the border color are needed.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.6 NppStatus nppiCopyConstBorder_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, Npp16u *nValue*)

1 channel 16-bit unsigned integer image copy with constant border color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and constant border color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the constant border color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

nValue The pixel value to be set for border pixels.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.7 NppStatus nppiCopyConstBorder_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp16u *aValue*[3])

3 channel 16-bit unsigned integer image copy with constant border color.

See nppiCopyConstBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.8 NppStatus nppiCopyConstBorder_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp16u *aValue*[4])

4 channel 16-bit unsigned integer image copy with constant border color.

See nppiCopyConstBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.9 NppStatus nppiCopyConstBorder_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp32f *aValue*[3])

4 channel 32-bit floating point image copy with constant border color with alpha channel unaffected.

See nppiCopyConstBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGB values of the border pixels. Because this method does not affect the destination image's alpha channel, only three components of the border color are needed.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.10 NppStatus nppiCopyConstBorder_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, Npp32f *nValue*)

1 channel 32-bit floating point image copy with constant border color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and constant border color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the constant border color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

nValue The pixel value to be set for border pixels.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.11 NppStatus nppiCopyConstBorder_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp32f *aValue*[3])

3 channel 32-bit floating point image copy with constant border color.

See nppiCopyConstBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.12 NppStatus nppiCopyConstBorder_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp32f *aValue*[4])

4 channel 32-bit floating point image copy with constant border color.

See nppiCopyConstBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.13 NppStatus nppiCopyConstBorder_32s_AC4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp32s *aValue*[3])

4 channel 32-bit signed integer image copy with constant border color with alpha channel unaffected.

See nppiCopyConstBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGB values of the border pixels. Because this method does not affect the destination image's alpha channel, only three components of the border color are needed.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.14 NppStatus nppiCopyConstBorder_32s_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, Npp32s *nValue*)

1 channel 32-bit signed integer image copy with constant border color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and constant border color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the constant border color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

nValue The pixel value to be set for border pixels.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.15 NppStatus nppiCopyConstBorder_32s_C3R (const Npp32s * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp32s *aValue*[3])

3 channel 32-bit signed integer image copy with constant border color.

See nppiCopyConstBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.16 NppStatus nppiCopyConstBorder_32s_C4R (const Npp32s * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp32s *aValue*[4])

4 channel 32-bit signed integer image copy with constant border color.

See nppiCopyConstBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.17 NppStatus nppiCopyConstBorder_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp8u *aValue*[3])

4 channel 8-bit unsigned integer image copy with constant border color with alpha channel unaffected.

See nppiCopyConstBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGB values of the border pixels. Because this method does not affect the destination image's alpha channel, only three components of the border color are needed.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.18 NppStatus nppiCopyConstBorder_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, Npp8u *nValue*)

1 channel 8-bit unsigned integer image copy with constant border color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and constant border color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the constant border color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

nValue The pixel value to be set for border pixels.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.19 NppStatus nppiCopyConstBorder_8u_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp8u *aValue*[3])

3 channel 8-bit unsigned integer image copy with constant border color.

See nppiCopyConstBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.58.1.20 NppStatus nppiCopyConstBorder_8u_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*, const Npp8u *aValue*[4])

4 channel 8-bit unsigned integer image copy with constant border color.

See nppiCopyConstBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

aValue Vector of the RGBA values of the border pixels to be set.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59 Copy Replicate Border

CopyReplicateBorder

Methods for copying images and padding borders with a replicates of the nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 8-bit unsigned integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 8-bit unsigned integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 8-bit unsigned integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 8-bit unsigned integer image copy with nearest source image pixel color with alpha channel unaffected.

- NppStatus nppiCopyReplicateBorder_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 16-bit unsigned integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 16-bit unsigned integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 16-bit unsigned integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 16-bit unsigned image copy with nearest source image pixel color with alpha channel unaffected.

- NppStatus nppiCopyReplicateBorder_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 16-bit signed integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 16-bit signed integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 16-bit signed integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 16-bit signed integer image copy with nearest source image pixel color with alpha channel unaffected.

- NppStatus nppiCopyReplicateBorder_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 32-bit signed integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 32-bit signed image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 32-bit signed integer image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_32s_AC4R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 32-bit signed integer image copy with nearest source image pixel color with alpha channel unaffected.

- NppStatus nppiCopyReplicateBorder_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 32-bit floating point image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 32-bit floating point image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 32-bit floating point image copy with nearest source image pixel color.

- NppStatus nppiCopyReplicateBorder_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 32-bit floating point image copy with nearest source image pixel color with alpha channel unaffected.

7.59.1 Function Documentation

7.59.1.1 NppStatus nppiCopyReplicateBorder_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 16-bit signed integer image copy with nearest source image pixel color with alpha channel unaffected.

See nppiCopyReplicateBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.2 NppStatus nppiCopyReplicateBorder_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 16-bit signed integer image copy with nearest source image pixel color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and nearest source image pixel color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the nearest source image pixel color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.3 NppStatus nppiCopyReplicateBorder_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 16-bit signed integer image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.4 NppStatus nppiCopyReplicateBorder_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 16-bit signed integer image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.5 NppStatus nppiCopyReplicateBorder_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 16-bit unsigned image copy with nearest source image pixel color with alpha channel unaffected.

See nppiCopyReplicateBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.6 NppStatus nppiCopyReplicateBorder_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 16-bit unsigned integer image copy with nearest source image pixel color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and nearest source image pixel color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the nearest source image pixel color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.7 NppStatus nppiCopyReplicateBorder_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 16-bit unsigned integer image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.8 NppStatus nppiCopyReplicateBorder_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 16-bit unsigned integer image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.9 NppStatus nppiCopyReplicateBorder_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 32-bit floating point image copy with nearest source image pixel color with alpha channel unaffected.

See nppiCopyReplicateBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.10 NppStatus nppiCopyReplicateBorder_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 32-bit floating point image copy with nearest source image pixel color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and nearest source image pixel color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the nearest source image pixel color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.11 NppStatus nppiCopyReplicateBorder_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 32-bit floating point image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.12 NppStatus nppiCopyReplicateBorder_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 32-bit floating point image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.13 NppStatus nppiCopyReplicateBorder_32s_AC4R (const Npp32s * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 32-bit signed integer image copy with nearest source image pixel color with alpha channel unaffected.

See nppiCopyReplicateBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.14 NppStatus nppiCopyReplicateBorder_32s_C1R (const Npp32s * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 32-bit signed integer image copy with nearest source image pixel color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and nearest source image pixel color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the nearest source image pixel color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.15 NppStatus nppiCopyReplicateBorder_32s_C3R (const Npp32s * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 32-bit signed image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.16 NppStatus nppiCopyReplicateBorder_32s_C4R (const Npp32s * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 32-bit signed integer image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.17 NppStatus nppiCopyReplicateBorder_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 8-bit unsigned integer image copy with nearest source image pixel color with alpha channel unaffected.

See nppiCopyReplicateBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.18 NppStatus nppiCopyReplicateBorder_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 8-bit unsigned integer image copy with nearest source image pixel color.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and nearest source image pixel color (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the nearest source image pixel color. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.19 NppStatus nppiCopyReplicateBorder_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 8-bit unsigned integer image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.59.1.20 NppStatus nppiCopyReplicateBorder_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 8-bit unsigned integer image copy with nearest source image pixel color.

See nppiCopyReplicateBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60 Copy Wrap Border

CopyWrapBorder

Methods for copying images and padding borders with wrapped replications of the source image pixel colors.

- NppStatus nppiCopyWrapBorder_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 8-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 8-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 8-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 8-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

- NppStatus nppiCopyWrapBorder_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 16-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 16-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 16-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

4 channel 16-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

- NppStatus nppiCopyWrapBorder_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 16-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 16-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 16-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 16-bit signed integer image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

- NppStatus nppiCopyWrapBorder_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 32-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 32-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 32-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_32s_AC4R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 32-bit signed integer image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

- NppStatus nppiCopyWrapBorder_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 32-bit floating point image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  3 channel 32-bit floating point image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  4 channel 32-bit floating point image copy with the borders wrapped by replication of source image pixel colors.

- NppStatus nppiCopyWrapBorder_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcSizeROI, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int nTopBorderHeight, int nLeftBorderWidth)

  1 channel 32-bit floating point image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

7.60.1 Function Documentation

7.60.1.1 NppStatus nppiCopyWrapBorder_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 16-bit signed integer image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

See nppiCopyWrapBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.2 NppStatus nppiCopyWrapBorder_16s_C1R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 16-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and a border consisting of wrapped replication of the source image pixel colors (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the wrapped replication of the corresponding column of source image pixels colors. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.3 NppStatus nppiCopyWrapBorder_16s_C3R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 16-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.4 NppStatus nppiCopyWrapBorder_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 16-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.5 NppStatus nppiCopyWrapBorder_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 16-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

See nppiCopyWrapBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.6 NppStatus nppiCopyWrapBorder_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 16-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and a border consisting of wrapped replication of the source image pixel colors (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the wrapped replication of the corresponding column of source image pixels colors. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.7 NppStatus nppiCopyWrapBorder_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 16-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.8 NppStatus nppiCopyWrapBorder_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 16-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.9 NppStatus nppiCopyWrapBorder_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 32-bit floating point image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

See nppiCopyWrapBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.10 NppStatus nppiCopyWrapBorder_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 32-bit floating point image copy with the borders wrapped by replication of source image pixel colors.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and a border consisting of wrapped replication of the source image pixel colors (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the wrapped replication of the corresponding column of source image pixels colors. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.11 NppStatus nppiCopyWrapBorder_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 32-bit floating point image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.12 NppStatus nppiCopyWrapBorder_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 32-bit floating point image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.13 NppStatus nppiCopyWrapBorder_32s_AC4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 32-bit signed integer image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

See nppiCopyWrapBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.14 NppStatus nppiCopyWrapBorder_32s_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 32-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and a border consisting of wrapped replication of the source image pixel colors (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the wrapped replication of the corresponding column of source image pixels colors. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.15 NppStatus nppiCopyWrapBorder_32s_C3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 32-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.16 NppStatus nppiCopyWrapBorder_32s_C4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 32-bit signed integer image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.17 NppStatus nppiCopyWrapBorder_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 8-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors with alpha channel unaffected.

See nppiCopyWrapBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.18 NppStatus nppiCopyWrapBorder_8u_C1R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

1 channel 8-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region of pixels.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image (inner part) and a border consisting of wrapped replication of the source image pixel colors (outer part).

nTopBorderHeight Height (in pixels) of the top border. The number of pixel rows at the top of the destination ROI that will be filled with the wrapped replication of the corresponding column of source image pixels colors. nBottomBorderHeight = oDstSizeROI.height - nTopBorderHeight - oSrcSizeROI.height.

nLeftBorderWidth Width (in pixels) of the left border. The width of the border at the right side of the destination ROI is implicitly defined by the size of the source ROI: nRightBorderWidth = oDstSizeROI.width - nLeftBorderWidth - oSrcSizeROI.width.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.19 NppStatus nppiCopyWrapBorder_8u_C3R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

3 channel 8-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.60.1.20 NppStatus nppiCopyWrapBorder_8u_C4R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcSizeROI*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *nTopBorderHeight*, int *nLeftBorderWidth*)

4 channel 8-bit unsigned integer image copy with the borders wrapped by replication of source image pixel colors.

See nppiCopyWrapBorder_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSizeROI Size of the source region-of-interest.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nTopBorderHeight Height of top border.

nLeftBorderWidth Width of left border.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61 Copy Sub-Pixel

CopySubpix

Functions for copying linearly interpolated images using source image subpixel coordinates

- NppStatus nppiCopySubpix_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  1 channel 8-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  3 channel 8-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 8-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 8-bit unsigned integer linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

- NppStatus nppiCopySubpix_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  1 channel 16-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  3 channel 16-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 16-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 16-bit unsigned linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

- NppStatus nppiCopySubpix_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  1 channel 16-bit signed integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  3 channel 16-bit signed integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 16-bit signed integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 16-bit signed integer linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

- NppStatus nppiCopySubpix_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  1 channel 32-bit signed integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  3 channel 32-bit signed linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 32-bit signed integer linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_32s_AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 32-bit signed integer linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

- NppStatus nppiCopySubpix_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  1 channel 32-bit floating point linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  3 channel 32-bit floating point linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 32-bit floating point linearly interpolated source image subpixel coordinate color copy.

- NppStatus nppiCopySubpix_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, Npp32f nDx, Npp32f nDy)

  4 channel 32-bit floating point linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

7.61.1 Function Documentation

7.61.1.1 NppStatus nppiCopySubpix_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 16-bit signed integer linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

See nppiCopySubpix_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.2 NppStatus nppiCopySubpix_16s_C1R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

1 channel 16-bit signed integer linearly interpolated source image subpixel coordinate color copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.3 NppStatus nppiCopySubpix_16s_C3R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

3 channel 16-bit signed integer linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.4 NppStatus nppiCopySubpix_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 16-bit signed integer linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_16s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.5 NppStatus nppiCopySubpix_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 16-bit unsigned linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

See nppiCopySubpix_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.6 NppStatus nppiCopySubpix_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

1 channel 16-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.7 NppStatus nppiCopySubpix_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

3 channel 16-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.8 NppStatus nppiCopySubpix_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 16-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_16u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.9 NppStatus nppiCopySubpix_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 32-bit floating point linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

See nppiCopySubpix_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.10 NppStatus nppiCopySubpix_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

1 channel 32-bit floating point linearly interpolated source image subpixel coordinate color copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.11 NppStatus nppiCopySubpix_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

3 channel 32-bit floating point linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.12 NppStatus nppiCopySubpix_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 32-bit floating point linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_32f_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.13 NppStatus nppiCopySubpix_32s_AC4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 32-bit signed integer linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

See nppiCopySubpix_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.14 NppStatus nppiCopySubpix_32s_C1R (const Npp32s $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

1 channel 32-bit signed integer linearly interpolated source image subpixel coordinate color copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.15 NppStatus nppiCopySubpix_32s_C3R (const Npp32s $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

3 channel 32-bit signed linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.16 NppStatus nppiCopySubpix_32s_C4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 32-bit signed integer linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_32s_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.17 NppStatus nppiCopySubpix_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 8-bit unsigned integer linearly interpolated source image subpixel coordinate color copy with alpha channel unaffected.

See nppiCopySubpix_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.18 NppStatus nppiCopySubpix_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

1 channel 8-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.19 NppStatus nppiCopySubpix_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

3 channel 8-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.61.1.20 NppStatus nppiCopySubpix_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, Npp32f *nDx*, Npp32f *nDy*)

4 channel 8-bit unsigned integer linearly interpolated source image subpixel coordinate color copy.

See nppiCopySubpix_8u_C1R() for detailed documentation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

nDx Fractional part of source image X coordinate.

nDy Fractional part of source image Y coordinate.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62 Duplicate Channel

Dup

Functions for duplicating a single channel image in a multiple channel image.

- NppStatus nppiDup_8u_C1C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 8-bit unsigned integer source image duplicated in all 3 channels of destination image.

- NppStatus nppiDup_8u_C1C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 8-bit unsigned integer source image duplicated in all 4 channels of destination image.

- NppStatus nppiDup_8u_C1AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 8-bit unsigned integer source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

- NppStatus nppiDup_16u_C1C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 16-bit unsigned integer source image duplicated in all 3 channels of destination image.

- NppStatus nppiDup_16u_C1C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 16-bit unsigned integer source image duplicated in all 4 channels of destination image.

- NppStatus nppiDup_16u_C1AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 16-bit unsigned integer source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

- NppStatus nppiDup_16s_C1C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 16-bit signed integer source image duplicated in all 3 channels of destination image.

- NppStatus nppiDup_16s_C1C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 16-bit signed integer source image duplicated in all 4 channels of destination image.

- NppStatus nppiDup_16s_C1AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 16-bit signed integer source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

- NppStatus nppiDup_32s_C1C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 32-bit signed integer source image duplicated in all 3 channels of destination image.

- NppStatus nppiDup_32s_C1C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI)

1 channel 32-bit signed integer source image duplicated in all 4 channels of destination image.

- NppStatus nppiDup_32s_C1AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 32-bit signed integer source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

- NppStatus nppiDup_32f_C1C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 32-bit floating point source image duplicated in all 3 channels of destination image.

- NppStatus nppiDup_32f_C1C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 32-bit floating point source image duplicated in all 4 channels of destination image.

- NppStatus nppiDup_32f_C1AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI)

  1 channel 32-bit floating point source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

7.62.1 Function Documentation

7.62.1.1 NppStatus nppiDup_16s_C1AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 16-bit signed integer source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.2 NppStatus nppiDup_16s_C1C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 16-bit signed integer source image duplicated in all 3 channels of destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.3 NppStatus nppiDup_16s_C1C4R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 16-bit signed integer source image duplicated in all 4 channels of destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.4 NppStatus nppiDup_16u_C1AC4R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 16-bit unsigned integer source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.5 NppStatus nppiDup_16u_C1C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 16-bit unsigned integer source image duplicated in all 3 channels of destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.6 NppStatus nppiDup_16u_C1C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 16-bit unsigned integer source image duplicated in all 4 channels of destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.7 NppStatus nppiDup_32f_C1AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 32-bit floating point source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.8 NppStatus nppiDup_32f_C1C3R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 32-bit floating point source image duplicated in all 3 channels of destination image.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.9 NppStatus nppiDup_32f_C1C4R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 32-bit floating point source image duplicated in all 4 channels of destination image.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.10 NppStatus nppiDup_32s_C1AC4R (const Npp32s $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 32-bit signed integer source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.11 NppStatus nppiDup_32s_C1C3R (const Npp32s $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 32-bit signed integer source image duplicated in all 3 channels of destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.12 NppStatus nppiDup_32s_C1C4R (const Npp32s $*$ *pSrc*, int *nSrcStep*, Npp32s $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 32-bit signed integer source image duplicated in all 4 channels of destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.13 NppStatus nppiDup_8u_C1AC4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 8-bit unsigned integer source image duplicated in 3 channels of 4 channel destination image with alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.14 NppStatus nppiDup_8u_C1C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 8-bit unsigned integer source image duplicated in all 3 channels of destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size (width, height) of the destination region, i.e. the region that gets filled with data from the source image, source image ROI is assumed to be same as destination image ROI.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.62.1.15 NppStatus nppiDup_8u_C1C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*)

1 channel 8-bit unsigned integer source image duplicated in all 4 channels of destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Size of the destination region-of-interest.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63 Transpose

Transpose

Methods for transposing images of various types.

Like matrix transpose, image transpose is a mirror along the image's diagonal (upper-left to lower-right corner).

- NppStatus nppiTranspose_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSrcROI)

  1 channel 8-bit unsigned int image transpose.

- NppStatus nppiTranspose_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSrcROI)

  3 channel 8-bit unsigned int image transpose.

- NppStatus nppiTranspose_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSrcROI)

  4 channel 8-bit unsigned int image transpose.

- NppStatus nppiTranspose_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSrcROI)

  1 channel 16-bit unsigned int image transpose.

- NppStatus nppiTranspose_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSrcROI)

  3 channel 16-bit unsigned int image transpose.

- NppStatus nppiTranspose_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSrcROI)

  4 channel 16-bit unsigned int image transpose.

- NppStatus nppiTranspose_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSrcROI)

  1 channel 16-bit signed int image transpose.

- NppStatus nppiTranspose_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSrcROI)

  3 channel 16-bit signed int image transpose.

- NppStatus nppiTranspose_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSrcROI)

  4 channel 16-bit signed int image transpose.

- NppStatus nppiTranspose_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSrcROI)

  1 channel 32-bit signed int image transpose.

- NppStatus nppiTranspose_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSrcROI)

3 channel 32-bit signed int image transpose.

- NppStatus nppiTranspose_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSrcROI)

  4 channel 32-bit signed int image transpose.

- NppStatus nppiTranspose_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSrcROI)

  1 channel 32-bit floating point image transpose.

- NppStatus nppiTranspose_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSrcROI)

  3 channel 32-bit floating point image transpose.

- NppStatus nppiTranspose_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSrcROI)

  4 channel 32-bit floating point image transpose.

7.63.1 Function Documentation

7.63.1.1 NppStatus nppiTranspose_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

1 channel 16-bit signed int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.2 NppStatus nppiTranspose_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

3 channel 16-bit signed int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.3 NppStatus nppiTranspose_16s_C4R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

4 channel 16-bit signed int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.4 NppStatus nppiTranspose_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

1 channel 16-bit unsigned int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.5 NppStatus nppiTranspose_16u_C3R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

3 channel 16-bit unsigned int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.6 NppStatus nppiTranspose_16u_C4R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

4 channel 16-bit unsigned int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.7 NppStatus nppiTranspose_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

1 channel 32-bit floating point image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.8 NppStatus nppiTranspose_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

3 channel 32-bit floating point image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.9 NppStatus nppiTranspose_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

4 channel 32-bit floating point image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.10 NppStatus nppiTranspose_32s_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

1 channel 32-bit signed int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.11 NppStatus nppiTranspose_32s_C3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

3 channel 32-bit signed int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.12 NppStatus nppiTranspose_32s_C4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

4 channel 32-bit signed int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.13 NppStatus nppiTranspose_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

1 channel 8-bit unsigned int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.14 NppStatus nppiTranspose_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

3 channel 8-bit unsigned int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.63.1.15 NppStatus nppiTranspose_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSrcROI*)

4 channel 8-bit unsigned int image transpose.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Pointer to the destination ROI.

nDstStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64 Swap Channels

SwapChannels

Functions for swapping and duplicating channels in multiple channel images.

The methods support arbitrary permutations of the original channels, including replication and setting one or more channels to a constant value.

- NppStatus nppiSwapChannels_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 8-bit unsigned integer source image to 3 channel destination image.

- NppStatus nppiSwapChannels_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 8-bit unsigned integer in place image.

- NppStatus nppiSwapChannels_8u_C4C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 8-bit unsigned integer source image to 3 channel destination image.

- NppStatus nppiSwapChannels_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 8-bit unsigned integer source image to 4 channel destination image.

- NppStatus nppiSwapChannels_8u_C4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 8-bit unsigned integer in place image.

- NppStatus nppiSwapChannels_8u_C3C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4], const Npp8u nValue)

  3 channel 8-bit unsigned integer source image to 4 channel destination image.

- NppStatus nppiSwapChannels_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 8-bit unsigned integer source image to 4 channel destination image with destination alpha channel unaffected.

- NppStatus nppiSwapChannels_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 16-bit unsigned integer source image to 3 channel destination image.

- NppStatus nppiSwapChannels_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 16-bit unsigned integer in place image.

- NppStatus nppiSwapChannels_16u_C4C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 16-bit unsigned integer source image to 3 channel destination image.

- NppStatus nppiSwapChannels_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4])

4 channel 16-bit unsigned integer source image to 4 channel destination image.

- NppStatus nppiSwapChannels_16u_C4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 16-bit unsigned integer in place image.

- NppStatus nppiSwapChannels_16u_C3C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4], const Npp16u nValue)

  3 channel 16-bit unsigned integer source image to 4 channel destination image.

- NppStatus nppiSwapChannels_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 16-bit unsigned integer source image to 4 channel destination image with destination alpha channel unaffected.

- NppStatus nppiSwapChannels_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 16-bit signed integer source image to 3 channel destination image.

- NppStatus nppiSwapChannels_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 16-bit signed integer in place image.

- NppStatus nppiSwapChannels_16s_C4C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 16-bit signed integer source image to 3 channel destination image.

- NppStatus nppiSwapChannels_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 16-bit signed integer source image to 4 channel destination image.

- NppStatus nppiSwapChannels_16s_C4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 16-bit signed integer in place image.

- NppStatus nppiSwapChannels_16s_C3C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4], const Npp16s nValue)

  3 channel 16-bit signed integer source image to 4 channel destination image.

- NppStatus nppiSwapChannels_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 16-bit signed integer source image to 4 channel destination image with destination alpha channel unaffected.

- NppStatus nppiSwapChannels_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 32-bit signed integer source image to 3 channel destination image.

- NppStatus nppiSwapChannels_32s_C3IR (Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 32-bit signed integer in place image.

- NppStatus nppiSwapChannels_32s_C4C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 32-bit signed integer source image to 3 channel destination image.

- NppStatus nppiSwapChannels_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 32-bit signed integer source image to 4 channel destination image.

- NppStatus nppiSwapChannels_32s_C4IR (Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 32-bit signed integer in place image.

- NppStatus nppiSwapChannels_32s_C3C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4], const Npp32s nValue)

  3 channel 32-bit signed integer source image to 4 channel destination image.

- NppStatus nppiSwapChannels_32s_AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 32-bit signed integer source image to 4 channel destination image with destination alpha channel unaffected.

- NppStatus nppiSwapChannels_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 32-bit floating point source image to 3 channel destination image.

- NppStatus nppiSwapChannels_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  3 channel 32-bit floating point in place image.

- NppStatus nppiSwapChannels_32f_C4C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 32-bit floating point source image to 3 channel destination image.

- NppStatus nppiSwapChannels_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 32-bit floating point source image to 4 channel destination image.

- NppStatus nppiSwapChannels_32f_C4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const int aDstOrder[4])

  4 channel 32-bit floating point in place image.

- NppStatus nppiSwapChannels_32f_C3C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[4], const Npp32f nValue)

  3 channel 32-bit floating point source image to 4 channel destination image.

- NppStatus nppiSwapChannels_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const int aDstOrder[3])

  4 channel 32-bit floating point source image to 4 channel destination image with destination alpha channel unaffected.

7.64.1 Function Documentation

7.64.1.1 NppStatus nppiSwapChannels_16s_AC4R (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp16s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 16-bit signed integer source image to 4 channel destination image with destination alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to BGRA channel order. In the AC4R case, the alpha channel is always assumed to be channel 3.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.2 NppStatus nppiSwapChannels_16s_C3C4R (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp16s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4], const Npp16s *nValue*)

3 channel 16-bit signed integer source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [3,2,1,0] converts this to VBGR channel order.

nValue (V) Single channel constant value that can be replicated in one or more of the 4 destination channels. nValue is either written or not written to a particular channel depending on the aDstOrder entry for that destination channel. An aDstOrder value of 3 will output nValue to that channel, an aDstOrder value greater than 3 will leave that particular destination channel value unmodified.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.3 NppStatus nppiSwapChannels_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 16-bit signed integer in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.4 NppStatus nppiSwapChannels_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 16-bit signed integer source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.5 NppStatus nppiSwapChannels_16s_C4C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 16-bit signed integer source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to a 3 channel BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.6 NppStatus nppiSwapChannels_16s_C4IR (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 16-bit signed integer in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.7 NppStatus nppiSwapChannels_16s_C4R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 16-bit signed integer source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.8 NppStatus nppiSwapChannels_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 16-bit unsigned integer source image to 4 channel destination image with destination alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to BGRA channel order. In the AC4R case, the alpha channel is always assumed to be channel 3.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.9 NppStatus nppiSwapChannels_16u_C3C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4], const Npp16u *nValue*)

3 channel 16-bit unsigned integer source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [3,2,1,0] converts this to VBGR channel order.

nValue (V) Single channel constant value that can be replicated in one or more of the 4 destination channels. nValue is either written or not written to a particular channel depending on the aDstOrder entry for that destination channel. An aDstOrder value of 3 will output nValue to that channel, an aDstOrder value greater than 3 will leave that particular destination channel value unmodified.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.10 NppStatus nppiSwapChannels_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 16-bit unsigned integer in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.11 NppStatus nppiSwapChannels_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 16-bit unsigned integer source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.12 NppStatus nppiSwapChannels_16u_C4C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 16-bit unsigned integer source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to a 3 channel BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.13 NppStatus nppiSwapChannels_16u_C4IR (Npp16u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 16-bit unsigned integer in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.14 NppStatus nppiSwapChannels_16u_C4R (const Npp16u $*$ *pSrc*, int *nSrcStep*, Npp16u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 16-bit unsigned integer source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.15 NppStatus nppiSwapChannels_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 32-bit floating point source image to 4 channel destination image with destination alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to BGRA channel order. In the AC4R case, the alpha channel is always assumed to be channel 3.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.16 NppStatus nppiSwapChannels_32f_C3C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4], const Npp32f *nValue*)

3 channel 32-bit floating point source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [3,2,1,0] converts this to VBGR channel order.

nValue (V) Single channel constant value that can be replicated in one or more of the 4 destination channels. nValue is either written or not written to a particular channel depending on the aDstOrder entry for that destination channel. An aDstOrder value of 3 will output nValue to that channel, an aDstOrder value greater than 3 will leave that particular destination channel value unmodified.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.17 NppStatus nppiSwapChannels_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 32-bit floating point in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.18 NppStatus nppiSwapChannels_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 32-bit floating point source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.19 NppStatus nppiSwapChannels_32f_C4C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 32-bit floating point source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to a 3 channel BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.20 NppStatus nppiSwapChannels_32f_C4IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 32-bit floating point in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.21 NppStatus nppiSwapChannels_32f_C4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 32-bit floating point source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.22 NppStatus nppiSwapChannels_32s_AC4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 32-bit signed integer source image to 4 channel destination image with destination alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to BGRA channel order. In the AC4R case, the alpha channel is always assumed to be channel 3.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.23 NppStatus nppiSwapChannels_32s_C3C4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4], const Npp32s *nValue*)

3 channel 32-bit signed integer source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [3,2,1,0] converts this to VBGR channel order.

nValue (V) Single channel constant value that can be replicated in one or more of the 4 destination channels. nValue is either written or not written to a particular channel depending on the aDstOrder entry for that destination channel. An aDstOrder value of 3 will output nValue to that channel, an aDstOrder value greater than 3 will leave that particular destination channel value unmodified.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.24 NppStatus nppiSwapChannels_32s_C3IR (Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 32-bit signed integer in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.25 NppStatus nppiSwapChannels_32s_C3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 32-bit signed integer source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.26 NppStatus nppiSwapChannels_32s_C4C3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 32-bit signed integer source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to a 3 channel BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.27 NppStatus nppiSwapChannels_32s_C4IR (Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 32-bit signed integer in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.28 NppStatus nppiSwapChannels_32s_C4R (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 32-bit signed integer source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.29 NppStatus nppiSwapChannels_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 8-bit unsigned integer source image to 4 channel destination image with destination alpha channel unaffected.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [3,2,1,0] converts this to VBGR channel order. of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to BGRA channel order. In the AC4R case, the alpha channel is always assumed to be channel 3.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.30 NppStatus nppiSwapChannels_8u_C3C4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4], const Npp8u *nValue*)

3 channel 8-bit unsigned integer source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [3,2,1,0] converts this to VBGR channel order.

nValue (V) Single channel constant value that can be replicated in one or more of the 4 destination channels. nValue is either written or not written to a particular channel depending on the aDstOrder entry for that destination channel. An aDstOrder value of 3 will output nValue to that channel, an aDstOrder value greater than 3 will leave that particular destination channel value unmodified.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.31 NppStatus nppiSwapChannels_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 8-bit unsigned integer in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.32 NppStatus nppiSwapChannels_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

3 channel 8-bit unsigned integer source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGB image, aDstOrder = [2,1,0] converts this to BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.33 NppStatus nppiSwapChannels_8u_C4C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[3])

4 channel 8-bit unsigned integer source image to 3 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an RGBA image, aDstOrder = [2,1,0] converts this to a 3 channel BGR channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.34 NppStatus nppiSwapChannels_8u_C4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 8-bit unsigned integer in place image.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.64.1.35 NppStatus nppiSwapChannels_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const int *aDstOrder*[4])

4 channel 8-bit unsigned integer source image to 4 channel destination image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDstOrder Host memory integer array describing how channel values are permutated. The n-th entry of the array contains the number of the channel that is stored in the n-th channel of the output image. E.g. Given an ARGB image, aDstOrder = [3,2,1,0] converts this to BGRA channel order.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.65 Filtering Functions

Linear and non-linear image filtering functions.

Modules

- 1D Linear Filter

7.65.1 Detailed Description

Linear and non-linear image filtering functions.

Filtering functions are classified as Neighborhood Operations. It is the user's responsibility to avoid Sampling Beyond Image Boundaries.

7.66 1D Linear Filter

Modules

- 1D Window Sum
- Convolution
- 2D Fixed Linear Filters
- Rank Filters
- Fixed Filters

  Fixed filters perform linear filtering operations (i.e.

FilterColumn

Apply convolution filter with user specified 1D column of weights.

Result pixel is equal to the sum of the products between the kernel coefficients (pKernel array) and corresponding neighboring column pixel values in the source image defined by nKernelDim and nAnchorY, divided by nDivisor.

- NppStatus nppiFilterColumn_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  8-bit unsigned single-channel 1D column convolution.

- NppStatus nppiFilterColumn_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  8-bit unsigned three-channel 1D column convolution.

- NppStatus nppiFilterColumn_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  8-bit unsigned four-channel 1D column convolution.

- NppStatus nppiFilterColumn_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  8-bit unsigned four-channel 1D column convolution ignoring alpha-channel.

- NppStatus nppiFilterColumn_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit unsigned single-channel 1D column convolution.

- NppStatus nppiFilterColumn_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit unsigned three-channel 1D column convolution.

- NppStatus nppiFilterColumn_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit unsigned four-channel 1D column convolution.

- NppStatus nppiFilterColumn_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit unsigned four-channel 1D column convolution ignoring alpha-channel.

- NppStatus nppiFilterColumn_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit single-channel 1D column convolution.

- NppStatus nppiFilterColumn_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit three-channel 1D column convolution.

- NppStatus nppiFilterColumn_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit four-channel 1D column convolution.

- NppStatus nppiFilterColumn_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit four-channel 1D column convolution ignoring alpha-channel.

- NppStatus nppiFilterColumn_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  32-bit float single-channel 1D column convolution.

- NppStatus nppiFilterColumn_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  32-bit float three-channel 1D column convolution.

- NppStatus nppiFilterColumn_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  32-bit float four-channel 1D column convolution.

- NppStatus nppiFilterColumn_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  32-bit float four-channel 1D column convolution ignoring alpha-channel.

- NppStatus nppiFilterColumn_64f_C1R (const Npp64f ∗pSrc, Npp32s nSrcStep, Npp64f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp64f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  64-bit float single-channel 1D column convolution.

FilterColumn32f

FilterColumn using floating-point weights.

- NppStatus nppiFilterColumn32f_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned single-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned three-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned four-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned four-channel 1D column convolution ignoring alpha-channel.

- NppStatus nppiFilterColumn32f_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit unsigned single-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit unsigned three-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit unsigned four-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit unsigned four-channel 1D column convolution ignoring alpha-channel.

- NppStatus nppiFilterColumn32f_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit single-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit three-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit four-channel 1D column convolution.

- NppStatus nppiFilterColumn32f_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

16-bit four-channel 1D column convolution ignoring alpha-channel.

FilterRow

Apply convolution filter with user specified 1D row of weights.

Result pixel is equal to the sum of the products between the kernel coefficients (pKernel array) and corresponding neighboring row pixel values in the source image defined by nKernelDim and nAnchorX, divided by nDivisor.

- NppStatus nppiFilterRow_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  8-bit unsigned single-channel 1D row convolution.

- NppStatus nppiFilterRow_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  8-bit unsigned three-channel 1D row convolution.

- NppStatus nppiFilterRow_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  8-bit unsigned four-channel 1D row convolution.

- NppStatus nppiFilterRow_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  8-bit unsigned four-channel 1D row convolution ignoring alpha-channel.

- NppStatus nppiFilterRow_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit unsigned single-channel 1D row convolution.

- NppStatus nppiFilterRow_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit unsigned three-channel 1D row convolution.

- NppStatus nppiFilterRow_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit unsigned four-channel 1D row convolution.

- NppStatus nppiFilterRow_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit unsigned four-channel 1D row convolution ignoring alpha-channel.

- NppStatus nppiFilterRow_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit single-channel 1D row convolution.

- NppStatus nppiFilterRow_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit three-channel 1D row convolution.

- NppStatus nppiFilterRow_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit four-channel 1D row convolution.

- NppStatus nppiFilterRow_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32s ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor, Npp32s nDivisor)

  16-bit four-channel 1D row convolution ignoring alpha-channel.

- NppStatus nppiFilterRow_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  32-bit float single-channel 1D row convolution.

- NppStatus nppiFilterRow_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  32-bit float three-channel 1D row convolution.

- NppStatus nppiFilterRow_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  32-bit float four-channel 1D row convolution.

- NppStatus nppiFilterRow_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  32-bit float four-channel 1D row convolution ignoring alpha-channel.

- NppStatus nppiFilterRow_64f_C1R (const Npp64f ∗pSrc, Npp32s nSrcStep, Npp64f ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp64f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  64-bit float single-channel 1D row convolution.

FilterRow32f

FilterRow using floating-point weights.

- NppStatus nppiFilterRow32f_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned single-channel 1D row convolution.

- NppStatus nppiFilterRow32f_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

8-bit unsigned three-channel 1D row convolution.

- NppStatus nppiFilterRow32f_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned four-channel 1D row convolution.

- NppStatus nppiFilterRow32f_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned four-channel 1D row convolution ignoring alpha-channel.

- NppStatus nppiFilterRow32f_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit unsigned single-channel 1D row convolution.

- NppStatus nppiFilterRow32f_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit unsigned three-channel 1D row convolution.

- NppStatus nppiFilterRow32f_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit unsigned four-channel 1D row convolution.

- NppStatus nppiFilterRow32f_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit unsigned four-channel 1D row convolution ignoring alpha-channel.

- NppStatus nppiFilterRow32f_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit single-channel 1D row convolution.

- NppStatus nppiFilterRow32f_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit three-channel 1D row convolution.

- NppStatus nppiFilterRow32f_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit four-channel 1D row convolution.

- NppStatus nppiFilterRow32f_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oROI, const Npp32f ∗pKernel, Npp32s nMaskSize, Npp32s nAnchor)

  16-bit four-channel 1D row convolution ignoring alpha-channel.

FilterSobelVertSecond

Filters the image using a second derivative, vertical Sobel filter kernel:

$$\begin{pmatrix} 1 & -2 & 1 \\ 2 & -4 & 2 \\ 1 & -2 & 1 \end{pmatrix} \begin{pmatrix} 1 & 0 & -2 & 0 & 1 \\ 4 & 0 & -8 & 0 & 4 \\ 6 & 0 & -12 & 0 & 6 \\ 4 & 0 & -8 & 0 & 4 \\ 1 & 0 & -2 & 0 & 1 \end{pmatrix}$$

- NppStatus nppiFilterSobelVertSecond_8u16s_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned to 16-bit signed second derivative, vertical Sobel filter.

- NppStatus nppiFilterSobelVertSecond_8s16s_C1R (const Npp8s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit signed to 16-bit signed second derivative, vertical Sobel filter.

- NppStatus nppiFilterSobelVertSecond_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point second derivative, vertical Sobel filter.

FilterSobelCross

Filters the image using a second cross derivative Sobel filter kernel:

$$\begin{pmatrix} -1 & 0 & 1 \\ 0 & 0 & 0 \\ 1 & 0 & -1 \end{pmatrix} \begin{pmatrix} -1 & -2 & 0 & 2 & 1 \\ -2 & -4 & 0 & 4 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 2 & 4 & 0 & -4 & -2 \\ 1 & 2 & 0 & -2 & -1 \end{pmatrix}$$

- NppStatus nppiFilterSobelCross_8u16s_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned to 16-bit signed second cross derivative Sobel filter.

- NppStatus nppiFilterSobelCross_8s16s_C1R (const Npp8s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit signed to 16-bit signed second cross derivative Sobel filter.

- NppStatus nppiFilterSobelCross_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point second cross derivative Sobel filter.

FilterRobertsDown

Filters the image using a horizontal Roberts filter kernel:

$$\begin{pmatrix} 0 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{pmatrix}$$

- NppStatus nppiFilterRobertsDown_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

Three channel 8-bit unsigned horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned horizontal Roberts filter, ignoring alpha-channel.

- NppStatus nppiFilterRobertsDown_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed horizontal Roberts filter, ignoring alpha-channel.

- NppStatus nppiFilterRobertsDown_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 32-bit floating-point horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point horizontal Roberts filter.

- NppStatus nppiFilterRobertsDown_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point horizontal Roberts filter, ignoring alpha-channel.

FilterRobertsUp

Filters the image using a vertical Roberts filter kernel:

$$\begin{pmatrix} 0 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{pmatrix}$$

- NppStatus nppiFilterRobertsUp_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned vertical Roberts filter, ignoring alpha-channel.

- NppStatus nppiFilterRobertsUp_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed vertical Roberts filter, ignoring alpha-channel.

- NppStatus nppiFilterRobertsUp_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 32-bit floating-point vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point vertical Roberts filter.

- NppStatus nppiFilterRobertsUp_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point vertical Roberts filter, ignoring alpha-channel.

FilterLaplace

Filters the image using a Laplacian filter kernel:

$$\begin{pmatrix} -1 & -1 & -1 \\ -1 & 8 & -1 \\ -1 & -1 & -1 \end{pmatrix} \begin{pmatrix} -1 & -3 & -4 & -3 & -1 \\ -3 & 0 & 6 & 0 & -3 \\ -4 & 6 & 20 & 6 & -4 \\ -3 & 0 & 6 & 0 & -3 \\ -1 & -3 & -4 & -3 & -1 \end{pmatrix}$$

- NppStatus nppiFilterLaplace_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned Laplace filter.

- NppStatus nppiFilterLaplace_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 8-bit unsigned Laplace filter.

- NppStatus nppiFilterLaplace_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 8-bit unsigned Laplace filter.

- NppStatus nppiFilterLaplace_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 8-bit unsigned Laplace filter, ignoring alpha channel.

- NppStatus nppiFilterLaplace_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 16-bit signed Laplace filter.

- NppStatus nppiFilterLaplace_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 16-bit signed Laplace filter.

- NppStatus nppiFilterLaplace_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit signed Laplace filter.

- NppStatus nppiFilterLaplace_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit signed Laplace filter, ignoring alpha channel.

- NppStatus nppiFilterLaplace_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point Laplace filter.

- NppStatus nppiFilterLaplace_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 32-bit floating-point Laplace filter.

- NppStatus nppiFilterLaplace_32f_C4R (const Npp32f *pSrc, Npp32s nSrcStep, Npp32f *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 32-bit floating-point Laplace filter.

- NppStatus nppiFilterLaplace_32f_AC4R (const Npp32f *pSrc, Npp32s nSrcStep, Npp32f *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 32-bit floating-point Laplace filter, ignoring alpha channel.

- NppStatus nppiFilterLaplace_8u16s_C1R (const Npp8u *pSrc, Npp32s nSrcStep, Npp16s *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned to 16-bit signed Laplace filter.

- NppStatus nppiFilterLaplace_8s16s_C1R (const Npp8s *pSrc, Npp32s nSrcStep, Npp16s *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit signed to 16-bit signed Laplace filter.

FilterGauss

Filters the image using a Gaussian filter kernel:

$$\begin{pmatrix} 1/16 & 2/16 & 1/16 \\ 2/16 & 4/16 & 2/16 \\ 1/16 & 2/16 & 1/16 \end{pmatrix} \begin{pmatrix} 2/571 & 7/571 & 12/571 & 7/571 & 2/571 \\ 7/571 & 31/571 & 52/571 & 31/571 & 7/571 \\ 12/571 & 52/571 & 127/571 & 52/571 & 12/571 \\ 7/571 & 31/571 & 52/571 & 31/571 & 7/571 \\ 2/571 & 7/571 & 12/571 & 7/571 & 2/571 \end{pmatrix}$$

- NppStatus nppiFilterGauss_8u_C1R (const Npp8u *pSrc, Npp32s nSrcStep, Npp8u *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned Gauss filter.

- NppStatus nppiFilterGauss_8u_C3R (const Npp8u *pSrc, Npp32s nSrcStep, Npp8u *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 8-bit unsigned Gauss filter.

- NppStatus nppiFilterGauss_8u_C4R (const Npp8u *pSrc, Npp32s nSrcStep, Npp8u *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 8-bit unsigned Gauss filter.

- NppStatus nppiFilterGauss_8u_AC4R (const Npp8u *pSrc, Npp32s nSrcStep, Npp8u *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 8-bit unsigned Gauss filter, ignoring alpha channel.

- NppStatus nppiFilterGauss_16u_C1R (const Npp16u *pSrc, Npp32s nSrcStep, Npp16u *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 16-bit unsigned Gauss filter.

- NppStatus nppiFilterGauss_16u_C3R (const Npp16u *pSrc, Npp32s nSrcStep, Npp16u *pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 16-bit unsigned Gauss filter.

- NppStatus nppiFilterGauss_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit unsigned Gauss filter.

- NppStatus nppiFilterGauss_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit unsigned Gauss filter, ignoring alpha channel.

- NppStatus nppiFilterGauss_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 16-bit signed Gauss filter.

- NppStatus nppiFilterGauss_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 16-bit signed Gauss filter.

- NppStatus nppiFilterGauss_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit signed Gauss filter.

- NppStatus nppiFilterGauss_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit signed Gauss filter, ignoring alpha channel.

- NppStatus nppiFilterGauss_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point Gauss filter.

- NppStatus nppiFilterGauss_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 32-bit floating-point Gauss filter.

- NppStatus nppiFilterGauss_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 32-bit floating-point Gauss filter.

- NppStatus nppiFilterGauss_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 32-bit floating-point Gauss filter, ignoring alpha channel.

FilterHighPass

Filters the image using a high-pass filter kernel:

$$\begin{pmatrix} -1 & -1 & -1 \\ -1 & 8 & -1 \\ -1 & -1 & -1 \end{pmatrix} \begin{pmatrix} -1 & -1 & -1 & -1 & -1 \\ -1 & -1 & -1 & -1 & -1 \\ -1 & -1 & 24 & -1 & -1 \\ -1 & -1 & -1 & -1 & -1 \\ -1 & -1 & -1 & -1 & -1 \end{pmatrix}$$

- NppStatus nppiFilterHighPass_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned high-pass filter.

- NppStatus nppiFilterHighPass_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 8-bit unsigned high-pass filter.

- NppStatus nppiFilterHighPass_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 8-bit unsigned high-pass filter.

- NppStatus nppiFilterHighPass_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 8-bit unsigned high-pass filter, ignoring alpha channel.

- NppStatus nppiFilterHighPass_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 16-bit unsigned high-pass filter.

- NppStatus nppiFilterHighPass_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 16-bit unsigned high-pass filter.

- NppStatus nppiFilterHighPass_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit unsigned high-pass filter.

- NppStatus nppiFilterHighPass_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit unsigned high-pass filter, ignoring alpha channel.

- NppStatus nppiFilterHighPass_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 16-bit signed high-pass filter.

- NppStatus nppiFilterHighPass_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 16-bit signed high-pass filter.

- NppStatus nppiFilterHighPass_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit signed high-pass filter.

- NppStatus nppiFilterHighPass_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit signed high-pass filter, ignoring alpha channel.

- NppStatus nppiFilterHighPass_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point high-pass filter.

- NppStatus nppiFilterHighPass_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 32-bit floating-point high-pass filter.

- NppStatus nppiFilterHighPass_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 32-bit floating-point high-pass filter.

- NppStatus nppiFilterHighPass_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 32-bit floating-point high-pass filter, ignoring alpha channel.

FilterLowPass

Filters the image using a low-pass filter kernel:

$$\begin{pmatrix} 1/9 & 1/9 & 1/9 \\ 1/9 & 1/9 & 1/9 \\ 1/9 & 1/9 & 1/9 \end{pmatrix} \begin{pmatrix} 1/25 & 1/25 & 1/25 & 1/25 & 1/25 \\ 1/25 & 1/25 & 1/25 & 1/25 & 1/25 \\ 1/25 & 1/25 & 1/25 & 1/25 & 1/25 \\ 1/25 & 1/25 & 1/25 & 1/25 & 1/25 \\ 1/25 & 1/25 & 1/25 & 1/25 & 1/25 \end{pmatrix}$$

- NppStatus nppiFilterLowPass_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned low-pass filter.

- NppStatus nppiFilterLowPass_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 8-bit unsigned low-pass filter.

- NppStatus nppiFilterLowPass_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 8-bit unsigned low-pass filter.

- NppStatus nppiFilterLowPass_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 8-bit unsigned low-pass filter, ignoring alpha channel.

- NppStatus nppiFilterLowPass_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 16-bit unsigned low-pass filter.

- NppStatus nppiFilterLowPass_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 16-bit unsigned low-pass filter.

- NppStatus nppiFilterLowPass_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

Four channel 16-bit unsigned low-pass filter.

- NppStatus nppiFilterLowPass_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit unsigned low-pass filter, ignoring alpha channel.

- NppStatus nppiFilterLowPass_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 16-bit signed low-pass filter.

- NppStatus nppiFilterLowPass_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 16-bit signed low-pass filter.

- NppStatus nppiFilterLowPass_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit signed low-pass filter.

- NppStatus nppiFilterLowPass_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 16-bit signed low-pass filter, ignoring alpha channel.

- NppStatus nppiFilterLowPass_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point low-pass filter.

- NppStatus nppiFilterLowPass_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Three channel 32-bit floating-point low-pass filter.

- NppStatus nppiFilterLowPass_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 32-bit floating-point low-pass filter.

- NppStatus nppiFilterLowPass_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Four channel 32-bit floating-point high-pass filter, ignoring alpha channel.

FilterSharpen

Filters the image using a sharpening filter kernel:

$$\begin{pmatrix} -1/8 & -1/8 & -1/8 \\ -1/8 & 16/8 & -1/8 \\ -1/8 & -1/8 & -1/8 \end{pmatrix}$$

- NppStatus nppiFilterSharpen_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned sharpening filter.

- NppStatus nppiFilterSharpen_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned sharpening filter.

- NppStatus nppiFilterSharpen_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned sharpening filter.

- NppStatus nppiFilterSharpen_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned sharpening filter, ignoring alpha channel.

- NppStatus nppiFilterSharpen_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 16-bit unsigned sharpening filter.

- NppStatus nppiFilterSharpen_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 16-bit unsigned sharpening filter.

- NppStatus nppiFilterSharpen_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit unsigned sharpening filter.

- NppStatus nppiFilterSharpen_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit unsigned sharpening filter, ignoring alpha channel.

- NppStatus nppiFilterSharpen_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed sharpening filter.

- NppStatus nppiFilterSharpen_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed sharpening filter.

- NppStatus nppiFilterSharpen_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed sharpening filter.

- NppStatus nppiFilterSharpen_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed sharpening filter, ignoring alpha channel.

- NppStatus nppiFilterSharpen_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point sharpening filter.

- NppStatus nppiFilterSharpen_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

Three channel 32-bit floating-point sharpening filter.

- NppStatus nppiFilterSharpen_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point sharpening filter.

- NppStatus nppiFilterSharpen_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point sharpening filter, ignoring alpha channel.

7.66.1 Function Documentation

7.66.1.1 NppStatus nppiFilterColumn32f_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit four-channel 1D column convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.2 NppStatus nppiFilterColumn32f_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit single-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.3 NppStatus nppiFilterColumn32f_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit three-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.4 NppStatus nppiFilterColumn32f_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit four-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.5 NppStatus nppiFilterColumn32f_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit unsigned four-channel 1D column convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.6 NppStatus nppiFilterColumn32f_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit unsigned single-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.7 NppStatus nppiFilterColumn32f_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit unsigned three-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.8 NppStatus nppiFilterColumn32f_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit unsigned four-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.9 NppStatus nppiFilterColumn32f_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned four-channel 1D column convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.10 NppStatus nppiFilterColumn32f_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned single-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.11 NppStatus nppiFilterColumn32f_8u_C3R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f $*$ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned three-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.12 NppStatus nppiFilterColumn32f_8u_C4R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f $*$ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned four-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.13 NppStatus nppiFilterColumn_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit four-channel 1D column convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.14 NppStatus nppiFilterColumn_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit single-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.15 NppStatus nppiFilterColumn_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit three-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.16 NppStatus nppiFilterColumn_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit four-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.17 NppStatus nppiFilterColumn_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit unsigned four-channel 1D column convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.18 NppStatus nppiFilterColumn_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit unsigned single-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.19 NppStatus nppiFilterColumn_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit unsigned three-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.20 NppStatus nppiFilterColumn_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit unsigned four-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.21 NppStatus nppiFilterColumn_32f_AC4R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

32-bit float four-channel 1D column convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.22 NppStatus nppiFilterColumn_32f_C1R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

32-bit float single-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.23 NppStatus nppiFilterColumn_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

32-bit float three-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.24 NppStatus nppiFilterColumn_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

32-bit float four-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.25 NppStatus nppiFilterColumn_64f_C1R (const Npp64f $*$ *pSrc*, Npp32s *nSrcStep*, Npp64f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp64f $*$ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

64-bit float single-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.26 NppStatus nppiFilterColumn_8u_AC4R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s $*$ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

8-bit unsigned four-channel 1D column convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.27 NppStatus nppiFilterColumn_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

8-bit unsigned single-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.28 NppStatus nppiFilterColumn_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

8-bit unsigned three-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.29 NppStatus nppiFilterColumn_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

8-bit unsigned four-channel 1D column convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.30 NppStatus nppiFilterGauss_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit signed Gauss filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.31 NppStatus nppiFilterGauss_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 16-bit signed Gauss filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.32 NppStatus nppiFilterGauss_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 16-bit signed Gauss filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.33 NppStatus nppiFilterGauss_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit signed Gauss filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.34 NppStatus nppiFilterGauss_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit unsigned Gauss filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.35 NppStatus nppiFilterGauss_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 16-bit unsigned Gauss filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.36 NppStatus nppiFilterGauss_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 16-bit unsigned Gauss filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.37 NppStatus nppiFilterGauss_16u_C4R (const Npp16u $*$ *pSrc*, Npp32s *nSrcStep*, Npp16u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit unsigned Gauss filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.38 NppStatus nppiFilterGauss_32f_AC4R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 32-bit floating-point Gauss filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.39 NppStatus nppiFilterGauss_32f_C1R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point Gauss filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.40 NppStatus nppiFilterGauss_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 32-bit floating-point Gauss filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.41 NppStatus nppiFilterGauss_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 32-bit floating-point Gauss filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.42 NppStatus nppiFilterGauss_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 8-bit unsigned Gauss filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.43 NppStatus nppiFilterGauss_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned Gauss filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.44 NppStatus nppiFilterGauss_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 8-bit unsigned Gauss filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.45 NppStatus nppiFilterGauss_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 8-bit unsigned Gauss filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.46 NppStatus nppiFilterHighPass_16s_AC4R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit signed high-pass filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.47 NppStatus nppiFilterHighPass_16s_C1R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 16-bit signed high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.48 NppStatus nppiFilterHighPass_16s_C3R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 16-bit signed high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.49 NppStatus nppiFilterHighPass_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit signed high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.50 NppStatus nppiFilterHighPass_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit unsigned high-pass filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.51 NppStatus nppiFilterHighPass_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 16-bit unsigned high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.52 NppStatus nppiFilterHighPass_16u_C3R (const Npp16u $*$ *pSrc*, Npp32s *nSrcStep*, Npp16u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 16-bit unsigned high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.53 NppStatus nppiFilterHighPass_16u_C4R (const Npp16u $*$ *pSrc*, Npp32s *nSrcStep*, Npp16u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit unsigned high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.54 NppStatus nppiFilterHighPass_32f_AC4R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 32-bit floating-point high-pass filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.55 NppStatus nppiFilterHighPass_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.56 NppStatus nppiFilterHighPass_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 32-bit floating-point high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.57 NppStatus nppiFilterHighPass_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 32-bit floating-point high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.58 NppStatus nppiFilterHighPass_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 8-bit unsigned high-pass filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.59 NppStatus nppiFilterHighPass_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.60 NppStatus nppiFilterHighPass_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 8-bit unsigned high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.61 NppStatus nppiFilterHighPass_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 8-bit unsigned high-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.62 NppStatus nppiFilterLaplace_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit signed Laplace filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.63 NppStatus nppiFilterLaplace_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 16-bit signed Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.64 NppStatus nppiFilterLaplace_16s_C3R (const Npp16s $*$ *pSrc*, Npp32s *nSrcStep*, Npp16s $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 16-bit signed Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.65 NppStatus nppiFilterLaplace_16s_C4R (const Npp16s $*$ *pSrc*, Npp32s *nSrcStep*, Npp16s $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit signed Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.66 NppStatus nppiFilterLaplace_32f_AC4R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 32-bit floating-point Laplace filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.67 NppStatus nppiFilterLaplace_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.68 NppStatus nppiFilterLaplace_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 32-bit floating-point Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.69 NppStatus nppiFilterLaplace_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 32-bit floating-point Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.70 NppStatus nppiFilterLaplace_8s16s_C1R (const Npp8s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit signed to 16-bit signed Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.71 NppStatus nppiFilterLaplace_8u16s_C1R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned to 16-bit signed Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.72 NppStatus nppiFilterLaplace_8u_AC4R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 8-bit unsigned Laplace filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.73 NppStatus nppiFilterLaplace_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.74 NppStatus nppiFilterLaplace_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 8-bit unsigned Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.75 NppStatus nppiFilterLaplace_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 8-bit unsigned Laplace filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.76 NppStatus nppiFilterLowPass_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit signed low-pass filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.77 NppStatus nppiFilterLowPass_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 16-bit signed low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.78 NppStatus nppiFilterLowPass_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 16-bit signed low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.79 NppStatus nppiFilterLowPass_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit signed low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.80 NppStatus nppiFilterLowPass_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit unsigned low-pass filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.81 NppStatus nppiFilterLowPass_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 16-bit unsigned low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.82 NppStatus nppiFilterLowPass_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 16-bit unsigned low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.83 NppStatus nppiFilterLowPass_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 16-bit unsigned low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.84 NppStatus nppiFilterLowPass_32f_AC4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 32-bit floating-point high-pass filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.85 NppStatus nppiFilterLowPass_32f_C1R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.86 NppStatus nppiFilterLowPass_32f_C3R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 32-bit floating-point low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.87 NppStatus nppiFilterLowPass_32f_C4R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 32-bit floating-point low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.88 NppStatus nppiFilterLowPass_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 8-bit unsigned low-pass filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.89 NppStatus nppiFilterLowPass_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.90 NppStatus nppiFilterLowPass_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Three channel 8-bit unsigned low-pass filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.91 NppStatus nppiFilterLowPass_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Four channel 8-bit unsigned low-pass filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.92 NppStatus nppiFilterRobertsDown_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed horizontal Roberts filter, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.93 NppStatus nppiFilterRobertsDown_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.94 NppStatus nppiFilterRobertsDown_16s_C3R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.95 NppStatus nppiFilterRobertsDown_16s_C4R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.96 NppStatus nppiFilterRobertsDown_32f_AC4R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point horizontal Roberts filter, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.97 NppStatus nppiFilterRobertsDown_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.98 NppStatus nppiFilterRobertsDown_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit floating-point horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.99 NppStatus nppiFilterRobertsDown_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.100 NppStatus nppiFilterRobertsDown_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned horizontal Roberts filter, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.101 NppStatus nppiFilterRobertsDown_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.102 NppStatus nppiFilterRobertsDown_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.103 NppStatus nppiFilterRobertsDown_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned horizontal Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.104 NppStatus nppiFilterRobertsUp_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed vertical Roberts filter, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.105 NppStatus nppiFilterRobertsUp_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed vertical Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.106 NppStatus nppiFilterRobertsUp_16s_C3R (const Npp16s $*$ *pSrc*, Npp32s *nSrcStep*, Npp16s $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed vertical Roberts filter.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.107 NppStatus nppiFilterRobertsUp_16s_C4R (const Npp16s $*$ *pSrc*, Npp32s *nSrcStep*, Npp16s $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed vertical Roberts filter.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.108 NppStatus nppiFilterRobertsUp_32f_AC4R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point vertical Roberts filter, ignoring alpha-channel.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.109 NppStatus nppiFilterRobertsUp_32f_C1R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point vertical Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.110 NppStatus nppiFilterRobertsUp_32f_C3R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit floating-point vertical Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.111 NppStatus nppiFilterRobertsUp_32f_C4R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point vertical Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.112 NppStatus nppiFilterRobertsUp_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned vertical Roberts filter, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.113 NppStatus nppiFilterRobertsUp_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned vertical Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.114 NppStatus nppiFilterRobertsUp_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned vertical Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.115 NppStatus nppiFilterRobertsUp_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned vertical Roberts filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.116 NppStatus nppiFilterRow32f_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit four-channel 1D row convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.117 NppStatus nppiFilterRow32f_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit single-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.118 NppStatus nppiFilterRow32f_16s_C3R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit three-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.119 NppStatus nppiFilterRow32f_16s_C4R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit four-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.120 NppStatus nppiFilterRow32f_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit unsigned four-channel 1D row convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.121 NppStatus nppiFilterRow32f_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit unsigned single-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.122 NppStatus nppiFilterRow32f_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit unsigned three-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.123 NppStatus nppiFilterRow32f_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

16-bit unsigned four-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.124 NppStatus nppiFilterRow32f_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned four-channel 1D row convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.125 NppStatus nppiFilterRow32f_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned single-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.126 NppStatus nppiFilterRow32f_8u_C3R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned three-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.127 NppStatus nppiFilterRow32f_8u_C4R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned four-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.128 NppStatus nppiFilterRow_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit four-channel 1D row convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.129 NppStatus nppiFilterRow_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit single-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.130 NppStatus nppiFilterRow_16s_C3R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit three-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.131 NppStatus nppiFilterRow_16s_C4R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit four-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.132 NppStatus nppiFilterRow_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit unsigned four-channel 1D row convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.133 NppStatus nppiFilterRow_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit unsigned single-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.134 NppStatus nppiFilterRow_16u_C3R (const Npp16u * *pSrc*, Npp32s *nSrcStep*, Npp16u * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit unsigned three-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.135 NppStatus nppiFilterRow_16u_C4R (const Npp16u * *pSrc*, Npp32s *nSrcStep*, Npp16u * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

16-bit unsigned four-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.136 NppStatus nppiFilterRow_32f_AC4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

32-bit float four-channel 1D row convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.137 NppStatus nppiFilterRow_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

32-bit float single-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.138 NppStatus nppiFilterRow_32f_C3R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

32-bit float three-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.139 NppStatus nppiFilterRow_32f_C4R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

32-bit float four-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.140 NppStatus nppiFilterRow_64f_C1R (const Npp64f * *pSrc*, Npp32s *nSrcStep*, Npp64f * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp64f * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

64-bit float single-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.141 NppStatus nppiFilterRow_8u_AC4R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s * *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

8-bit unsigned four-channel 1D row convolution ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.142 NppStatus nppiFilterRow_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

8-bit unsigned single-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.143 NppStatus nppiFilterRow_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s ∗ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

8-bit unsigned three-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.144 NppStatus nppiFilterRow_8u_C4R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, const Npp32s $*$ *pKernel*, Npp32s *nMaskSize*, Npp32s *nAnchor*, Npp32s *nDivisor*)

8-bit unsigned four-channel 1D row convolution.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coefficients are expected to be stored in reverse order.

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.145 NppStatus nppiFilterSharpen_16s_AC4R (const Npp16s $*$ *pSrc*, Npp32s *nSrcStep*, Npp16s $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed sharpening filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.146 NppStatus nppiFilterSharpen_16s_C1R (const Npp16s $*$ *pSrc*, Npp32s *nSrcStep*, Npp16s $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.147 NppStatus nppiFilterSharpen_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.148 NppStatus nppiFilterSharpen_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.149 NppStatus nppiFilterSharpen_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit unsigned sharpening filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.150 NppStatus nppiFilterSharpen_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit unsigned sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.151 NppStatus nppiFilterSharpen_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit unsigned sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.152 NppStatus nppiFilterSharpen_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit unsigned sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.153 NppStatus nppiFilterSharpen_32f_AC4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point sharpening filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.154 NppStatus nppiFilterSharpen_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.155 NppStatus nppiFilterSharpen_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit floating-point sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.156 NppStatus nppiFilterSharpen_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.157 NppStatus nppiFilterSharpen_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned sharpening filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.158 NppStatus nppiFilterSharpen_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.159 NppStatus nppiFilterSharpen_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.160 NppStatus nppiFilterSharpen_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned sharpening filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.161 NppStatus nppiFilterSobelCross_32f_C1R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point second cross derivative Sobel filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.162 NppStatus nppiFilterSobelCross_8s16s_C1R (const Npp8s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit signed to 16-bit signed second cross derivative Sobel filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.163 NppStatus nppiFilterSobelCross_8u16s_C1R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned to 16-bit signed second cross derivative Sobel filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.164 NppStatus nppiFilterSobelVertSecond_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point second derivative, vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.165 NppStatus nppiFilterSobelVertSecond_8s16s_C1R (const Npp8s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit signed to 16-bit signed second derivative, vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.66.1.166 NppStatus nppiFilterSobelVertSecond_8u16s_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned to 16-bit signed second derivative, vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.67 1D Window Sum

1D Window Sum

1D mask Window Sum for 8 bit images.

- NppStatus nppiSumWindowColumn_8u32f_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned 1D (column) sum to 32f.

- NppStatus nppiSumWindowRow_8u32f_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oROI, Npp32s nMaskSize, Npp32s nAnchor)

  8-bit unsigned 1D (row) sum to 32f.

7.67.1 Function Documentation

7.67.1.1 NppStatus nppiSumWindowColumn_8u32f_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned 1D (column) sum to 32f.

Apply Column Window Summation filter over a 1D mask region around each source pixel for 1-channel 8 bit/pixel input images with 32-bit floating point output. Result 32-bit floating point pixel is equal to the sum of the corresponding and neighboring column pixel values in a mask region of the source image defined by nMaskSize and nAnchor.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

nMaskSize Length of the linear kernel array.

nAnchor Y offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.67.1.2 NppStatus nppiSumWindowRow_8u32f_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oROI*, Npp32s *nMaskSize*, Npp32s *nAnchor*)

8-bit unsigned 1D (row) sum to 32f.

Apply Row Window Summation filter over a 1D mask region around each source pixel for 1-channel 8-bit pixel input images with 32-bit floating point output. Result 32-bit floating point pixel is equal to the sum of the corresponding and neighboring row pixel values in a mask region of the source image defined by iKernelDim and iAnchorX.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

nMaskSize Length of the linear kernel array.

nAnchor X offset of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68 Convolution

Filter

General purpose 2D convolution filter.

Pixels under the mask are multiplied by the respective weights in the mask and the results are summed. Before writing the result pixel the sum is scaled back via division by nDivisor.

- NppStatus nppiFilter_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Single channel 8-bit unsigned convolution filter.

- NppStatus nppiFilter_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Three channel 8-bit unsigned convolution filter.

- NppStatus nppiFilter_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Four channel channel 8-bit unsigned convolution filter.

- NppStatus nppiFilter_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Four channel 8-bit unsigned convolution filter, ignoring alpha channel.

- NppStatus nppiFilter_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Single channel 16-bit unsigned convolution filter.

- NppStatus nppiFilter_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Three channel 16-bit unsigned convolution filter.

- NppStatus nppiFilter_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Four channel channel 16-bit unsigned convolution filter.

- NppStatus nppiFilter_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Four channel 16-bit unsigned convolution filter, ignoring alpha channel.

- NppStatus nppiFilter_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

Single channel 16-bit convolution filter.

- NppStatus nppiFilter_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Three channel 16-bit convolution filter.

- NppStatus nppiFilter_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Four channel channel 16-bit convolution filter.

- NppStatus nppiFilter_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32s ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor, Npp32s nDivisor)

  Four channel 16-bit convolution filter, ignoring alpha channel.

- NppStatus nppiFilter_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 32-bit float convolution filter.

- NppStatus nppiFilter_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Three channel 32-bit float convolution filter.

- NppStatus nppiFilter_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 32-bit float convolution filter.

- NppStatus nppiFilter_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 32-bit float convolution filter, ignoring alpha channel.

- NppStatus nppiFilter_64f_C1R (const Npp64f ∗pSrc, Npp32s nSrcStep, Npp64f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp64f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 64-bit float convolution filter.

Filter32f

General purpose 2D convolution filter using floating-point weights.

Pixels under the mask are multiplied by the respective weights in the mask and the results are summed. Before writing the result pixel the sum is scaled back via division by nDivisor.

- NppStatus nppiFilter32f_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 8-bit unsigned convolution filter.

- NppStatus nppiFilter32f_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

Three channel 8-bit unsigned convolution filter.

- NppStatus nppiFilter32f_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned convolution filter.

- NppStatus nppiFilter32f_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned convolution filter, ignorint alpha channel.

- NppStatus nppiFilter32f_8s_C1R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 8-bit signed convolution filter.

- NppStatus nppiFilter32f_8s_C3R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Three channel 8-bit signed convolution filter.

- NppStatus nppiFilter32f_8s_C4R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 8-bit signed convolution filter.

- NppStatus nppiFilter32f_8s_AC4R (const Npp8s ∗pSrc, int nSrcStep, Npp8s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 8-bit signed convolution filter, ignoring alpha channel.

- NppStatus nppiFilter32f_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 16-bit unsigned convolution filter.

- NppStatus nppiFilter32f_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Three channel 16-bit unsigned convolution filter.

- NppStatus nppiFilter32f_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 16-bit unsigned convolution filter.

- NppStatus nppiFilter32f_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 16-bit unsigned convolution filter, ignoring alpha channel.

- NppStatus nppiFilter32f_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 16-bit convolution filter.

- NppStatus nppiFilter32f_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Three channel 16-bit convolution filter.

- NppStatus nppiFilter32f_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 16-bit convolution filter.

- NppStatus nppiFilter32f_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 16-bit convolution filter, ignoring alpha channel.

- NppStatus nppiFilter32f_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 32-bit convolution filter.

- NppStatus nppiFilter32f_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Three channel 32-bit convolution filter.

- NppStatus nppiFilter32f_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 32-bit convolution filter.

- NppStatus nppiFilter32f_32s_AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 32-bit convolution filter, ignoring alpha channel.

- NppStatus nppiFilter32f_8u16s_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 8-bit unsigned to 16-bit signed convolution filter.

- NppStatus nppiFilter32f_8u16s_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Three channel 8-bit unsigned to 16-bit signed convolution filter.

- NppStatus nppiFilter32f_8u16s_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned to 16-bit signed convolution filter.

- NppStatus nppiFilter32f_8u16s_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned to 16-bit signed convolution filter, ignoring alpha channel.

- NppStatus nppiFilter32f_8s16s_C1R (const Npp8s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Single channel 8-bit to 16-bit signed convolution filter.

- NppStatus nppiFilter32f_8s16s_C3R (const Npp8s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Three channel 8-bit to 16-bit signed convolution filter.

- NppStatus nppiFilter32f_8s16s_C4R (const Npp8s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 8-bit to 16-bit signed convolution filter.

- NppStatus nppiFilter32f_8s16s_AC4R (const Npp8s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f ∗pKernel, NppiSize oKernelSize, NppiPoint oAnchor)

  Four channel 8-bit to 16-bit signed convolution filter, ignoring alpha channel.

7.68.1 Function Documentation

7.68.1.1 NppStatus nppiFilter32f_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 16-bit convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.2 NppStatus nppiFilter32f_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 16-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.3 NppStatus nppiFilter32f_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Three channel 16-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.4 NppStatus nppiFilter32f_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 16-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.5 NppStatus nppiFilter32f_16u_AC4R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f * *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 16-bit unsigned convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.6 NppStatus nppiFilter32f_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f * *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 16-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.7 NppStatus nppiFilter32f_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Three channel 16-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.8 NppStatus nppiFilter32f_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 16-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.9 NppStatus nppiFilter32f_32s_AC4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 32-bit convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.10 NppStatus nppiFilter32f_32s_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 32-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.11 NppStatus nppiFilter32f_32s_C3R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Three channel 32-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.12 NppStatus nppiFilter32f_32s_C4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 32-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.13 NppStatus nppiFilter32f_8s16s_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 8-bit to 16-bit signed convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.14 NppStatus nppiFilter32f_8s16s_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 8-bit to 16-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.15 NppStatus nppiFilter32f_8s16s_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Three channel 8-bit to 16-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.16 NppStatus nppiFilter32f_8s16s_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 8-bit to 16-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.17 NppStatus nppiFilter32f_8s_AC4R (const Npp8s * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f * *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 8-bit signed convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.18 NppStatus nppiFilter32f_8s_C1R (const Npp8s * *pSrc*, int *nSrcStep*, Npp8s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f * *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 8-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.19 NppStatus nppiFilter32f_8s_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Three channel 8-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.20 NppStatus nppiFilter32f_8s_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, Npp8s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 8-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.21 NppStatus nppiFilter32f_8u16s_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned to 16-bit signed convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.22 NppStatus nppiFilter32f_8u16s_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 8-bit unsigned to 16-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.23 NppStatus nppiFilter32f_8u16s_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Three channel 8-bit unsigned to 16-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.24 NppStatus nppiFilter32f_8u16s_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned to 16-bit signed convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.25 NppStatus nppiFilter32f_8u_AC4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f $*$ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned convolution filter, ignorint alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.26 NppStatus nppiFilter32f_8u_C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f $*$ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 8-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.27 NppStatus nppiFilter32f_8u_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f $*$ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Three channel 8-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.28 NppStatus nppiFilter32f_8u_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f $*$ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.29 NppStatus nppiFilter_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Four channel 16-bit convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.30 NppStatus nppiFilter_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Single channel 16-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.31 NppStatus nppiFilter_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Three channel 16-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.32 NppStatus nppiFilter_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Four channel channel 16-bit convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.33 NppStatus nppiFilter_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Four channel 16-bit unsigned convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.34 NppStatus nppiFilter_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Single channel 16-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.35 NppStatus nppiFilter_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Three channel 16-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.36 NppStatus nppiFilter_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Four channel channel 16-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.37 NppStatus nppiFilter_32f_AC4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 32-bit float convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.38 NppStatus nppiFilter_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32f ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 32-bit float convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.39 NppStatus nppiFilter_32f_C3R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32f $*$ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Three channel 32-bit float convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.40 NppStatus nppiFilter_32f_C4R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32f $*$ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Four channel 32-bit float convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.41 NppStatus nppiFilter_64f_C1R (const Npp64f * *pSrc*, Npp32s *nSrcStep*, Npp64f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp64f * *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*)

Single channel 64-bit float convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.42 NppStatus nppiFilter_8u_AC4R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s * *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Four channel 8-bit unsigned convolution filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.43 NppStatus nppiFilter_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Single channel 8-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.44 NppStatus nppiFilter_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s ∗ *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Three channel 8-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.68.1.45 NppStatus nppiFilter_8u_C4R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp32s * *pKernel*, NppiSize *oKernelSize*, NppiPoint *oAnchor*, Npp32s *nDivisor*)

Four channel channel 8-bit unsigned convolution filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pKernel Pointer to the start address of the kernel coefficient array. Coeffcients are expected to be stored in reverse order.

oKernelSize Width and Height of the rectangular kernel.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

nDivisor The factor by which the convolved summation from the Filter operation should be divided. If equal to the sum of coefficients, this will keep the maximum result value within full scale.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69 2D Fixed Linear Filters

FilterBox

Computes the average pixel values of the pixels under a rectangular mask.

- NppStatus nppiFilterBox_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 8-bit unsigned box filter.

- NppStatus nppiFilterBox_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 8-bit unsigned box filter.

- NppStatus nppiFilterBox_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned box filter.

- NppStatus nppiFilterBox_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned box filter, ignorting alpha channel.

- NppStatus nppiFilterBox_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 16-bit unsigned box filter.

- NppStatus nppiFilterBox_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 16-bit unsigned box filter.

- NppStatus nppiFilterBox_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit unsigned box filter.

- NppStatus nppiFilterBox_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit unsigned box filter, ignorting alpha channel.

- NppStatus nppiFilterBox_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 16-bit box filter.

- NppStatus nppiFilterBox_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 16-bit box filter.

- NppStatus nppiFilterBox_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit box filter.

- NppStatus nppiFilterBox_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit box filter, ignorting alpha channel.

- NppStatus nppiFilterBox_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 32-bit floating-point box filter.

- NppStatus nppiFilterBox_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 32-bit floating-point box filter.

- NppStatus nppiFilterBox_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 32-bit floating-point box filter.

- NppStatus nppiFilterBox_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 32-bit floating-point box filter, ignorting alpha channel.

- NppStatus nppiFilterBox_64f_C1R (const Npp64f ∗pSrc, Npp32s nSrcStep, Npp64f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 64-bit floating-point box filter.

7.69.1 Function Documentation

7.69.1.1 NppStatus nppiFilterBox_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit box filter, ignorting alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.2 NppStatus nppiFilterBox_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 16-bit box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.3 NppStatus nppiFilterBox_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 16-bit box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.4 NppStatus nppiFilterBox_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.5 NppStatus nppiFilterBox_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit unsigned box filter, ignorting alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.6 NppStatus nppiFilterBox_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 16-bit unsigned box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.7 NppStatus nppiFilterBox_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 16-bit unsigned box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.8 NppStatus nppiFilterBox_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit unsigned box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.9 NppStatus nppiFilterBox_32f_AC4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 32-bit floating-point box filter, ignorting alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.10 NppStatus nppiFilterBox_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 32-bit floating-point box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.11 NppStatus nppiFilterBox_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 32-bit floating-point box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.12 NppStatus nppiFilterBox_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 32-bit floating-point box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.13 NppStatus nppiFilterBox_64f_C1R (const Npp64f ∗ *pSrc*, Npp32s *nSrcStep*, Npp64f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 64-bit floating-point box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.14 NppStatus nppiFilterBox_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned box filter, ignorting alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.15 NppStatus nppiFilterBox_8u_C1R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 8-bit unsigned box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.16 NppStatus nppiFilterBox_8u_C3R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 8-bit unsigned box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.69.1.17 NppStatus nppiFilterBox_8u_C4R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned box filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Avg operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70 Rank Filters

ImageMax Filter

Result pixel value is the maximum of pixel values under the rectangular mask region.

- NppStatus nppiFilterMax_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 8-bit unsigned maximum filter.

- NppStatus nppiFilterMax_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 8-bit unsigned maximum filter.

- NppStatus nppiFilterMax_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned maximum filter.

- NppStatus nppiFilterMax_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned maximum filter, ignoring alpha channel.

- NppStatus nppiFilterMax_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 16-bit unsigned maximum filter.

- NppStatus nppiFilterMax_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 16-bit unsigned maximum filter.

- NppStatus nppiFilterMax_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit unsigned maximum filter.

- NppStatus nppiFilterMax_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit unsigned maximum filter, ignoring alpha channel.

- NppStatus nppiFilterMax_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 16-bit signed maximum filter.

- NppStatus nppiFilterMax_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 16-bit signed maximum filter.

- NppStatus nppiFilterMax_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit signed maximum filter.

- NppStatus nppiFilterMax_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit signed maximum filter, ignoring alpha channel.

- NppStatus nppiFilterMax_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 32-bit floating-point maximum filter.

- NppStatus nppiFilterMax_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 32-bit floating-point maximum filter.

- NppStatus nppiFilterMax_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 32-bit floating-point maximum filter.

- NppStatus nppiFilterMax_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 32-bit floating-point maximum filter, ignoring alpha channel.

ImageMin Filter

Result pixel value is the minimum of pixel values under the rectangular mask region.

- NppStatus nppiFilterMin_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 8-bit unsigned minimum filter.

- NppStatus nppiFilterMin_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 8-bit unsigned minimum filter.

- NppStatus nppiFilterMin_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned minimum filter.

- NppStatus nppiFilterMin_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 8-bit unsigned minimum filter, ignoring alpha channel.

- NppStatus nppiFilterMin_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 16-bit unsigned minimum filter.

- NppStatus nppiFilterMin_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 16-bit unsigned minimum filter.

- NppStatus nppiFilterMin_16u_C4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

Four channel 16-bit unsigned minimum filter.

- NppStatus nppiFilterMin_16u_AC4R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit unsigned minimum filter, ignoring alpha channel.

- NppStatus nppiFilterMin_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 16-bit signed minimum filter.

- NppStatus nppiFilterMin_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 16-bit signed minimum filter.

- NppStatus nppiFilterMin_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit signed minimum filter.

- NppStatus nppiFilterMin_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 16-bit signed minimum filter, ignoring alpha channel.

- NppStatus nppiFilterMin_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Single channel 32-bit floating-point minimum filter.

- NppStatus nppiFilterMin_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Three channel 32-bit floating-point minimum filter.

- NppStatus nppiFilterMin_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 32-bit floating-point minimum filter.

- NppStatus nppiFilterMin_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiSize oMaskSize, NppiPoint oAnchor)

  Four channel 32-bit floating-point minimum filter, ignoring alpha channel.

7.70.1 Function Documentation

7.70.1.1 NppStatus nppiFilterMax_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit signed maximum filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.2 NppStatus nppiFilterMax_16s_C1R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 16-bit signed maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.3 NppStatus nppiFilterMax_16s_C3R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 16-bit signed maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.4 NppStatus nppiFilterMax_16s_C4R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit signed maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.5 NppStatus nppiFilterMax_16u_AC4R (const Npp16u * *pSrc*, Npp32s *nSrcStep*, Npp16u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit unsigned maximum filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.6 NppStatus nppiFilterMax_16u_C1R (const Npp16u * *pSrc*, Npp32s *nSrcStep*, Npp16u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 16-bit unsigned maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.7 NppStatus nppiFilterMax_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 16-bit unsigned maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.8 NppStatus nppiFilterMax_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit unsigned maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.9 NppStatus nppiFilterMax_32f_AC4R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 32-bit floating-point maximum filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.10 NppStatus nppiFilterMax_32f_C1R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 32-bit floating-point maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.11 NppStatus nppiFilterMax_32f_C3R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 32-bit floating-point maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.12 NppStatus nppiFilterMax_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 32-bit floating-point maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.13 NppStatus nppiFilterMax_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned maximum filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.14 NppStatus nppiFilterMax_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 8-bit unsigned maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.15 NppStatus nppiFilterMax_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 8-bit unsigned maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.16 NppStatus nppiFilterMax_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned maximum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.17 NppStatus nppiFilterMin_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit signed minimum filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.18 NppStatus nppiFilterMin_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 16-bit signed minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.19 NppStatus nppiFilterMin_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 16-bit signed minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.20 NppStatus nppiFilterMin_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit signed minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.21 NppStatus nppiFilterMin_16u_AC4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit unsigned minimum filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.22 NppStatus nppiFilterMin_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 16-bit unsigned minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.23 NppStatus nppiFilterMin_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 16-bit unsigned minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.24 NppStatus nppiFilterMin_16u_C4R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 16-bit unsigned minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.25 NppStatus nppiFilterMin_32f_AC4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 32-bit floating-point minimum filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.26 NppStatus nppiFilterMin_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 32-bit floating-point minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.27 NppStatus nppiFilterMin_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 32-bit floating-point minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.28 NppStatus nppiFilterMin_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 32-bit floating-point minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.29 NppStatus nppiFilterMin_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned minimum filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.30 NppStatus nppiFilterMin_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single channel 8-bit unsigned minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.31 NppStatus nppiFilterMin_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three channel 8-bit unsigned minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.70.1.32 NppStatus nppiFilterMin_8u_C4R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four channel 8-bit unsigned minimum filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oMaskSize Width and Height of the neighborhood region for the local Max operation.

oAnchor X and Y offsets of the kernel origin frame of reference relative to the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71 Fixed Filters

Fixed filters perform linear filtering operations (i.e.

FilterPrewittHoriz

Filters the image using a horizontal Prewitt filter kernel:

$$\begin{pmatrix} 1 & 1 & 1 \\ 0 & 0 & 0 \\ -1 & -1 & -1 \end{pmatrix}$$

- NppStatus nppiFilterPrewittHoriz_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned horizontal Prewitt filter, ignoring alpha channel.

- NppStatus nppiFilterPrewittHoriz_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed horizontal Prewitt filter, ignoring alpha channel.

- NppStatus nppiFilterPrewittHoriz_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

Three channel 32-bit floating-point horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point horizontal Prewitt filter.

- NppStatus nppiFilterPrewittHoriz_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point horizontal Prewitt filter, ignoring alpha channel.

FilterPrewittVert

Filters the image using a vertical Prewitt filter kernel:

$$\begin{pmatrix} -1 & 0 & 1 \\ -1 & 0 & 1 \\ -1 & 0 & 1 \end{pmatrix}$$

- NppStatus nppiFilterPrewittVert_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned vertical Prewitt filter, ignoring alpha channel.

- NppStatus nppiFilterPrewittVert_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed vertical Prewitt filter, ignoring alpha channel.

- NppStatus nppiFilterPrewittVert_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 32-bit floating-point vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point vertical Prewitt filter.

- NppStatus nppiFilterPrewittVert_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point vertical Prewitt filter, ignoring alpha channel.

FilterScharrHoriz

Filters the image using a horizontal Scharr filter kernel:

$$\begin{pmatrix} 3 & 10 & 3 \\ 0 & 0 & 0 \\ -3 & -10 & -3 \end{pmatrix}$$

- NppStatus nppiFilterScharrHoriz_8u16s_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 16-bit signed horizontal Scharr filter.

- NppStatus nppiFilterScharrHoriz_8s16s_C1R (const Npp8s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit signed to 16-bit signed horizontal Scharr filter.

- NppStatus nppiFilterScharrHoriz_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point horizontal Scharr filter.

FilterScharrVert

Filters the image using a vertical Scharr filter kernel:

$$\begin{pmatrix} 3 & 10 & 3 \\ 0 & 0 & 0 \\ -3 & -10 & -3 \end{pmatrix}$$

- NppStatus nppiFilterScharrVert_8u16s_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned to 16-bit signed vertical Scharr filter.

- NppStatus nppiFilterScharrVert_8s16s_C1R (const Npp8s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit signed to 16-bit signed vertical Scharr filter.

- NppStatus nppiFilterScharrVert_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point vertical Scharr filter.

FilterSobelHoriz

Filters the image using a horizontal Sobel filter kernel:

$$\begin{pmatrix} 1 & 2 & 1 \\ 0 & 0 & 0 \\ -1 & -2 & -2 \end{pmatrix} \begin{pmatrix} 1 & 4 & 6 & 4 & 1 \\ 2 & 8 & 12 & 8 & 2 \\ 0 & 0 & 0 & 0 & 0 \\ -2 & -8 & -12 & -8 & -2 \\ -1 & -4 & -6 & -4 & -1 \end{pmatrix}$$

- NppStatus nppiFilterSobelHoriz_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed horizontal Sobel filter, ignoring alpha channel.

- NppStatus nppiFilterSobelHoriz_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

Four channel 8-bit unsigned horizontal Sobel filter, ignoring alpha channel.

- NppStatus nppiFilterSobelHoriz_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 32-bit floating-point horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point horizontal Sobel filter, ignoring alpha channel.

- NppStatus nppiFilterSobelHoriz_8u16s_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned to 16-bit signed horizontal Sobel filter.

- NppStatus nppiFilterSobelHoriz_8s16s_C1R (const Npp8s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit signed to 16-bit signed horizontal Sobel filter.

- NppStatus nppiFilterSobelHorizMask_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point horizontal Sobel filter.

FilterSobelVert

Filters the image using a vertical Sobel filter kernel:

$$\begin{pmatrix} -1 & 0 & 1 \\ -2 & 0 & 2 \\ -1 & 0 & 1 \end{pmatrix} \begin{pmatrix} -1 & -2 & 0 & 2 & 1 \\ -4 & -8 & 0 & 8 & 4 \\ -6 & -12 & 0 & 12 & 6 \\ -4 & -8 & 0 & 8 & 4 \\ -1 & -2 & 0 & 2 & 1 \end{pmatrix}$$

- NppStatus nppiFilterSobelVert_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 8-bit unsigned vertical Sobel filter.

- NppStatus nppiFilterSobelVert_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 8-bit unsigned vertical Sobel filter.

- NppStatus nppiFilterSobelVert_8u_C4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

Four channel 8-bit unsigned vertical Sobel filter.

- NppStatus nppiFilterSobelVert_8u_AC4R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed vertical Sobel filter, ignoring alpha channel.

- NppStatus nppiFilterSobelVert_16s_C1R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 16-bit signed vertical Sobel filter.

- NppStatus nppiFilterSobelVert_16s_C3R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 16-bit signed vertical Sobel filter.

- NppStatus nppiFilterSobelVert_16s_C4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 16-bit signed vertical Sobel filter.

- NppStatus nppiFilterSobelVert_16s_AC4R (const Npp16s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 8-bit unsigned vertical Sobel filter, ignoring alpha channel.

- NppStatus nppiFilterSobelVert_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single channel 32-bit floating-point vertical Sobel filter.

- NppStatus nppiFilterSobelVert_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three channel 32-bit floating-point vertical Sobel filter.

- NppStatus nppiFilterSobelVert_32f_C4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point vertical Sobel filter.

- NppStatus nppiFilterSobelVert_32f_AC4R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Four channel 32-bit floating-point vertical Sobel filter, ignoring alpha channel.

- NppStatus nppiFilterSobelVert_8u16s_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned to 16-bit signed vertical Sobel filter.

- NppStatus nppiFilterSobelVert_8s16s_C1R (const Npp8s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit signed to 16-bit signed vertical Sobel filter.

- NppStatus nppiFilterSobelVertMask_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point vertical Sobel filter.

FilterSobelHorizSecond

Filters the image using a second derivative, horizontal Sobel filter kernel:

$$\begin{pmatrix} 1 & 2 & 1 \\ -2 & -4 & -2 \\ 1 & 2 & 1 \end{pmatrix} \begin{pmatrix} 1 & 4 & 6 & 4 & 1 \\ 0 & 0 & 0 & 0 & 0 \\ -2 & -8 & -12 & -8 & -2 \\ 0 & 0 & 0 & 0 & 0 \\ 1 & 4 & 6 & 4 & 1 \end{pmatrix}$$

- NppStatus nppiFilterSobelHorizSecond_8u16s_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit unsigned to 16-bit signed second derivative, horizontal Sobel filter.

- NppStatus nppiFilterSobelHorizSecond_8s16s_C1R (const Npp8s ∗pSrc, Npp32s nSrcStep, Npp16s ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 8-bit signed to 16-bit signed second derivative, horizontal Sobel filter.

- NppStatus nppiFilterSobelHorizSecond_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, NppiMaskSize eMaskSize)

  Single channel 32-bit floating-point second derivative, horizontal Sobel filter.

7.71.1 Detailed Description

Fixed filters perform linear filtering operations (i.e.

convolutions) with predefined kernels of fixed sizes.

7.71.2 Function Documentation

7.71.2.1 NppStatus nppiFilterPrewittHoriz_16s_AC4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed horizontal Prewitt filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.2 NppStatus nppiFilterPrewittHoriz_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.3 NppStatus nppiFilterPrewittHoriz_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.4 NppStatus nppiFilterPrewittHoriz_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.5 NppStatus nppiFilterPrewittHoriz_32f_AC4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point horizontal Prewitt filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.6 NppStatus nppiFilterPrewittHoriz_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.7 NppStatus nppiFilterPrewittHoriz_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit floating-point horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.8 NppStatus nppiFilterPrewittHoriz_32f_C4R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.9 NppStatus nppiFilterPrewittHoriz_8u_AC4R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned horizontal Prewitt filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.10 NppStatus nppiFilterPrewittHoriz_8u_C1R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.11 NppStatus nppiFilterPrewittHoriz_8u_C3R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.12 NppStatus nppiFilterPrewittHoriz_8u_C4R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned horizontal Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.13 NppStatus nppiFilterPrewittVert_16s_AC4R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed vertical Prewitt filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.14 NppStatus nppiFilterPrewittVert_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.15 NppStatus nppiFilterPrewittVert_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.16 NppStatus nppiFilterPrewittVert_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.17 NppStatus nppiFilterPrewittVert_32f_AC4R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point vertical Prewitt filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.18 NppStatus nppiFilterPrewittVert_32f_C1R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.19 NppStatus nppiFilterPrewittVert_32f_C3R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit floating-point vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.20 NppStatus nppiFilterPrewittVert_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.21 NppStatus nppiFilterPrewittVert_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned vertical Prewitt filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.22 NppStatus nppiFilterPrewittVert_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.23 NppStatus nppiFilterPrewittVert_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.24 NppStatus nppiFilterPrewittVert_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned vertical Prewitt filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.25 NppStatus nppiFilterScharrHoriz_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point horizontal Scharr filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.26 NppStatus nppiFilterScharrHoriz_8s16s_C1R (const Npp8s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit signed to 16-bit signed horizontal Scharr filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.27 NppStatus nppiFilterScharrHoriz_8u16s_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 16-bit signed horizontal Scharr filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.28 NppStatus nppiFilterScharrVert_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point vertical Scharr filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.29 NppStatus nppiFilterScharrVert_8s16s_C1R (const Npp8s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit signed to 16-bit signed vertical Scharr filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.30 NppStatus nppiFilterScharrVert_8u16s_C1R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned to 16-bit signed vertical Scharr filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.31 NppStatus nppiFilterSobelHoriz_16s_AC4R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned horizontal Sobel filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.32 NppStatus nppiFilterSobelHoriz_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.33 NppStatus nppiFilterSobelHoriz_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.34 NppStatus nppiFilterSobelHoriz_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.35 NppStatus nppiFilterSobelHoriz_32f_AC4R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point horizontal Sobel filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.36 NppStatus nppiFilterSobelHoriz_32f_C1R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.37 NppStatus nppiFilterSobelHoriz_32f_C3R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit floating-point horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.38 NppStatus nppiFilterSobelHoriz_32f_C4R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.39 NppStatus nppiFilterSobelHoriz_8s16s_C1R (const Npp8s $*$ *pSrc*, Npp32s *nSrcStep*, Npp16s $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit signed to 16-bit signed horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.40 NppStatus nppiFilterSobelHoriz_8u16s_C1R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp16s $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned to 16-bit signed horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.41 NppStatus nppiFilterSobelHoriz_8u_AC4R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed horizontal Sobel filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.42 NppStatus nppiFilterSobelHoriz_8u_C1R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.43 NppStatus nppiFilterSobelHoriz_8u_C3R (const Npp8u $*$ *pSrc*, Npp32s *nSrcStep*, Npp8u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.44 NppStatus nppiFilterSobelHoriz_8u_C4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.45 NppStatus nppiFilterSobelHorizMask_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.46 NppStatus nppiFilterSobelHorizSecond_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point second derivative, horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.
nSrcStep Source-Image Line Step.
pDst Destination-Image Pointer.
nDstStep Destination-Image Line Step.
oSizeROI Region-of-Interest (ROI).
eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.47 NppStatus nppiFilterSobelHorizSecond_8s16s_C1R (const Npp8s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit signed to 16-bit signed second derivative, horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.48 NppStatus nppiFilterSobelHorizSecond_8u16s_C1R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned to 16-bit signed second derivative, horizontal Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.49 NppStatus nppiFilterSobelVert_16s_AC4R (const Npp16s * *pSrc*, Npp32s *nSrcStep*, Npp16s * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned vertical Sobel filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.50 NppStatus nppiFilterSobelVert_16s_C1R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 16-bit signed vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.51 NppStatus nppiFilterSobelVert_16s_C3R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 16-bit signed vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.52 NppStatus nppiFilterSobelVert_16s_C4R (const Npp16s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.53 NppStatus nppiFilterSobelVert_32f_AC4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point vertical Sobel filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.54 NppStatus nppiFilterSobelVert_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 32-bit floating-point vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.55 NppStatus nppiFilterSobelVert_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 32-bit floating-point vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.56 NppStatus nppiFilterSobelVert_32f_C4R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 32-bit floating-point vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.57 NppStatus nppiFilterSobelVert_8s16s_C1R (const Npp8s ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit signed to 16-bit signed vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.58 NppStatus nppiFilterSobelVert_8u16s_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16s ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 8-bit unsigned to 16-bit signed vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.59 NppStatus nppiFilterSobelVert_8u_AC4R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 16-bit signed vertical Sobel filter, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.60 NppStatus nppiFilterSobelVert_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single channel 8-bit unsigned vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.61 NppStatus nppiFilterSobelVert_8u_C3R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three channel 8-bit unsigned vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.62 NppStatus nppiFilterSobelVert_8u_C4R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Four channel 8-bit unsigned vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.71.2.63 NppStatus nppiFilterSobelVertMask_32f_C1R (const Npp32f * *pSrc*, Npp32s *nSrcStep*, Npp32f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, NppiMaskSize *eMaskSize*)

Single channel 32-bit floating-point vertical Sobel filter.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eMaskSize Enumeration value specifying the mask size.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.72 Geometry Transforms

Routines manipulating an image's geometry.

Modules

- ResizeSqrPixel

  ResizeSqrPixel supports the following interpolation modes:.

- Resize

  This function has been deprecated.

- Remap

  Remap supports the following interpolation modes:.

- Rotate

  Rotates an image around the origin (0,0) and then shifts it.

- Mirror
- Affine Transforms
- Perspective Transform

7.72.1 Detailed Description

Routines manipulating an image's geometry.

7.72.2 Geometric Transform API Specifics

This section covers some of the unique API features common to the geometric transform primitives.

7.72.2.1 Geometric Transforms and ROIs

Geometric transforms operate on source and destination ROIs. The way these ROIs affect the processing of pixels differs from other (non geometric) image-processing primitives: Only pixels in the intersection of the destination ROI and the transformed source ROI are being processed.

The typical processing proceedes as follows:

1. Transform the rectangular source ROI (given in source image coordinates) into the destination image space. This yields a quadrilateral.
2. Write only pixels in the intersection of the transformed source ROI and the destination ROI.

7.72.2.2 Pixel Interpolation

The majority of image geometry transform operation need to perform a resampling of the source image as source and destination pixels are not coincident.

NPP supports the following pixel inerpolation modes (in order from fastest to slowest and lowest to highest quality):

- nearest neighbor
- linear interpolation
- cubic convolution
- supersampling
- interpolation using Lanczos window function

7.73 ResizeSqrPixel

ResizeSqrPixel supports the following interpolation modes:.

GetResizeRect

Returns NppiRect which represents the offset and size of the destination rectangle that would be generated by resizing the source NppiRect by the requested scale factors and shifts.

- NppStatus nppiGetResizeRect (NppiRect oSrcROI, NppiRect ∗pDstRect, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

ResizeSqrPixel

Resizes images.

- NppStatus nppiResizeSqrPixel_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  1 channel 8-bit unsigned image resize.

- NppStatus nppiResizeSqrPixel_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 8-bit unsigned image resize.

- NppStatus nppiResizeSqrPixel_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 8-bit unsigned image resize.

- NppStatus nppiResizeSqrPixel_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 8-bit unsigned image resize not affecting alpha.

- NppStatus nppiResizeSqrPixel_8u_P3R (const Npp8u ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[3], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 8-bit unsigned planar image resize.

- NppStatus nppiResizeSqrPixel_8u_P4R (const Npp8u ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[4], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 8-bit unsigned planar image resize.

- NppStatus nppiResizeSqrPixel_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  1 channel 16-bit unsigned image resize.

- NppStatus nppiResizeSqrPixel_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 16-bit unsigned image resize.

- NppStatus nppiResizeSqrPixel_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 16-bit unsigned image resize.

- NppStatus nppiResizeSqrPixel_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 16-bit unsigned image resize not affecting alpha.

- NppStatus nppiResizeSqrPixel_16u_P3R (const Npp16u ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[3], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 16-bit unsigned planar image resize.

- NppStatus nppiResizeSqrPixel_16u_P4R (const Npp16u ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[4], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 16-bit unsigned planar image resize.

- NppStatus nppiResizeSqrPixel_16s_C1R (const Npp16s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16s ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  1 channel 16-bit signed image resize.

- NppStatus nppiResizeSqrPixel_16s_C3R (const Npp16s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16s ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 16-bit signed image resize.

- NppStatus nppiResizeSqrPixel_16s_C4R (const Npp16s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16s ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 16-bit signed image resize.

- NppStatus nppiResizeSqrPixel_16s_AC4R (const Npp16s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16s ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 16-bit signed image resize not affecting alpha.

- NppStatus nppiResizeSqrPixel_16s_P3R (const Npp16s ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16s ∗pDst[3], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 16-bit signed planar image resize.

- NppStatus nppiResizeSqrPixel_16s_P4R (const Npp16s ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16s ∗pDst[4], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 16-bit signed planar image resize.

- NppStatus nppiResizeSqrPixel_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  1 channel 32-bit floating point image resize.

- NppStatus nppiResizeSqrPixel_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 32-bit floating point image resize.

- NppStatus nppiResizeSqrPixel_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 32-bit floating point image resize.

- NppStatus nppiResizeSqrPixel_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 32-bit floating point image resize not affecting alpha.

- NppStatus nppiResizeSqrPixel_32f_P3R (const Npp32f ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[3], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 32-bit floating point planar image resize.

- NppStatus nppiResizeSqrPixel_32f_P4R (const Npp32f ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[4], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 32-bit floating point planar image resize.

- NppStatus nppiResizeSqrPixel_64f_C1R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  1 channel 64-bit floating point image resize.

- NppStatus nppiResizeSqrPixel_64f_C3R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 64-bit floating point image resize.

- NppStatus nppiResizeSqrPixel_64f_C4R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 64-bit floating point image resize.

- NppStatus nppiResizeSqrPixel_64f_AC4R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst, int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 64-bit floating point image resize not affecting alpha.

- NppStatus nppiResizeSqrPixel_64f_P3R (const Npp64f ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst[3], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  3 channel 64-bit floating point planar image resize.

- NppStatus nppiResizeSqrPixel_64f_P4R (const Npp64f ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst[4], int nDstStep, NppiRect oDstROI, double nXFactor, double nYFactor, double nXShift, double nYShift, int eInterpolation)

  4 channel 64-bit floating point planar image resize.

7.73.1 Detailed Description

ResizeSqrPixel supports the following interpolation modes:.

```
NPPI_INTER_NN
NPPI_INTER_LINEAR
NPPI_INTER_CUBIC
NPPI_INTER_CUBIC2P_BSPLINE
NPPI_INTER_CUBIC2P_CATMULLROM
NPPI_INTER_CUBIC2P_B05C03
NPPI_INTER_SUPER
NPPI_INTER_LANCZOS
```

ResizeSqrPixel attempts to choose source pixels that would approximately represent the center of the destination pixels. It does so by using the following scaling formula to select source pixels for interpolation:

```
nAdjustedXFactor = 1.0 / nXFactor;
nAdjustedYFactor = 1.0 / nYFactor;
nAdjustedXShift = nXShift * nAdjustedXFactor + ((1.0 - nAdjustedXFactor) * 0.5);
nAdjustedYShift = nYShift * nAdjustedYFactor + ((1.0 - nAdjustedYFactor) * 0.5);
nSrcX = nAdjustedXFactor * nDstX - nAdjustedXShift;
nSrcY = nAdjustedYFactor * nDstY - nAdjustedYShift;
```

In the ResizeSqrPixel functions below source image clip checking is handled as follows:

If the source pixel fractional x and y coordinates are greater than or equal to oSizeROI.x and less than oSizeROI.x + oSizeROI.width and greater than or equal to oSizeROI.y and less than oSizeROI.y + oSizeROI.height then the source pixel is considered to be within the source image clip rectangle and the source image is sampled. Otherwise the source image is not sampled and a destination pixel is not written to the destination image.

7.73.2 Error Codes

The resize primitives return the following error codes:

- NPP_WRONG_INTERSECTION_ROI_ERROR indicates an error condition if srcROIRect has no intersection with the source image.

- NPP_RESIZE_NO_OPERATION_ERROR if either destination ROI width or height is less than 1 pixel.
- NPP_RESIZE_FACTOR_ERROR Indicates an error condition if either nXFactor or nYFactor is less than or equal to zero.
- NPP_INTERPOLATION_ERROR if eInterpolation has an illegal value.

7.73.3 Function Documentation

7.73.3.1 NppStatus nppiGetResizeRect (NppiRect *oSrcROI*, NppiRect ∗ *pDstRect*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

Parameters:

oSrcROI Region of interest in the source image.

pDstRect User supplied host memory pointer to an NppiRect structure that will be filled in by this function with the region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.2 NppStatus nppiResizeSqrPixel_16s_AC4R (const Npp16s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 16-bit signed image resize not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.3 NppStatus nppiResizeSqrPixel_16s_C1R (const Npp16s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

1 channel 16-bit signed image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.4 NppStatus nppiResizeSqrPixel_16s_C3R (const Npp16s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 16-bit signed image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.5 NppStatus nppiResizeSqrPixel_16s_C4R (const Npp16s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 16-bit signed image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.6 NppStatus nppiResizeSqrPixel_16s_P3R (const Npp16s ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16s ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 16-bit signed planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.7 NppStatus nppiResizeSqrPixel_16s_P4R (const Npp16s ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16s ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 16-bit signed planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.8 NppStatus nppiResizeSqrPixel_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 16-bit unsigned image resize not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.9 NppStatus nppiResizeSqrPixel_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

1 channel 16-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.10 NppStatus nppiResizeSqrPixel_16u_C3R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 16-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.11 NppStatus nppiResizeSqrPixel_16u_C4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 16-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.12 NppStatus nppiResizeSqrPixel_16u_P3R (const Npp16u ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 16-bit unsigned planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.13 NppStatus nppiResizeSqrPixel_16u_P4R (const Npp16u ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 16-bit unsigned planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.14 NppStatus nppiResizeSqrPixel_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 32-bit floating point image resize not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.15 NppStatus nppiResizeSqrPixel_32f_C1R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

1 channel 32-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.16 NppStatus nppiResizeSqrPixel_32f_C3R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 32-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.17 NppStatus nppiResizeSqrPixel_32f_C4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 32-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.18 NppStatus nppiResizeSqrPixel_32f_P3R (const Npp32f ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 32-bit floating point planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.19 NppStatus nppiResizeSqrPixel_32f_P4R (const Npp32f ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 32-bit floating point planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.20 NppStatus nppiResizeSqrPixel_64f_AC4R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 64-bit floating point image resize not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.21 NppStatus nppiResizeSqrPixel_64f_C1R (const Npp64f * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f * *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

1 channel 64-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.22 NppStatus nppiResizeSqrPixel_64f_C3R (const Npp64f * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f * *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 64-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.23 NppStatus nppiResizeSqrPixel_64f_C4R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 64-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.24 NppStatus nppiResizeSqrPixel_64f_P3R (const Npp64f ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 64-bit floating point planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.25 NppStatus nppiResizeSqrPixel_64f_P4R (const Npp64f ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 64-bit floating point planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.26 NppStatus nppiResizeSqrPixel_8u_AC4R (const Npp8u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u * *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 8-bit unsigned image resize not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.27 NppStatus nppiResizeSqrPixel_8u_C1R (const Npp8u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u * *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

1 channel 8-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.28 NppStatus nppiResizeSqrPixel_8u_C3R (const Npp8u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u * *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 8-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.29 NppStatus nppiResizeSqrPixel_8u_C4R (const Npp8u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u * *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 8-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.30 NppStatus nppiResizeSqrPixel_8u_P3R (const Npp8u *const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u * *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

3 channel 8-bit unsigned planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.73.3.31 NppStatus nppiResizeSqrPixel_8u_P4R (const Npp8u *const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u * *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, double *nXFactor*, double *nYFactor*, double *nXShift*, double *nYShift*, int *eInterpolation*)

4 channel 8-bit unsigned planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

nXShift Source pixel shift in x-direction.

nYShift Source pixel shift in y-direction.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74 Resize

This function has been deprecated.

Resize

Resizes images.

- NppStatus nppiResize_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  1 channel 8-bit unsigned image resize.

- NppStatus nppiResize_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  3 channel 8-bit unsigned image resize.

- NppStatus nppiResize_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  4 channel 8-bit unsigned image resize.

- NppStatus nppiResize_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  4 channel 8-bit unsigned image resize not affecting alpha.

- NppStatus nppiResize_8u_P3R (const Npp8u ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[3], int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  3 channel 8-bit unsigned planar image resize.

- NppStatus nppiResize_8u_P4R (const Npp8u ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[4], int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  4 channel 8-bit unsigned planar image resize.

- NppStatus nppiResize_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  1 channel 16-bit unsigned image resize.

- NppStatus nppiResize_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  3 channel 16-bit unsigned image resize.

- NppStatus nppiResize_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

4 channel 16-bit unsigned image resize.

- NppStatus nppiResize_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  4 channel 16-bit unsigned image resize not affecting alpha.

- NppStatus nppiResize_16u_P3R (const Npp16u ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[3], int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  3 channel 16-bit unsigned planar image resize.

- NppStatus nppiResize_16u_P4R (const Npp16u ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[4], int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  4 channel 16-bit unsigned planar image resize.

- NppStatus nppiResize_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  1 channel 32-bit floating point image resize.

- NppStatus nppiResize_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  3 channel 32-bit floating point image resize.

- NppStatus nppiResize_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  4 channel 32-bit floating point image resize.

- NppStatus nppiResize_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  4 channel 32-bit floating point image resize not affecting alpha.

- NppStatus nppiResize_32f_P3R (const Npp32f ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[3], int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  3 channel 32-bit floating point planar image resize.

- NppStatus nppiResize_32f_P4R (const Npp32f ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[4], int nDstStep, NppiSize dstROISize, double nXFactor, double nYFactor, int eInterpolation)

  4 channel 32-bit floating point planar image resize.

7.74.1 Detailed Description

This function has been deprecated.

ResizeSqrPixel provides the same functionality and more.

Resize supports the following interpolation modes:

```
NPPI_INTER_NN
NPPI_INTER_LINEAR
NPPI_INTER_CUBIC
NPPI_INTER_SUPER
NPPI_INTER_LANCZOS
```

Resize uses the following scaling formula to select source pixels for interpolation:

```
scaledSrcSize.width = nXFactor * srcRectROI.width;
scaledSrcSize.height = nYFactor * srcRectROI.height;
nAdjustedXFactor = (srcRectROI.width - 1) / (scaledSrcSize.width - 1);
nAdjustedYFactor = (srcRectROI.height - 1) / (scaledSrcSize.height - 1);
nSrcX = nAdjustedXFactor * nDstX;
nSrcY = nAdjustedYFactor * nDstY;
```

In the Resize functions below source image clip checking is handled as follows:

If the source pixel fractional x and y coordinates are greater than or equal to oSizeROI.x and less than oSizeROI.x + oSizeROI.width and greater than or equal to oSizeROI.y and less than oSizeROI.y + oSizeROI.height then the source pixel is considered to be within the source image clip rectangle and the source image is sampled. Otherwise the source image is not sampled and a destination pixel is not written to the destination image.

7.74.2 Error Codes

The resize primitives return the following error codes:

- NPP_WRONG_INTERSECTION_ROI_ERROR indicates an error condition if srcROIRect has no intersection with the source image.
- NPP_RESIZE_NO_OPERATION_ERROR if either destination ROI width or height is less than 1 pixel.
- NPP_RESIZE_FACTOR_ERROR Indicates an error condition if either nXFactor or nYFactor is less than or equal to zero.
- NPP_INTERPOLATION_ERROR if eInterpolation has an illegal value.

7.74.3 Function Documentation

7.74.3.1 NppStatus nppiResize_16u_AC4R (const Npp16u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u * *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 16-bit unsigned image resize not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.2 NppStatus nppiResize_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

1 channel 16-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.3 NppStatus nppiResize_16u_C3R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

3 channel 16-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.4 NppStatus nppiResize_16u_C4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 16-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.5 NppStatus nppiResize_16u_P3R (const Npp16u ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[3], int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

3 channel 16-bit unsigned planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.6 NppStatus nppiResize_16u_P4R (const Npp16u ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[4], int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 16-bit unsigned planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.7 NppStatus nppiResize_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 32-bit floating point image resize not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.8 NppStatus nppiResize_32f_C1R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

1 channel 32-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.9 NppStatus nppiResize_32f_C3R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

3 channel 32-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.10 NppStatus nppiResize_32f_C4R (const Npp32f * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f * *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 32-bit floating point image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.11 NppStatus nppiResize_32f_P3R (const Npp32f *const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f * *pDst*[3], int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

3 channel 32-bit floating point planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.12 NppStatus nppiResize_32f_P4R (const Npp32f ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*[4], int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 32-bit floating point planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.13 NppStatus nppiResize_8u_AC4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 8-bit unsigned image resize not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.14 NppStatus nppiResize_8u_C1R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

1 channel 8-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.15 NppStatus nppiResize_8u_C3R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

3 channel 8-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.16 NppStatus nppiResize_8u_C4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 8-bit unsigned image resize.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.17 NppStatus nppiResize_8u_P3R (const Npp8u ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

3 channel 8-bit unsigned planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.74.3.18 NppStatus nppiResize_8u_P4R (const Npp8u *const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u * *pDst*[4], int *nDstStep*, NppiSize *dstROISize*, double *nXFactor*, double *nYFactor*, int *eInterpolation*)

4 channel 8-bit unsigned planar image resize.

Parameters:

pSrc Source-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pDst Destination-Planar-Image Pointer Array (host memory array containing device memory image plane pointers).

nDstStep Destination-Image Line Step.

dstROISize Size in pixels of the destination image.

nXFactor Factor by which x dimension is changed.

nYFactor Factor by which y dimension is changed.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75 Remap

Remap supports the following interpolation modes:.

Remap

Remaps images.

- NppStatus nppiRemap_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  1 channel 8-bit unsigned image remap.

- NppStatus nppiRemap_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 8-bit unsigned image remap.

- NppStatus nppiRemap_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 8-bit unsigned image remap.

- NppStatus nppiRemap_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp8u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 8-bit unsigned image remap not affecting alpha.

- NppStatus nppiRemap_8u_P3R (const Npp8u ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp8u ∗pDst[3], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 8-bit unsigned planar image remap.

- NppStatus nppiRemap_8u_P4R (const Npp8u ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp8u ∗pDst[4], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 8-bit unsigned planar image remap.

- NppStatus nppiRemap_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  1 channel 16-bit unsigned image remap.

- NppStatus nppiRemap_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 16-bit unsigned image remap.

- NppStatus nppiRemap_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

4 channel 16-bit unsigned image remap.

- NppStatus nppiRemap_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16u ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 16-bit unsigned image remap not affecting alpha.

- NppStatus nppiRemap_16u_P3R (const Npp16u ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16u ∗pDst[3], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 16-bit unsigned planar image remap.

- NppStatus nppiRemap_16u_P4R (const Npp16u ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16u ∗pDst[4], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 16-bit unsigned planar image remap.

- NppStatus nppiRemap_16s_C1R (const Npp16s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  1 channel 16-bit signed image remap.

- NppStatus nppiRemap_16s_C3R (const Npp16s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 16-bit signed image remap.

- NppStatus nppiRemap_16s_C4R (const Npp16s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 16-bit signed image remap.

- NppStatus nppiRemap_16s_AC4R (const Npp16s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16s ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 16-bit signed image remap not affecting alpha.

- NppStatus nppiRemap_16s_P3R (const Npp16s ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16s ∗pDst[3], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 16-bit signed planar image remap.

- NppStatus nppiRemap_16s_P4R (const Npp16s ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp16s ∗pDst[4], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 16-bit signed planar image remap.

- NppStatus nppiRemap_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  1 channel 32-bit floating point image remap.

- NppStatus nppiRemap_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 32-bit floating point image remap.

- NppStatus nppiRemap_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 32-bit floating point image remap.

- NppStatus nppiRemap_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp32f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 32-bit floating point image remap not affecting alpha.

- NppStatus nppiRemap_32f_P3R (const Npp32f ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp32f ∗pDst[3], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 32-bit floating point planar image remap.

- NppStatus nppiRemap_32f_P4R (const Npp32f ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp32f ∗pXMap, int nXMapStep, const Npp32f ∗pYMap, int nYMapStep, Npp32f ∗pDst[4], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 32-bit floating point planar image remap.

- NppStatus nppiRemap_64f_C1R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp64f ∗pXMap, int nXMapStep, const Npp64f ∗pYMap, int nYMapStep, Npp64f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  1 channel 64-bit floating point image remap.

- NppStatus nppiRemap_64f_C3R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp64f ∗pXMap, int nXMapStep, const Npp64f ∗pYMap, int nYMapStep, Npp64f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 64-bit floating point image remap.

- NppStatus nppiRemap_64f_C4R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp64f ∗pXMap, int nXMapStep, const Npp64f ∗pYMap, int nYMapStep, Npp64f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 64-bit floating point image remap.

- NppStatus nppiRemap_64f_AC4R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp64f ∗pXMap, int nXMapStep, const Npp64f ∗pYMap, int nYMapStep, Npp64f ∗pDst, int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 64-bit floating point image remap not affecting alpha.

- NppStatus nppiRemap_64f_P3R (const Npp64f ∗const pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp64f ∗pXMap, int nXMapStep, const Npp64f ∗pYMap, int nYMapStep, Npp64f ∗pDst[3], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  3 channel 64-bit floating point planar image remap.

- NppStatus nppiRemap_64f_P4R (const Npp64f ∗const pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const Npp64f ∗pXMap, int nXMapStep, const Npp64f ∗pYMap, int nYMapStep, Npp64f ∗pDst[4], int nDstStep, NppiSize oDstSizeROI, int eInterpolation)

  4 channel 64-bit floating point planar image remap.

7.75.1 Detailed Description

Remap supports the following interpolation modes:.

NPPI_INTER_NN NPPI_INTER_LINEAR NPPI_INTER_CUBIC NPPI_INTER_CUBIC2P_BSPLINE NPPI_INTER_CUBIC2P_CATMULLROM NPPI_INTER_CUBIC2P_B05C03 NPPI_INTER_LANCZOS

Remap chooses source pixels using pixel coordinates explicitely supplied in two 2D device memory image arrays pointed to by the pXMap and pYMap pointers. The pXMap array contains the X coordinated and the pYMap array contains the Y coordinate of the corresponding source image pixel to use as input. These coordinates are in floating point format so fraction pixel positions can be used. The coordinates of the source pixel to sample are determined as follows:

nSrcX = pxMap[nDstX, nDstY] nSrcY = pyMap[nDstX, nDstY]

In the Remap functions below source image clip checking is handled as follows:

If the source pixel fractional x and y coordinates are greater than or equal to oSizeROI.x and less than oSizeROI.x + oSizeROI.width and greater than or equal to oSizeROI.y and less than oSizeROI.y + oSizeROI.height then the source pixel is considered to be within the source image clip rectangle and the source image is sampled. Otherwise the source image is not sampled and a destination pixel is not written to the destination image.

7.75.2 Error Codes

The remap primitives return the following error codes:

- NPP_WRONG_INTERSECTION_ROI_ERROR indicates an error condition if srcROIRect has no intersection with the source image.
- NPP_RESIZE_NO_OPERATION_ERROR if either destination ROI width or height is less than 1 pixel.
- NPP_RESIZE_FACTOR_ERROR Indicates an error condition if either nXFactor or nYFactor is less than or equal to zero.
- NPP_INTERPOLATION_ERROR if eInterpolation has an illegal value.

7.75.3 Function Documentation

7.75.3.1 NppStatus nppiRemap_16s_AC4R (const Npp16s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 16-bit signed image remap not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.2 NppStatus nppiRemap_16s_C1R (const Npp16s * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f * *pXMap*, int *nXMapStep*, const Npp32f * *pYMap*, int *nYMapStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

1 channel 16-bit signed image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.3 NppStatus nppiRemap_16s_C3R (const Npp16s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 16-bit signed image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.4 NppStatus nppiRemap_16s_C4R (const Npp16s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 16-bit signed image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.5 NppStatus nppiRemap_16s_P3R (const Npp16s ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16s ∗ *pDst*[3], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 16-bit signed planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.6 NppStatus nppiRemap_16s_P4R (const Npp16s ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16s ∗ *pDst*[4], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 16-bit signed planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.7 NppStatus nppiRemap_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 16-bit unsigned image remap not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.8 NppStatus nppiRemap_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

1 channel 16-bit unsigned image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.9 NppStatus nppiRemap_16u_C3R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 16-bit unsigned image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.10 NppStatus nppiRemap_16u_C4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 16-bit unsigned image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.11 NppStatus nppiRemap_16u_P3R (const Npp16u ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16u ∗ *pDst*[3], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 16-bit unsigned planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.12 NppStatus nppiRemap_16u_P4R (const Npp16u ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp16u ∗ *pDst*[4], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 16-bit unsigned planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.13 NppStatus nppiRemap_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 32-bit floating point image remap not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.14 NppStatus nppiRemap_32f_C1R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

1 channel 32-bit floating point image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.15 NppStatus nppiRemap_32f_C3R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 32-bit floating point image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.16 NppStatus nppiRemap_32f_C4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 32-bit floating point image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.17 NppStatus nppiRemap_32f_P3R (const Npp32f ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp32f ∗ *pDst*[3], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 32-bit floating point planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.18 NppStatus nppiRemap_32f_P4R (const Npp32f ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp32f ∗ *pDst*[4], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 32-bit floating point planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.19 NppStatus nppiRemap_64f_AC4R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp64f ∗ *pXMap*, int *nXMapStep*, const Npp64f ∗ *pYMap*, int *nYMapStep*, Npp64f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 64-bit floating point image remap not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.20 NppStatus nppiRemap_64f_C1R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp64f ∗ *pXMap*, int *nXMapStep*, const Npp64f ∗ *pYMap*, int *nYMapStep*, Npp64f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

1 channel 64-bit floating point image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.21 NppStatus nppiRemap_64f_C3R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp64f ∗ *pXMap*, int *nXMapStep*, const Npp64f ∗ *pYMap*, int *nYMapStep*, Npp64f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 64-bit floating point image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.22 NppStatus nppiRemap_64f_C4R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp64f ∗ *pXMap*, int *nXMapStep*, const Npp64f ∗ *pYMap*, int *nYMapStep*, Npp64f ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 64-bit floating point image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.23 NppStatus nppiRemap_64f_P3R (const Npp64f ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp64f ∗ *pXMap*, int *nXMapStep*, const Npp64f ∗ *pYMap*, int *nYMapStep*, Npp64f ∗ *pDst*[3], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 64-bit floating point planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.24 NppStatus nppiRemap_64f_P4R (const Npp64f ∗const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp64f ∗ *pXMap*, int *nXMapStep*, const Npp64f ∗ *pYMap*, int *nYMapStep*, Npp64f ∗ *pDst*[4], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 64-bit floating point planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.25 NppStatus nppiRemap_8u_AC4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 8-bit unsigned image remap not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of interpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.26 NppStatus nppiRemap_8u_C1R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

1 channel 8-bit unsigned image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.27 NppStatus nppiRemap_8u_C3R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 8-bit unsigned image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.28 NppStatus nppiRemap_8u_C4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 8-bit unsigned image remap.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.29 NppStatus nppiRemap_8u_P3R (const Npp8u ∗const *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f ∗ *pXMap*, int *nXMapStep*, const Npp32f ∗ *pYMap*, int *nYMapStep*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

3 channel 8-bit unsigned planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.75.3.30 NppStatus nppiRemap_8u_P4R (const Npp8u *const *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const Npp32f * *pXMap*, int *nXMapStep*, const Npp32f * *pYMap*, int *nYMapStep*, Npp8u * *pDst*[4], int *nDstStep*, NppiSize *oDstSizeROI*, int *eInterpolation*)

4 channel 8-bit unsigned planar image remap.

Parameters:

pSrc Source-Planar-Image Pointer Array.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image.

oSrcROI Region of interest in the source image.

pXMap Device memory pointer to 2D image array of X coordinate values to be used when sampling source image.

nXMapStep pXMap image array line step in bytes.

pYMap Device memory pointer to 2D image array of Y coordinate values to be used when sampling source image.

nYMapStep pYMap image array line step in bytes.

pDst Destination-Planar-Image Pointer Array.

nDstStep Destination-Image Line Step.

oDstSizeROI Region of interest size in the destination image.

eInterpolation The type of eInterpolation to perform resampling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Error Codes

7.76 Rotate

Rotates an image around the origin (0,0) and then shifts it.

Utility Functions

- NppStatus nppiGetRotateQuad (NppiRect oSrcROI, double aQuad[4][2], double nAngle, double nShiftX, double nShiftY)

  Compute shape of rotated image.

- NppStatus nppiGetRotateBound (NppiRect oSrcROI, double aBoundingBox[2][2], double nAngle, double nShiftX, double nShiftY)

  Compute bounding-box of rotated image.

Rotate

- NppStatus nppiRotate_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  8-bit unsigned image rotate.

- NppStatus nppiRotate_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  3 channel 8-bit unsigned image rotate.

- NppStatus nppiRotate_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  4 channel 8-bit unsigned image rotate.

- NppStatus nppiRotate_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  4 channel 8-bit unsigned image rotate ignoring alpha channel.

- NppStatus nppiRotate_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  16-bit unsigned image rotate.

- NppStatus nppiRotate_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  3 channel 16-bit unsigned image rotate.

- NppStatus nppiRotate_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

4 channel 16-bit unsigned image rotate.

- NppStatus nppiRotate_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  4 channel 16-bit unsigned image rotate ignoring alpha channel.

- NppStatus nppiRotate_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  32-bit float image rotate.

- NppStatus nppiRotate_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  3 channel 32-bit float image rotate.

- NppStatus nppiRotate_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  4 channel 32-bit float image rotate.

- NppStatus nppiRotate_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, double nAngle, double nShiftX, double nShiftY, int eInterpolation)

  4 channel 32-bit float image rotate ignoring alpha channel.

7.76.1 Detailed Description

Rotates an image around the origin (0,0) and then shifts it.

7.76.2 Rotate Error Codes

- NPP_INTERPOLATION_ERROR if eInterpolation has an illegal value.
- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1.
- NPP_WRONG_INTERSECTION_ROI_ERROR indicates an error condition if srcROIRect has no intersection with the source image.
- NPP_WRONG_INTERSECTION_QUAD_WARNING indicates a warning that no operation is performed if the transformed source ROI does not intersect the destination ROI.

7.76.3 Function Documentation

7.76.3.1 NppStatus nppiGetRotateBound (NppiRect *oSrcROI*, double *aBoundingBox*[2][2], double *nAngle*, double *nShiftX*, double *nShiftY*)

Compute bounding-box of rotated image.

Parameters:

oSrcROI Region-of-interest of the source image.

aBoundingBox Two 2D points representing the bounding-box of the rotated image. All four points from nppiGetRotateQuad are contained inside the axis-aligned rectangle spanned by the the two points of this bounding box.

nAngle The rotation angle.

nShiftX Post-rotation shift in x-direction.

nShiftY Post-rotation shift in y-direction.

Returns:

ROI Related Error Codes.

7.76.3.2 NppStatus nppiGetRotateQuad (NppiRect *oSrcROI*, double *aQuad*[4][2], double *nAngle*, double *nShiftX*, double *nShiftY*)

Compute shape of rotated image.

Parameters:

oSrcROI Region-of-interest of the source image.

aQuad Array of 2D points. These points are the locations of the corners of the rotated ROI.

nAngle The rotation nAngle.

nShiftX Post-rotation shift in x-direction

nShiftY Post-rotation shift in y-direction

Returns:

ROI Related Error Codes.

7.76.3.3 NppStatus nppiRotate_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

4 channel 16-bit unsigned image rotate ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.4 NppStatus nppiRotate_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

16-bit unsigned image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.5 NppStatus nppiRotate_16u_C3R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

3 channel 16-bit unsigned image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.6 NppStatus nppiRotate_16u_C4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

4 channel 16-bit unsigned image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.7 NppStatus nppiRotate_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

4 channel 32-bit float image rotate ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.8 NppStatus nppiRotate_32f_C1R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

32-bit float image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.9 NppStatus nppiRotate_32f_C3R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

3 channel 32-bit float image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.10 NppStatus nppiRotate_32f_C4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

4 channel 32-bit float image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.11 NppStatus nppiRotate_8u_AC4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

4 channel 8-bit unsigned image rotate ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.12 NppStatus nppiRotate_8u_C1R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

8-bit unsigned image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.13 NppStatus nppiRotate_8u_C3R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

3 channel 8-bit unsigned image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.76.3.14 NppStatus nppiRotate_8u_C4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, double *nAngle*, double *nShiftX*, double *nShiftY*, int *eInterpolation*)

4 channel 8-bit unsigned image rotate.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcSize Size in pixels of the source image

oSrcROI Region of interest in the source image.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Region of interest in the destination image.

nAngle The angle of rotation in degrees.

nShiftX Shift along horizontal axis

nShiftY Shift along vertical axis

eInterpolation The type of interpolation to perform resampling

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Rotate Error Codes

7.77 Mirror

Mirror

Mirrors images horizontally, vertically and diagonally.

- NppStatus nppiMirror_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 8-bit unsigned image mirror.

- NppStatus nppiMirror_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 8-bit unsigned in place image mirror.

- NppStatus nppiMirror_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 8-bit unsigned image mirror.

- NppStatus nppiMirror_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 8-bit unsigned in place image mirror.

- NppStatus nppiMirror_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 8-bit unsigned image mirror.

- NppStatus nppiMirror_8u_C4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 8-bit unsigned in place image mirror.

- NppStatus nppiMirror_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 8-bit unsigned image mirror not affecting alpha.

- NppStatus nppiMirror_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 8-bit unsigned in place image mirror not affecting alpha.

- NppStatus nppiMirror_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 16-bit unsigned image mirror.

- NppStatus nppiMirror_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 16-bit unsigned in place image mirror.

- NppStatus nppiMirror_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 16-bit unsigned image mirror.

- NppStatus nppiMirror_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 16-bit unsigned in place image mirror.

- NppStatus nppiMirror_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 16-bit unsigned image mirror.

- NppStatus nppiMirror_16u_C4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 16-bit unsigned in place image mirror.

- NppStatus nppiMirror_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 16-bit unsigned image mirror not affecting alpha.

- NppStatus nppiMirror_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 16-bit unsigned in place image mirror not affecting alpha.

- NppStatus nppiMirror_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 16-bit signed image mirror.

- NppStatus nppiMirror_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 16-bit signed in place image mirror.

- NppStatus nppiMirror_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 16-bit signed image mirror.

- NppStatus nppiMirror_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 16-bit signed in place image mirror.

- NppStatus nppiMirror_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 16-bit signed image mirror.

- NppStatus nppiMirror_16s_C4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 16-bit signed in place image mirror.

- NppStatus nppiMirror_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 16-bit signed image mirror not affecting alpha.

- NppStatus nppiMirror_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 16-bit signed in place image mirror not affecting alpha.

- NppStatus nppiMirror_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 32-bit image mirror.

- NppStatus nppiMirror_32s_C1IR (Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 32-bit signed in place image mirror.

- NppStatus nppiMirror_32s_C3R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 32-bit image mirror.

- NppStatus nppiMirror_32s_C3IR (Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 32-bit signed in place image mirror.

- NppStatus nppiMirror_32s_C4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 32-bit image mirror.

- NppStatus nppiMirror_32s_C4IR (Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 32-bit signed in place image mirror.

- NppStatus nppiMirror_32s_AC4R (const Npp32s ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 32-bit image mirror not affecting alpha.

- NppStatus nppiMirror_32s_AC4IR (Npp32s ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 32-bit signed in place image mirror not affecting alpha.

- NppStatus nppiMirror_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 32-bit float image mirror.

- NppStatus nppiMirror_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  1 channel 32-bit float in place image mirror.

- NppStatus nppiMirror_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 32-bit float image mirror.

- NppStatus nppiMirror_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  3 channel 32-bit float in place image mirror.

- NppStatus nppiMirror_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

4 channel 32-bit float image mirror.

- NppStatus nppiMirror_32f_C4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 32-bit float in place image mirror.

- NppStatus nppiMirror_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 32-bit float image mirror not affecting alpha.

- NppStatus nppiMirror_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oROI, NppiAxis flip)

  4 channel 32-bit float in place image mirror not affecting alpha.

7.77.1 Detailed Description

7.77.2 Mirror Error Codes

- NPP_MIRROR_FLIP_ERR if flip has an illegal value.

7.77.3 Function Documentation

7.77.3.1 NppStatus nppiMirror_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 16-bit signed in place image mirror not affecting alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.2 NppStatus nppiMirror_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 16-bit signed image mirror not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.3 NppStatus nppiMirror_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 16-bit signed in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.4 NppStatus nppiMirror_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 16-bit signed image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.5 NppStatus nppiMirror_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 16-bit signed in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.6 NppStatus nppiMirror_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 16-bit signed image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.7 NppStatus nppiMirror_16s_C4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 16-bit signed in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.8 NppStatus nppiMirror_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 16-bit signed image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.9 NppStatus nppiMirror_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 16-bit unsigned in place image mirror not affecting alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.10 NppStatus nppiMirror_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 16-bit unsigned image mirror not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.11 NppStatus nppiMirror_16u_C1IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 16-bit unsigned in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.12 NppStatus nppiMirror_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 16-bit unsigned image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.13 NppStatus nppiMirror_16u_C3IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 16-bit unsigned in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.14 NppStatus nppiMirror_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 16-bit unsigned image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.15 NppStatus nppiMirror_16u_C4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 16-bit unsigned in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.16 NppStatus nppiMirror_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 16-bit unsigned image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.17 NppStatus nppiMirror_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 32-bit float in place image mirror not affecting alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.18 NppStatus nppiMirror_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 32-bit float image mirror not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.19 NppStatus nppiMirror_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 32-bit float in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.20 NppStatus nppiMirror_32f_C1R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 32-bit float image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.21 NppStatus nppiMirror_32f_C3IR (Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 32-bit float in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.22 NppStatus nppiMirror_32f_C3R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 32-bit float image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.23 NppStatus nppiMirror_32f_C4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 32-bit float in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.24 NppStatus nppiMirror_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 32-bit float image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.25 NppStatus nppiMirror_32s_AC4IR (Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 32-bit signed in place image mirror not affecting alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.26 NppStatus nppiMirror_32s_AC4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 32-bit image mirror not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.27 NppStatus nppiMirror_32s_C1IR (Npp32s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 32-bit signed in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.28 NppStatus nppiMirror_32s_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 32-bit image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.29 NppStatus nppiMirror_32s_C3IR (Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 32-bit signed in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.30 NppStatus nppiMirror_32s_C3R (const Npp32s * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 32-bit image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.31 NppStatus nppiMirror_32s_C4IR (Npp32s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 32-bit signed in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.32 NppStatus nppiMirror_32s_C4R (const Npp32s ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 32-bit image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.33 NppStatus nppiMirror_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 8-bit unsigned in place image mirror not affecting alpha.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.34 NppStatus nppiMirror_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 8-bit unsigned image mirror not affecting alpha.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.35 NppStatus nppiMirror_8u_C1IR (Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 8-bit unsigned in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.36 NppStatus nppiMirror_8u_C1R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

1 channel 8-bit unsigned image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.37 NppStatus nppiMirror_8u_C3IR (Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 8-bit unsigned in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.38 NppStatus nppiMirror_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

3 channel 8-bit unsigned image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.39 NppStatus nppiMirror_8u_C4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 8-bit unsigned in place image mirror.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.77.3.40 NppStatus nppiMirror_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, NppiAxis *flip*)

4 channel 8-bit unsigned image mirror.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Distance in bytes between starts of consecutive lines of the destination image.

oROI Region-of-Interest (ROI).

flip Specifies the axis about which the image is to be mirrored.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Mirror Error Codes

7.78 Affine Transforms

Utility Functions

- NppStatus nppiGetAffineTransform (NppiRect oSrcROI, const double aQuad[4][2], double aCoeffs[2][3])

  Computes affine transform coefficients based on source ROI and destination quadrilateral.

- NppStatus nppiGetAffineQuad (NppiRect oSrcROI, double aQuad[4][2], const double aCoeffs[2][3])

  Compute shape of transformed image.

- NppStatus nppiGetAffineBound (NppiRect oSrcROI, double aBound[2][2], const double aCoeffs[2][3])

  Compute bounding-box of transformed image.

Affine Transform

Transforms (warps) an image based on an affine transform.

The affine transform is given as a 2 × 3 matrix C. A pixel location (x, y) in the source image is mapped to the location (x', y') in the destination image. The destination image coorodinates are computed as follows:

$$x' = c_{00} * x + c_{01} * y + c_{02} \qquad y' = c_{10} * x + c_{11} * y + c_{12} \qquad C = \begin{bmatrix} c_{00} & c_{01} & c_{02} \\ c_{10} & c_{11} & c_{12} \end{bmatrix}$$

Affine transforms can be understood as a linear transformation (traditional matrix multiplication) and a shift operation. The 2 × 2 matrix

$$L = \begin{bmatrix} c_{00} & c_{01} \\ c_{10} & c_{11} \end{bmatrix}$$

represents the linear transform portion of the affine transformation. The vector

$$v = \begin{pmatrix} c_{02} \\ c_{12} \end{pmatrix}$$

represents the post-transform shift, i.e. after the pixel location is transformed by L it is translated by v.

- NppStatus nppiWarpAffine_8u_C1R (const Npp8u *pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u *pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 8-bit unsigned affine warp.

- NppStatus nppiWarpAffine_8u_C3R (const Npp8u *pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u *pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 8-bit unsigned affine warp.

- NppStatus nppiWarpAffine_8u_C4R (const Npp8u *pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u *pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 8-bit unsigned affine warp.

- NppStatus nppiWarpAffine_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 8-bit unsigned affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffine_8u_P3R (const Npp8u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 8-bit unsigned affine warp.

- NppStatus nppiWarpAffine_8u_P4R (const Npp8u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 8-bit unsigned affine warp.

- NppStatus nppiWarpAffine_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 16-bit unsigned affine warp.

- NppStatus nppiWarpAffine_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 16-bit unsigned affine warp.

- NppStatus nppiWarpAffine_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 16-bit unsigned affine warp.

- NppStatus nppiWarpAffine_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 16-bit unsigned affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffine_16u_P3R (const Npp16u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 16-bit unsigned affine warp.

- NppStatus nppiWarpAffine_16u_P4R (const Npp16u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 16-bit unsigned affine warp.

- NppStatus nppiWarpAffine_32s_C1R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 32-bit signed affine warp.

- NppStatus nppiWarpAffine_32s_C3R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 32-bit signed affine warp.

- NppStatus nppiWarpAffine_32s_C4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 32-bit signed affine warp.

- NppStatus nppiWarpAffine_32s_AC4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 32-bit signed affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffine_32s_P3R (const Npp32s ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 32-bit signed affine warp.

- NppStatus nppiWarpAffine_32s_P4R (const Npp32s ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 32-bit signed affine warp.

- NppStatus nppiWarpAffine_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 32-bit floating-point affine warp.

- NppStatus nppiWarpAffine_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 32-bit floating-point affine warp.

- NppStatus nppiWarpAffine_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 32-bit floating-point affine warp.

- NppStatus nppiWarpAffine_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 32-bit floating-point affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffine_32f_P3R (const Npp32f ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 32-bit floating-point affine warp.

- NppStatus nppiWarpAffine_32f_P4R (const Npp32f ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 32-bit floating-point affine warp.

- NppStatus nppiWarpAffine_64f_C1R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 64-bit floating-point affine warp.

- NppStatus nppiWarpAffine_64f_C3R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 64-bit floating-point affine warp.

- NppStatus nppiWarpAffine_64f_C4R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 64-bit floating-point affine warp.

- NppStatus nppiWarpAffine_64f_AC4R (const Npp64f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 64-bit floating-point affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffine_64f_P3R (const Npp64f ∗aSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗aDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 64-bit floating-point affine warp.

- NppStatus nppiWarpAffine_64f_P4R (const Npp64f ∗aSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp64f ∗aDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 64-bit floating-point affine warp.

Backwards Affine Transform

Transforms (warps) an image based on an affine transform.

The affine transform is given as a 2 × 3 matrix C. A pixel location (x, y) in the source image is mapped to the location (x', y') in the destination image. The destination image coorodinates fullfil the following properties:

$$x = c_{00} * x' + c_{01} * y' + c_{02} \qquad y = c_{10} * x' + c_{11} * y' + c_{12} \qquad C = \begin{bmatrix} c_{00} & c_{01} & c_{02} \\ c_{10} & c_{11} & c_{12} \end{bmatrix}$$

In other words, given matrix C the source image's shape is transfored to the destination image using the inverse matrix C^{-1}:

$$M = C^{-1} = \begin{bmatrix} m_{00} & m_{01} & m_{02} \\ m_{10} & m_{11} & m_{12} \end{bmatrix} x' = m_{00} * x + m_{01} * y + m_{02} \qquad y' = m_{10} * x + m_{11} * y + m_{12}$$

- NppStatus nppiWarpAffineBack_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 8-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 8-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 8-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 8-bit unsigned integer backwards affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffineBack_8u_P3R (const Npp8u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 8-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_8u_P4R (const Npp8u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 8-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 16-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 16-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 16-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 16-bit unsigned integer backwards affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffineBack_16u_P3R (const Npp16u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 16-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_16u_P4R (const Npp16u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 16-bit unsigned integer backwards affine warp.

- NppStatus nppiWarpAffineBack_32s_C1R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 32-bit signed integer backwards affine warp.

- NppStatus nppiWarpAffineBack_32s_C3R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 32-bit signed integer backwards affine warp.

- NppStatus nppiWarpAffineBack_32s_C4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 32-bit signed integer backwards affine warp.

- NppStatus nppiWarpAffineBack_32s_AC4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 32-bit signed integer backwards affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffineBack_32s_P3R (const Npp32s ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 32-bit signed integer backwards affine warp.

- NppStatus nppiWarpAffineBack_32s_P4R (const Npp32s ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 32-bit signed integer backwards affine warp.

- NppStatus nppiWarpAffineBack_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Single-channel 32-bit floating-point backwards affine warp.

- NppStatus nppiWarpAffineBack_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel 32-bit floating-point backwards affine warp.

- NppStatus nppiWarpAffineBack_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 32-bit floating-point backwards affine warp.

- NppStatus nppiWarpAffineBack_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel 32-bit floating-point backwards affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffineBack_32f_P3R (const Npp32f ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Three-channel planar 32-bit floating-point backwards affine warp.

- NppStatus nppiWarpAffineBack_32f_P4R (const Npp32f ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[2][3], int eInterpolation)

  Four-channel planar 32-bit floating-point backwards affine warp.

Quad-Based Affine Transform

Transforms (warps) an image based on an affine transform.

The affine transform is computed such that it maps a quadrilateral in source image space to a quadrilateral in destination image space.

An affine transform is fully determined by the mapping of 3 discrete points. The following primitives compute an affine transformation matrix that maps the first three corners of the source quad are mapped to the first three vertices of the destination image quad. If the fourth vertices do not match the transform, an NPP_AFFINE_QUAD_INCORRECT_WARNING is returned by the primitive.

- NppStatus nppiWarpAffineQuad_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Single-channel 32-bit floating-point quad-based affine warp.

- NppStatus nppiWarpAffineQuad_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel 8-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 8-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 8-bit unsigned integer quad-based affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffineQuad_8u_P3R (const Npp8u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel planar 8-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_8u_P4R (const Npp8u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel planar 8-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Single-channel 16-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel 16-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 16-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 16-bit unsigned integer quad-based affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffineQuad_16u_P3R (const Npp16u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel planar 16-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_16u_P4R (const Npp16u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel planar 16-bit unsigned integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32s_C1R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Single-channel 32-bit signed integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32s_C3R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel 32-bit signed integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32s_C4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 32-bit signed integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32s_AC4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 32-bit signed integer quad-based affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffineQuad_32s_P3R (const Npp32s ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel planar 32-bit signed integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32s_P4R (const Npp32s ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel planar 32-bit signed integer quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Single-channel 32-bit floating-point quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel 32-bit floating-point quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 32-bit floating-point quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 32-bit floating-point quad-based affine warp, ignoring alpha channel.

- NppStatus nppiWarpAffineQuad_32f_P3R (const Npp32f ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel planar 32-bit floating-point quad-based affine warp.

- NppStatus nppiWarpAffineQuad_32f_P4R (const Npp32f ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel planar 32-bit floating-point quad-based affine warp.

7.78.1 Detailed Description

7.78.2 Affine Transform Error Codes

- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1
- NPP_WRONG_INTERSECTION_ROI_ERROR Indicates an error condition if oSrcROI has no intersection with the source image
- NPP_INTERPOLATION_ERROR Indicates an error condition if interpolation has an illegal value
- NPP_COEFF_ERROR Indicates an error condition if coefficient values are invalid
- NPP_WRONG_INTERSECTION_QUAD_WARNING Indicates a warning that no operation is performed if the transformed source ROI has no intersection with the destination ROI

7.78.3 Function Documentation

7.78.3.1 NppStatus nppiGetAffineBound (NppiRect *oSrcROI*, double *aBound*[2][2], const double *aCoeffs*[2][3])

Compute bounding-box of transformed image.

The method effectively computes the bounding box (axis aligned rectangle) of the transformed source ROI (see nppiGetAffineQuad()).

Parameters:

oSrcROI The source ROI.

aBound The resulting bounding box.

aCoeffs The afine transform coefficients.

Returns:

Error codes:

- NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1
- NPP_COEFF_ERROR Indicates an error condition if coefficient values are invalid

7.78.3.2 NppStatus nppiGetAffineQuad (NppiRect *oSrcROI*, double *aQuad*[4][2], const double *aCoeffs*[2][3])

Compute shape of transformed image.

This method computes the quadrilateral in the destination image that the source ROI is transformed into by the affine transformation expressed by the coefficients array (aCoeffs).

Parameters:

oSrcROI The source ROI.

aQuad The resulting destination quadrangle.

aCoeffs The afine transform coefficients.

Returns:

Error codes:

- NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1
- NPP_COEFF_ERROR Indicates an error condition if coefficient values are invalid

7.78.3.3 NppStatus nppiGetAffineTransform (NppiRect *oSrcROI*, const double *aQuad*[4][2], double *aCoeffs*[2][3])

Computes affine transform coefficients based on source ROI and destination quadrilateral.

The function computes the coefficients of an affine transformation that maps the given source ROI (axis aligned rectangle with integer coordinates) to a quadrilateral in the destination image.

An affine transform in 2D is fully determined by the mapping of just three vertices. This function's API allows for passing a complete quadrilateral effectively making the prolem overdetermined. What this means in practice is, that for certain quadrilaterals it is not possible to find an affine transform that would map all four corners of the source ROI to the four vertices of that quadrilateral.

The function circumvents this problem by only looking at the first three vertices of the destination image quadrilateral to determine the affine transformation's coefficients. If the destination quadrilateral is indeed one that cannot be mapped using an affine transformation the functions informs the user of this situation by returning a NPP_AFFINE_QUAD_INCORRECT_WARNING.

Parameters:

oSrcROI The source ROI. This rectangle needs to be at least one pixel wide and high. If either width or hight are less than one an NPP_RECT_ERROR is returned.

aQuad The destination quadrilateral.

aCoeffs The resulting affine transform coefficients.

Returns:

Error codes:

- NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1
- NPP_COEFF_ERROR Indicates an error condition if coefficient values are invalid
- NPP_AFFINE_QUAD_INCORRECT_WARNING Indicates a warning when quad does not conform to the transform properties. Fourth vertex is ignored, internally computed coordinates are used instead

7.78.3.4 NppStatus nppiWarpAffine_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 16-bit unsigned affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.5 NppStatus nppiWarpAffine_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 16-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.6 NppStatus nppiWarpAffine_16u_C3R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 16-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.7 NppStatus nppiWarpAffine_16u_C4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 16-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.8 NppStatus nppiWarpAffine_16u_P3R (const Npp16u ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 16-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.9 NppStatus nppiWarpAffine_16u_P4R (const Npp16u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 16-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.10 NppStatus nppiWarpAffine_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 32-bit floating-point affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.11 NppStatus nppiWarpAffine_32f_C1R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 32-bit floating-point affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.12 NppStatus nppiWarpAffine_32f_C3R (const Npp32f $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 32-bit floating-point affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.13 NppStatus nppiWarpAffine_32f_C4R (const Npp32f $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 32-bit floating-point affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.14 NppStatus nppiWarpAffine_32f_P3R (const Npp32f $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 32-bit floating-point affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.15 NppStatus nppiWarpAffine_32f_P4R (const Npp32f $*$ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 32-bit floating-point affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.16 NppStatus nppiWarpAffine_32s_AC4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 32-bit signed affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.17 NppStatus nppiWarpAffine_32s_C1R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 32-bit signed affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.18 NppStatus nppiWarpAffine_32s_C3R (const Npp32s $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 32-bit signed affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.19 NppStatus nppiWarpAffine_32s_C4R (const Npp32s $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 32-bit signed affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.20 NppStatus nppiWarpAffine_32s_P3R (const Npp32s ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 32-bit signed affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.21 NppStatus nppiWarpAffine_32s_P4R (const Npp32s ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 32-bit signed affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.22 NppStatus nppiWarpAffine_64f_AC4R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 64-bit floating-point affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.23 NppStatus nppiWarpAffine_64f_C1R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 64-bit floating-point affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.24 NppStatus nppiWarpAffine_64f_C3R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 64-bit floating-point affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.25 NppStatus nppiWarpAffine_64f_C4R (const Npp64f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 64-bit floating-point affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.26 NppStatus nppiWarpAffine_64f_P3R (const Npp64f ∗ *aSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *aDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 64-bit floating-point affine warp.

Parameters:

aSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.27 NppStatus nppiWarpAffine_64f_P4R (const Npp64f ∗ *aSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp64f ∗ *aDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 64-bit floating-point affine warp.

Parameters:

aSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.28 NppStatus nppiWarpAffine_8u_AC4R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 8-bit unsigned affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.29 NppStatus nppiWarpAffine_8u_C1R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 8-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.30 NppStatus nppiWarpAffine_8u_C3R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 8-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.31 NppStatus nppiWarpAffine_8u_C4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 8-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.32 NppStatus nppiWarpAffine_8u_P3R (const Npp8u ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 8-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.33 NppStatus nppiWarpAffine_8u_P4R (const Npp8u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 8-bit unsigned affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.34 NppStatus nppiWarpAffineBack_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 16-bit unsigned integer backwards affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.35 NppStatus nppiWarpAffineBack_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 16-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.36 NppStatus nppiWarpAffineBack_16u_C3R (const Npp16u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 16-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.37 NppStatus nppiWarpAffineBack_16u_C4R (const Npp16u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 16-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.38 NppStatus nppiWarpAffineBack_16u_P3R (const Npp16u $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 16-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.39 NppStatus nppiWarpAffineBack_16u_P4R (const Npp16u $*$ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u $*$ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 16-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.40 NppStatus nppiWarpAffineBack_32f_AC4R (const Npp32f * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 32-bit floating-point backwards affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.41 NppStatus nppiWarpAffineBack_32f_C1R (const Npp32f * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 32-bit floating-point backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.42 NppStatus nppiWarpAffineBack_32f_C3R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 32-bit floating-point backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.43 NppStatus nppiWarpAffineBack_32f_C4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 32-bit floating-point backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.44 NppStatus nppiWarpAffineBack_32f_P3R (const Npp32f $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 32-bit floating-point backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.45 NppStatus nppiWarpAffineBack_32f_P4R (const Npp32f $*$ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 32-bit floating-point backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.46 NppStatus nppiWarpAffineBack_32s_AC4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 32-bit signed integer backwards affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.47 NppStatus nppiWarpAffineBack_32s_C1R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 32-bit signed integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.48 NppStatus nppiWarpAffineBack_32s_C3R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 32-bit signed integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.49 NppStatus nppiWarpAffineBack_32s_C4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 32-bit signed integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.50 NppStatus nppiWarpAffineBack_32s_P3R (const Npp32s ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 32-bit signed integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.51 NppStatus nppiWarpAffineBack_32s_P4R (const Npp32s ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 32-bit signed integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.52 NppStatus nppiWarpAffineBack_8u_AC4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 8-bit unsigned integer backwards affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.53 NppStatus nppiWarpAffineBack_8u_C1R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Single-channel 8-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.54 NppStatus nppiWarpAffineBack_8u_C3R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel 8-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.55 NppStatus nppiWarpAffineBack_8u_C4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel 8-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.56 NppStatus nppiWarpAffineBack_8u_P3R (const Npp8u $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Three-channel planar 8-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.57 NppStatus nppiWarpAffineBack_8u_P4R (const Npp8u $*$ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[2][3], int *eInterpolation*)

Four-channel planar 8-bit unsigned integer backwards affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Affine transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.58 NppStatus nppiWarpAffineQuad_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 16-bit unsigned integer quad-based affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.59 NppStatus nppiWarpAffineQuad_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Single-channel 16-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.60 NppStatus nppiWarpAffineQuad_16u_C3R (const Npp16u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel 16-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.61 NppStatus nppiWarpAffineQuad_16u_C4R (const Npp16u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 16-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.62 NppStatus nppiWarpAffineQuad_16u_P3R (const Npp16u ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel planar 16-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.63 NppStatus nppiWarpAffineQuad_16u_P4R (const Npp16u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel planar 16-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.64 NppStatus nppiWarpAffineQuad_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 32-bit floating-point quad-based affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.65 NppStatus nppiWarpAffineQuad_32f_C1R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Single-channel 32-bit floating-point quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.66 NppStatus nppiWarpAffineQuad_32f_C3R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel 32-bit floating-point quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.67 NppStatus nppiWarpAffineQuad_32f_C4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 32-bit floating-point quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.68 NppStatus nppiWarpAffineQuad_32f_P3R (const Npp32f ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel planar 32-bit floating-point quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.69 NppStatus nppiWarpAffineQuad_32f_P4R (const Npp32f ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel planar 32-bit floating-point quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.70 NppStatus nppiWarpAffineQuad_32s_AC4R (const Npp32s * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 32-bit signed integer quad-based affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.71 NppStatus nppiWarpAffineQuad_32s_C1R (const Npp32s * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Single-channel 32-bit signed integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.72 NppStatus nppiWarpAffineQuad_32s_C3R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel 32-bit signed integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.73 NppStatus nppiWarpAffineQuad_32s_C4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 32-bit signed integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.74 NppStatus nppiWarpAffineQuad_32s_P3R (const Npp32s ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel planar 32-bit signed integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.75 NppStatus nppiWarpAffineQuad_32s_P4R (const Npp32s ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel planar 32-bit signed integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.76 NppStatus nppiWarpAffineQuad_8u_AC4R (const Npp8u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 8-bit unsigned integer quad-based affine warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.77 NppStatus nppiWarpAffineQuad_8u_C1R (const Npp8u * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Single-channel 32-bit floating-point quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.78 NppStatus nppiWarpAffineQuad_8u_C3R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel 8-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.79 NppStatus nppiWarpAffineQuad_8u_C4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 8-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.80 NppStatus nppiWarpAffineQuad_8u_P3R (const Npp8u ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel planar 8-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.78.3.81 NppStatus nppiWarpAffineQuad_8u_P4R (const Npp8u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel planar 8-bit unsigned integer quad-based affine warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Affine Transform Error Codes

7.79 Perspective Transform

Utility Functions

- NppStatus nppiGetPerspectiveTransform (NppiRect oSrcROI, const double quad[4][2], double aCoeffs[3][3])

  Calculates perspective transform coefficients given source rectangular ROI and its destination quadrangle projection.

- NppStatus nppiGetPerspectiveQuad (NppiRect oSrcROI, double quad[4][2], const double aCoeffs[3][3])

  Calculates perspective transform projection of given source rectangular ROI.

- NppStatus nppiGetPerspectiveBound (NppiRect oSrcROI, double bound[2][2], const double aCoeffs[3][3])

  Calculates bounding box of the perspective transform projection of the given source rectangular ROI.

Perspective Transform

Transforms (warps) an image based on a perspective transform.

The perspective transform is given as a 3×3 matrix C. A pixel location (x, y) in the source image is mapped to the location (x', y') in the destination image. The destination image coorodinates are computed as follows:

$$x' = \frac{c_{00} * x + c_{01} * y + c_{02}}{c_{20} * x + c_{21} * y + c_{22}} \qquad y' = \frac{c_{10} * x + c_{11} * y + c_{12}}{c_{20} * x + c_{21} * y + c_{22}}$$

$$C = \begin{bmatrix} c_{00} & c_{01} & c_{02} \\ c_{10} & c_{11} & c_{12} \\ c_{20} & c_{21} & c_{22} \end{bmatrix}$$

- NppStatus nppiWarpPerspective_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Single-channel 8-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel 8-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 8-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 8-bit unsigned integer perspective warp, ignoring alpha channel.

- NppStatus nppiWarpPerspective_8u_P3R (const Npp8u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel planar 8-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_8u_P4R (const Npp8u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 8-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Single-channel 16-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel 16-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 16-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 16-bit unsigned integer perspective warp, igoring alpha channel.

- NppStatus nppiWarpPerspective_16u_P3R (const Npp16u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel planar 16-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_16u_P4R (const Npp16u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 16-bit unsigned integer perspective warp.

- NppStatus nppiWarpPerspective_32s_C1R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Single-channel 32-bit signed integer perspective warp.

- NppStatus nppiWarpPerspective_32s_C3R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel 32-bit signed integer perspective warp.

- NppStatus nppiWarpPerspective_32s_C4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 32-bit signed integer perspective warp.

- NppStatus nppiWarpPerspective_32s_AC4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 32-bit signed integer perspective warp, igoring alpha channel.

- NppStatus nppiWarpPerspective_32s_P3R (const Npp32s ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel planar 32-bit signed integer perspective warp.

- NppStatus nppiWarpPerspective_32s_P4R (const Npp32s ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 32-bit signed integer perspective warp.

- NppStatus nppiWarpPerspective_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Single-channel 32-bit floating-point perspective warp.

- NppStatus nppiWarpPerspective_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel 32-bit floating-point perspective warp.

- NppStatus nppiWarpPerspective_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 32-bit floating-point perspective warp.

- NppStatus nppiWarpPerspective_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 32-bit floating-point perspective warp, ignoring alpha channel.

- NppStatus nppiWarpPerspective_32f_P3R (const Npp32f ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel planar 32-bit floating-point perspective warp.

- NppStatus nppiWarpPerspective_32f_P4R (const Npp32f ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 32-bit floating-point perspective warp.

Backwards Perspective Transform

Transforms (warps) an image based on a perspective transform.

The perspective transform is given as a 3×3 matrix C. A pixel location (x, y) in the source image is mapped to the location (x', y') in the destination image. The destination image coorodinates fullfil the following properties:

$$x = \frac{c_{00} * x' + c_{01} * y' + c_{02}}{c_{20} * x' + c_{21} * y' + c_{22}} \qquad y = \frac{c_{10} * x' + c_{11} * y' + c_{12}}{c_{20} * x' + c_{21} * y' + c_{22}}$$

$$C = \begin{bmatrix} c_{00} & c_{01} & c_{02} \\ c_{10} & c_{11} & c_{12} \\ c_{20} & c_{21} & c_{22} \end{bmatrix}$$

In other words, given matrix C the source image's shape is transfored to the destination image using the inverse matrix C^{-1}:

$$M = C^{-1} = \begin{bmatrix} m_{00} & m_{01} & m_{02} \\ m_{10} & m_{11} & m_{12} \\ m_{20} & m_{21} & m_{22} \end{bmatrix} x' = \frac{c_{00} * x + c_{01} * y + c_{02}}{c_{20} * x + c_{21} * y + c_{22}} \qquad y' = \frac{c_{10} * x + c_{11} * y + c_{12}}{c_{20} * x + c_{21} * y + c_{22}}$$

- NppStatus nppiWarpPerspectiveBack_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Single-channel 8-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel 8-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 8-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 8-bit unsigned integer backwards perspective warp, igoring alpha channel.

- NppStatus nppiWarpPerspectiveBack_8u_P3R (const Npp8u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel planar 8-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_8u_P4R (const Npp8u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp8u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 8-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

Single-channel 16-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel 16-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 16-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 16-bit unsigned integer backwards perspective warp, ignoring alpha channel.

- NppStatus nppiWarpPerspectiveBack_16u_P3R (const Npp16u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 16-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_16u_P4R (const Npp16u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp16u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 16-bit unsigned integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32s_C1R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Single-channel 32-bit signed integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32s_C3R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel 32-bit signed integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32s_C4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 32-bit signed integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32s_AC4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 32-bit signed integer backwards perspective warp, ignoring alpha channel.

- NppStatus nppiWarpPerspectiveBack_32s_P3R (const Npp32s ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel planar 32-bit signed integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32s_P4R (const Npp32s ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32s ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 32-bit signed integer backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Single-channel 32-bit floating-point backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel 32-bit floating-point backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 32-bit floating-point backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel 32-bit floating-point backwards perspective warp, ignorning alpha channel.

- NppStatus nppiWarpPerspectiveBack_32f_P3R (const Npp32f ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Three-channel planar 32-bit floating-point backwards perspective warp.

- NppStatus nppiWarpPerspectiveBack_32f_P4R (const Npp32f ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, Npp32f ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aCoeffs[3][3], int eInterpolation)

  Four-channel planar 32-bit floating-point backwards perspective warp.

Quad-Based Perspective Transform

Transforms (warps) an image based on an perspective transform.

The perspective transform is computed such that it maps a quadrilateral in source image space to a quadrilateral in destination image space.

- NppStatus nppiWarpPerspectiveQuad_8u_C1R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Single-channel 8-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_8u_C3R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

Three-channel 8-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_8u_C4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 8-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_8u_AC4R (const Npp8u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 8-bit unsigned integer quad-based perspective warp, ignoring alpha channel.

- NppStatus nppiWarpPerspectiveQuad_8u_P3R (const Npp8u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel planar 8-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_8u_P4R (const Npp8u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp8u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel planar 8-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_16u_C1R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Single-channel 16-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_16u_C3R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel 16-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_16u_C4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 16-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_16u_AC4R (const Npp16u ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 16-bit unsigned integer quad-based perspective warp, ignoring alpha channel.

- NppStatus nppiWarpPerspectiveQuad_16u_P3R (const Npp16u ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel planar 16-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_16u_P4R (const Npp16u ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp16u ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel planar 16-bit unsigned integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32s_C1R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Single-channel 32-bit signed integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32s_C3R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel 32-bit signed integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32s_C4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 32-bit signed integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32s_AC4R (const Npp32s ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 32-bit signed integer quad-based perspective warp, ignoring alpha channel.

- NppStatus nppiWarpPerspectiveQuad_32s_P3R (const Npp32s ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel planar 32-bit signed integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32s_P4R (const Npp32s ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32s ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel planar 32-bit signed integer quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32f_C1R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Single-channel 32-bit floating-point quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32f_C3R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel 32-bit floating-point quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32f_C4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 32-bit floating-point quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32f_AC4R (const Npp32f ∗pSrc, NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst, int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel 32-bit floating-point quad-based perspective warp, ignoring alpha channel.

- NppStatus nppiWarpPerspectiveQuad_32f_P3R (const Npp32f ∗pSrc[3], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst[3], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Three-channel planar 32-bit floating-point quad-based perspective warp.

- NppStatus nppiWarpPerspectiveQuad_32f_P4R (const Npp32f ∗pSrc[4], NppiSize oSrcSize, int nSrcStep, NppiRect oSrcROI, const double aSrcQuad[4][2], Npp32f ∗pDst[4], int nDstStep, NppiRect oDstROI, const double aDstQuad[4][2], int eInterpolation)

  Four-channel planar 32-bit floating-point quad-based perspective warp.

7.79.1 Detailed Description

7.79.2 Perspective Transform Error Codes

- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1
- NPP_WRONG_INTERSECTION_ROI_ERROR Indicates an error condition if oSrcROI has no intersection with the source image
- NPP_INTERPOLATION_ERROR Indicates an error condition if interpolation has an illegal value
- NPP_COEFF_ERROR Indicates an error condition if coefficient values are invalid
- NPP_WRONG_INTERSECTION_QUAD_WARNING Indicates a warning that no operation is performed if the transformed source ROI has no intersection with the destination ROI

7.79.3 Function Documentation

7.79.3.1 NppStatus nppiGetPerspectiveBound (NppiRect *oSrcROI*, double *bound*[2][2], const double *aCoeffs*[3][3])

Calculates bounding box of the perspective transform projection of the given source rectangular ROI.

Parameters:

oSrcROI Source ROI

bound Bounding box of the transformed source ROI

aCoeffs Perspective transform coefficients

Returns:

Error codes:

- NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1
- NPP_COEFF_ERROR Indicates an error condition if coefficient values are invalid

7.79.3.2 NppStatus nppiGetPerspectiveQuad (NppiRect *oSrcROI*, double *quad*[4][2], const double *aCoeffs*[3][3])

Calculates perspective transform projection of given source rectangular ROI.

Parameters:

oSrcROI Source ROI

quad Destination quadrangle

aCoeffs Perspective transform coefficients

Returns:

Error codes:

- NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1
- NPP_COEFF_ERROR Indicates an error condition if coefficient values are invalid

7.79.3.3 NppStatus nppiGetPerspectiveTransform (NppiRect *oSrcROI*, const double *quad*[4][2], double *aCoeffs*[3][3])

Calculates perspective transform coefficients given source rectangular ROI and its destination quadrangle projection.

Parameters:

oSrcROI Source ROI

quad Destination quadrangle

aCoeffs Perspective transform coefficients

Returns:

Error codes:

- NPP_SIZE_ERROR Indicates an error condition if any image dimension has zero or negative value
- NPP_RECT_ERROR Indicates an error condition if width or height of the intersection of the oSrcROI and source image is less than or equal to 1
- NPP_COEFF_ERROR Indicates an error condition if coefficient values are invalid

7.79.3.4 NppStatus nppiWarpPerspective_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 16-bit unsigned integer perspective warp, igoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.5 NppStatus nppiWarpPerspective_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Single-channel 16-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.6 NppStatus nppiWarpPerspective_16u_C3R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel 16-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.7 NppStatus nppiWarpPerspective_16u_C4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 16-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.8 NppStatus nppiWarpPerspective_16u_P3R (const Npp16u ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel planar 16-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.9 NppStatus nppiWarpPerspective_16u_P4R (const Npp16u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 16-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.10 NppStatus nppiWarpPerspective_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 32-bit floating-point perspective warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.11 NppStatus nppiWarpPerspective_32f_C1R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Single-channel 32-bit floating-point perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.12 NppStatus nppiWarpPerspective_32f_C3R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel 32-bit floating-point perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.13 NppStatus nppiWarpPerspective_32f_C4R (const Npp32f $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 32-bit floating-point perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.14 NppStatus nppiWarpPerspective_32f_P3R (const Npp32f $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel planar 32-bit floating-point perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.15 NppStatus nppiWarpPerspective_32f_P4R (const Npp32f ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 32-bit floating-point perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.16 NppStatus nppiWarpPerspective_32s_AC4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 32-bit signed integer perspective warp, igoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.17 NppStatus nppiWarpPerspective_32s_C1R (const Npp32s * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Single-channel 32-bit signed integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.18 NppStatus nppiWarpPerspective_32s_C3R (const Npp32s * *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s * *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel 32-bit signed integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.19 NppStatus nppiWarpPerspective_32s_C4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 32-bit signed integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.20 NppStatus nppiWarpPerspective_32s_P3R (const Npp32s ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel planar 32-bit signed integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.21 NppStatus nppiWarpPerspective_32s_P4R (const Npp32s $*$ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s $*$ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 32-bit signed integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.22 NppStatus nppiWarpPerspective_8u_AC4R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 8-bit unsigned integer perspective warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.23 NppStatus nppiWarpPerspective_8u_C1R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Single-channel 8-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.24 NppStatus nppiWarpPerspective_8u_C3R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel 8-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.25 NppStatus nppiWarpPerspective_8u_C4R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 8-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.26 NppStatus nppiWarpPerspective_8u_P3R (const Npp8u $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel planar 8-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.27 NppStatus nppiWarpPerspective_8u_P4R (const Npp8u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 8-bit unsigned integer perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.28 NppStatus nppiWarpPerspectiveBack_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 16-bit unsigned integer backwards perspective warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.29 NppStatus nppiWarpPerspectiveBack_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Single-channel 16-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.30 NppStatus nppiWarpPerspectiveBack_16u_C3R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel 16-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.31 NppStatus nppiWarpPerspectiveBack_16u_C4R (const Npp16u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 16-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.32 NppStatus nppiWarpPerspectiveBack_16u_P3R (const Npp16u $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 16-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.33 NppStatus nppiWarpPerspectiveBack_16u_P4R (const Npp16u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp16u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 16-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.34 NppStatus nppiWarpPerspectiveBack_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 32-bit floating-point backwards perspective warp, ignorning alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.35 NppStatus nppiWarpPerspectiveBack_32f_C1R (const Npp32f $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Single-channel 32-bit floating-point backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.36 NppStatus nppiWarpPerspectiveBack_32f_C3R (const Npp32f $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel 32-bit floating-point backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.37 NppStatus nppiWarpPerspectiveBack_32f_C4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 32-bit floating-point backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.38 NppStatus nppiWarpPerspectiveBack_32f_P3R (const Npp32f ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel planar 32-bit floating-point backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.39 NppStatus nppiWarpPerspectiveBack_32f_P4R (const Npp32f ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32f ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 32-bit floating-point backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.40 NppStatus nppiWarpPerspectiveBack_32s_AC4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 32-bit signed integer backwards perspective warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.41 NppStatus nppiWarpPerspectiveBack_32s_C1R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Single-channel 32-bit signed integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.42 NppStatus nppiWarpPerspectiveBack_32s_C3R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel 32-bit signed integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.43 NppStatus nppiWarpPerspectiveBack_32s_C4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 32-bit signed integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.44 NppStatus nppiWarpPerspectiveBack_32s_P3R (const Npp32s ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel planar 32-bit signed integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.45 NppStatus nppiWarpPerspectiveBack_32s_P4R (const Npp32s ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp32s ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 32-bit signed integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.46 NppStatus nppiWarpPerspectiveBack_8u_AC4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 8-bit unsigned integer backwards perspective warp, igoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.47 NppStatus nppiWarpPerspectiveBack_8u_C1R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Single-channel 8-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.48 NppStatus nppiWarpPerspectiveBack_8u_C3R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel 8-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.49 NppStatus nppiWarpPerspectiveBack_8u_C4R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel 8-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.50 NppStatus nppiWarpPerspectiveBack_8u_P3R (const Npp8u $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Three-channel planar 8-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.51 NppStatus nppiWarpPerspectiveBack_8u_P4R (const Npp8u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, Npp8u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aCoeffs*[3][3], int *eInterpolation*)

Four-channel planar 8-bit unsigned integer backwards perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aCoeffs Perspective transform coefficients

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.52 NppStatus nppiWarpPerspectiveQuad_16u_AC4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 16-bit unsigned integer quad-based perspective warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.53 NppStatus nppiWarpPerspectiveQuad_16u_C1R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Single-channel 16-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.54 NppStatus nppiWarpPerspectiveQuad_16u_C3R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel 16-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.55 NppStatus nppiWarpPerspectiveQuad_16u_C4R (const Npp16u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 16-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.56 NppStatus nppiWarpPerspectiveQuad_16u_P3R (const Npp16u ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel planar 16-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.57 NppStatus nppiWarpPerspectiveQuad_16u_P4R (const Npp16u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp16u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel planar 16-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.58 NppStatus nppiWarpPerspectiveQuad_32f_AC4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 32-bit floating-point quad-based perspective warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.59 NppStatus nppiWarpPerspectiveQuad_32f_C1R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Single-channel 32-bit floating-point quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.60 NppStatus nppiWarpPerspectiveQuad_32f_C3R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel 32-bit floating-point quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.61 NppStatus nppiWarpPerspectiveQuad_32f_C4R (const Npp32f ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 32-bit floating-point quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.62 NppStatus nppiWarpPerspectiveQuad_32f_P3R (const Npp32f ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel planar 32-bit floating-point quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.63 NppStatus nppiWarpPerspectiveQuad_32f_P4R (const Npp32f ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32f ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel planar 32-bit floating-point quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.64 NppStatus nppiWarpPerspectiveQuad_32s_AC4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 32-bit signed integer quad-based perspective warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.65 NppStatus nppiWarpPerspectiveQuad_32s_C1R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Single-channel 32-bit signed integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.66 NppStatus nppiWarpPerspectiveQuad_32s_C3R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel 32-bit signed integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.67 NppStatus nppiWarpPerspectiveQuad_32s_C4R (const Npp32s ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 32-bit signed integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.68 NppStatus nppiWarpPerspectiveQuad_32s_P3R (const Npp32s ∗ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel planar 32-bit signed integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.69 NppStatus nppiWarpPerspectiveQuad_32s_P4R (const Npp32s ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp32s ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel planar 32-bit signed integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.70 NppStatus nppiWarpPerspectiveQuad_8u_AC4R (const Npp8u ∗ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u ∗ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 8-bit unsigned integer quad-based perspective warp, ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.71 NppStatus nppiWarpPerspectiveQuad_8u_C1R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Single-channel 8-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.72 NppStatus nppiWarpPerspectiveQuad_8u_C3R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel 8-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_-INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.73 NppStatus nppiWarpPerspectiveQuad_8u_C4R (const Npp8u $*$ *pSrc*, NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u $*$ *pDst*, int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel 8-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.74 NppStatus nppiWarpPerspectiveQuad_8u_P3R (const Npp8u $*$ *pSrc*[3], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u $*$ *pDst*[3], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Three-channel planar 8-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.79.3.75 NppStatus nppiWarpPerspectiveQuad_8u_P4R (const Npp8u ∗ *pSrc*[4], NppiSize *oSrcSize*, int *nSrcStep*, NppiRect *oSrcROI*, const double *aSrcQuad*[4][2], Npp8u ∗ *pDst*[4], int *nDstStep*, NppiRect *oDstROI*, const double *aDstQuad*[4][2], int *eInterpolation*)

Four-channel planar 8-bit unsigned integer quad-based perspective warp.

Parameters:

pSrc Source-Image Pointer.

oSrcSize Size of source image in pixels

nSrcStep Source-Image Line Step.

oSrcROI Source ROI

aSrcQuad Source quad.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oDstROI Destination ROI

aDstQuad Destination quad.

eInterpolation Interpolation mode: can be NPPI_INTER_NN, NPPI_INTER_LINEAR or NPPI_INTER_CUBIC

Returns:

Image Data Related Error Codes, ROI Related Error Codes, Perspective Transform Error Codes

7.80 Linear Transforms

Linear image transformations.

Modules

- Fourier Transforms

7.80.1 Detailed Description

Linear image transformations.

7.81 Fourier Transforms

Functions

- NppStatus nppiMagnitude_32fc32f_C1R (const Npp32fc ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit floating point complex to 32-bit floating point magnitude.

- NppStatus nppiMagnitudeSqr_32fc32f_C1R (const Npp32fc ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  32-bit floating point complex to 32-bit floating point squared magnitude.

7.81.1 Function Documentation

7.81.1.1 NppStatus nppiMagnitude_32fc32f_C1R (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit floating point complex to 32-bit floating point magnitude.

Converts complex-number pixel image to single channel image computing the result pixels as the magnitude of the complex values.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.81.1.2 NppStatus nppiMagnitudeSqr_32fc32f_C1R (const Npp32fc ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

32-bit floating point complex to 32-bit floating point squared magnitude.

Converts complex-number pixel image to single channel image computing the result pixels as the squared magnitude of the complex values.

The squared magnitude is an itermediate result of magnitude computation and can thus be computed faster than actual magnitude. If magnitudes are required for sorting/comparing only, using this function instead of nppiMagnitude_32fc32f_C1R can be a worthwhile performance optimization.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.82 Morphological Operations

Morphological image operations.

Modules

- Dilation

  Dilation computes the output pixel as the maximum pixel value of the pixels under the mask.

- Erode

  Erosion computes the output pixel as the minimum pixel value of the pixels under the mask.

- Dilate3x3

  Dilation using a 3x3 mask with the anchor at its center pixel.

- Erode3x3

  Erosion using a 3x3 mask with the anchor at its center pixel.

7.82.1 Detailed Description

Morphological image operations.

Morphological operations are classified as Neighborhood Operations. It is the user's responsibility to avoid Sampling Beyond Image Boundaries.

7.83 Dilation

Dilation computes the output pixel as the maximum pixel value of the pixels under the mask.

Functions

- NppStatus nppiDilate_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Single-channel 8-bit unsigned integer dilation.

- NppStatus nppiDilate_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Three-channel 8-bit unsigned integer dilation.

- NppStatus nppiDilate_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 8-bit unsigned integer dilation.

- NppStatus nppiDilate_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 8-bit unsigned integer dilation, ignoring alpha-channel.

- NppStatus nppiDilate_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Single-channel 16-bit unsigned integer dilation.

- NppStatus nppiDilate_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Three-channel 16-bit unsigned integer dilation.

- NppStatus nppiDilate_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 16-bit unsigned integer dilation.

- NppStatus nppiDilate_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 16-bit unsigned integer dilation, ignoring alpha-channel.

- NppStatus nppiDilate_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Single-channel 32-bit floating-point dilation.

- NppStatus nppiDilate_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Three-channel 32-bit floating-point dilation.

- NppStatus nppiDilate_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 32-bit floating-point dilation.

- NppStatus nppiDilate_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 32-bit floating-point dilation, ignoring alpha-channel.

7.83.1 Detailed Description

Dilation computes the output pixel as the maximum pixel value of the pixels under the mask.

Pixels who's corresponding mask values are zero do not participate in the maximum search.

7.83.2 Function Documentation

7.83.2.1 NppStatus nppiDilate_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 16-bit unsigned integer dilation, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.2 NppStatus nppiDilate_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single-channel 16-bit unsigned integer dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.3 NppStatus nppiDilate_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three-channel 16-bit unsigned integer dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.4 NppStatus nppiDilate_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 16-bit unsigned integer dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.5 NppStatus nppiDilate_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 32-bit floating-point dilation, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.6 NppStatus nppiDilate_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single-channel 32-bit floating-point dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.7 NppStatus nppiDilate_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three-channel 32-bit floating-point dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.8 NppStatus nppiDilate_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 32-bit floating-point dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.9 NppStatus nppiDilate_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 8-bit unsigned integer dilation, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.10 NppStatus nppiDilate_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single-channel 8-bit unsigned integer dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.11 NppStatus nppiDilate_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three-channel 8-bit unsigned integer dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.83.2.12 NppStatus nppiDilate_8u_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u $*$ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 8-bit unsigned integer dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84 Erode

Erosion computes the output pixel as the minimum pixel value of the pixels under the mask.

Functions

- NppStatus nppiErode_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Single-channel 8-bit unsigned integer erosion.

- NppStatus nppiErode_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Three-channel 8-bit unsigned integer erosion.

- NppStatus nppiErode_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 8-bit unsigned integer erosion.

- NppStatus nppiErode_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 8-bit unsigned integer erosion, ignoring alpha-channel.

- NppStatus nppiErode_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Single-channel 16-bit unsigned integer erosion.

- NppStatus nppiErode_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Three-channel 16-bit unsigned integer erosion.

- NppStatus nppiErode_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 16-bit unsigned integer erosion.

- NppStatus nppiErode_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 16-bit unsigned integer erosion, ignoring alpha-channel.

- NppStatus nppiErode_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Single-channel 32-bit floating-point erosion.

- NppStatus nppiErode_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Three-channel 32-bit floating-point erosion.

- NppStatus nppiErode_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 32-bit floating-point erosion.

- NppStatus nppiErode_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u ∗pMask, NppiSize oMaskSize, NppiPoint oAnchor)

  Four-channel 32-bit floating-point erosion, ignoring alpha-channel.

7.84.1 Detailed Description

Erosion computes the output pixel as the minimum pixel value of the pixels under the mask.

Pixels who's corresponding mask values are zero do not participate in the maximum search.

7.84.2 Function Documentation

7.84.2.1 NppStatus nppiErode_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 16-bit unsigned integer erosion, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.2 NppStatus nppiErode_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single-channel 16-bit unsigned integer erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.3 NppStatus nppiErode_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three-channel 16-bit unsigned integer erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.4 NppStatus nppiErode_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 16-bit unsigned integer erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.5 NppStatus nppiErode_32f_AC4R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u $*$ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 32-bit floating-point erosion, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.6 NppStatus nppiErode_32f_C1R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u $*$ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single-channel 32-bit floating-point erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.7 NppStatus nppiErode_32f_C3R (const Npp32f $*$ *pSrc*, Npp32s *nSrcStep*, Npp32f $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u $*$ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three-channel 32-bit floating-point erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.8 NppStatus nppiErode_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 32-bit floating-point erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.9 NppStatus nppiErode_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 8-bit unsigned integer erosion, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.10 NppStatus nppiErode_8u_C1R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Single-channel 8-bit unsigned integer erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.11 NppStatus nppiErode_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Three-channel 8-bit unsigned integer erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.84.2.12 NppStatus nppiErode_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u ∗ *pMask*, NppiSize *oMaskSize*, NppiPoint *oAnchor*)

Four-channel 8-bit unsigned integer erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMask Pointer to the start address of the mask array

oMaskSize Width and Height mask array.

oAnchor X and Y offsets of the mask origin frame of reference w.r.t the source pixel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85 Dilate3x3

Dilation using a 3x3 mask with the anchor at its center pixel.

Functions

- NppStatus nppiDilate3x3_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single-channel 8-bit unsigned integer 3x3 dilation.

- NppStatus nppiDilate3x3_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three-channel 8-bit unsigned integer 3x3 dilation.

- NppStatus nppiDilate3x3_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned integer 3x3 dilation.

- NppStatus nppiDilate3x3_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned integer 3x3 dilation, ignoring alpha-channel.

- NppStatus nppiDilate3x3_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single-channel 16-bit unsigned integer 3x3 dilation.

- NppStatus nppiDilate3x3_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three-channel 16-bit unsigned integer 3x3 dilation.

- NppStatus nppiDilate3x3_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned integer 3x3 dilation.

- NppStatus nppiDilate3x3_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned integer 3x3 dilation, ignoring alpha-channel.

- NppStatus nppiDilate3x3_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single-channel 32-bit floating-point 3x3 dilation.

- NppStatus nppiDilate3x3_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three-channel 32-bit floating-point 3x3 dilation.

- NppStatus nppiDilate3x3_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating-point 3x3 dilation.

- NppStatus nppiDilate3x3_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating-point 3x3 dilation, ignoring alpha-channel.

- NppStatus nppiDilate3x3_64f_C1R (const Npp64f ∗pSrc, Npp32s nSrcStep, Npp64f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single-channel 64-bit floating-point 3x3 dilation.

7.85.1 Detailed Description

Dilation using a 3x3 mask with the anchor at its center pixel.

7.85.2 Function Documentation

7.85.2.1 NppStatus nppiDilate3x3_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned integer 3x3 dilation, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.2 NppStatus nppiDilate3x3_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single-channel 16-bit unsigned integer 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.3 NppStatus nppiDilate3x3_16u_C3R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit unsigned integer 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.4 NppStatus nppiDilate3x3_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned integer 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.5 NppStatus nppiDilate3x3_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating-point 3x3 dilation, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.6 NppStatus nppiDilate3x3_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single-channel 32-bit floating-point 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.7 NppStatus nppiDilate3x3_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit floating-point 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.8 NppStatus nppiDilate3x3_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating-point 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.9 NppStatus nppiDilate3x3_64f_C1R (const Npp64f * *pSrc*, Npp32s *nSrcStep*, Npp64f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single-channel 64-bit floating-point 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.10 NppStatus nppiDilate3x3_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned integer 3x3 dilation, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.11 NppStatus nppiDilate3x3_8u_C1R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single-channel 8-bit unsigned integer 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.12 NppStatus nppiDilate3x3_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three-channel 8-bit unsigned integer 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.85.2.13 NppStatus nppiDilate3x3_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned integer 3x3 dilation.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86 Erode3x3

Erosion using a 3x3 mask with the anchor at its center pixel.

Functions

- NppStatus nppiErode3x3_8u_C1R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single-channel 8-bit unsigned integer 3x3 erosion.

- NppStatus nppiErode3x3_8u_C3R (const Npp8u ∗pSrc, Npp32s nSrcStep, Npp8u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three-channel 8-bit unsigned integer 3x3 erosion.

- NppStatus nppiErode3x3_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned integer 3x3 erosion.

- NppStatus nppiErode3x3_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned integer 3x3 erosion, ignoring alpha-channel.

- NppStatus nppiErode3x3_16u_C1R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single-channel 16-bit unsigned integer 3x3 erosion.

- NppStatus nppiErode3x3_16u_C3R (const Npp16u ∗pSrc, Npp32s nSrcStep, Npp16u ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three-channel 16-bit unsigned integer 3x3 erosion.

- NppStatus nppiErode3x3_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned integer 3x3 erosion.

- NppStatus nppiErode3x3_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned integer 3x3 erosion, ignoring alpha-channel.

- NppStatus nppiErode3x3_32f_C1R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single-channel 32-bit floating-point 3x3 erosion.

- NppStatus nppiErode3x3_32f_C3R (const Npp32f ∗pSrc, Npp32s nSrcStep, Npp32f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Three-channel 32-bit floating-point 3x3 erosion.

- NppStatus nppiErode3x3_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating-point 3x3 erosion.

- NppStatus nppiErode3x3_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating-point 3x3 erosion, ignoring alpha-channel.

- NppStatus nppiErode3x3_64f_C1R (const Npp64f ∗pSrc, Npp32s nSrcStep, Npp64f ∗pDst, Npp32s nDstStep, NppiSize oSizeROI)

  Single-channel 64-bit floating-point 3x3 erosion.

7.86.1 Detailed Description

Erosion using a 3x3 mask with the anchor at its center pixel.

7.86.2 Function Documentation

7.86.2.1 NppStatus nppiErode3x3_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned integer 3x3 erosion, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.2 NppStatus nppiErode3x3_16u_C1R (const Npp16u ∗ *pSrc*, Npp32s *nSrcStep*, Npp16u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single-channel 16-bit unsigned integer 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.3 NppStatus nppiErode3x3_16u_C3R (const Npp16u $*$ *pSrc*, Npp32s *nSrcStep*, Npp16u $*$ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit unsigned integer 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.4 NppStatus nppiErode3x3_16u_C4R (const Npp16u $*$ *pSrc*, int *nSrcStep*, Npp16u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned integer 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.5 NppStatus nppiErode3x3_32f_AC4R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating-point 3x3 erosion, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.6 NppStatus nppiErode3x3_32f_C1R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single-channel 32-bit floating-point 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.7 NppStatus nppiErode3x3_32f_C3R (const Npp32f ∗ *pSrc*, Npp32s *nSrcStep*, Npp32f ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit floating-point 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.8 NppStatus nppiErode3x3_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating-point 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.9 NppStatus nppiErode3x3_64f_C1R (const Npp64f * *pSrc*, Npp32s *nSrcStep*, Npp64f * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single-channel 64-bit floating-point 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.10 NppStatus nppiErode3x3_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned integer 3x3 erosion, ignoring alpha-channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.11 NppStatus nppiErode3x3_8u_C1R (const Npp8u * *pSrc*, Npp32s *nSrcStep*, Npp8u * *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Single-channel 8-bit unsigned integer 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.12 NppStatus nppiErode3x3_8u_C3R (const Npp8u ∗ *pSrc*, Npp32s *nSrcStep*, Npp8u ∗ *pDst*, Npp32s *nDstStep*, NppiSize *oSizeROI*)

Three-channel 8-bit unsigned integer 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.86.2.13 NppStatus nppiErode3x3_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned integer 3x3 erosion.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.87 Statistical Operations

Primitives for computing the statistical properties of an image.

Modules

- Sum

  Primitives for computing the sum of all the pixel values in an image.

- Min

  Primitives for computing the minimal pixel value of an image.

- MinIndx

  Primitives for computing the minimal value and its indices (X and Y coordinates) of an image.

- Max

  Primitives for computing the maximal pixel value of an image.

- MaxIndx

  Primitives for computing the maximal value and its indices (X and Y coordinates) of an image.

- MinMax

  Primitives for computing both the minimal and the maximal values of an image.

- MinMaxIndx

  Primitives for computing the minimal and the maximal values with their indices (X and Y coordinates) of an image.

- Mean

  Primitives for computing the arithmetic mean of all the pixel values in an image.

- Mean_StdDev

  Primitives for computing both the arithmetic mean and the standard deviation of an image.

- Image Norms

  Primitives for computing the norms of an image, the norms of difference, and the relative errors of two images.

- DotProd

  Primitives for computing the dot product of two images.

- CountInRange.

  Primitives for computing the amount of pixels that fall into the specified intensity range.

- MaxEvery

  Primitives for computing the maximal value of the pixel pair from two images.

- MinEvery

  Primitives for computing the minimal value of the pixel pair from two images.

- Integral

  Primitives for computing the integral image of a given image.

- SqrIntegral

  Primitives for computing both the integral and the squared integral images of a given image.

- RectStdDev

  Primitives for computing the standard deviation of the integral images.

- HistogramEven

  Primitives for computing the histogram of an image with evenly distributed bins.

- HistogramRange

  Primitives for computing the histogram of an image within specified ranges.

- Image Proximity

  Primitives for computing the proximity measure between a source image and a template image.

- Image Quality Index

  Primitives for computing the image quality index of two images.

7.87.1 Detailed Description

Primitives for computing the statistical properties of an image.

Some statistical primitives also require scratch buffer during the computation. For details, please refer to Scratch Buffer and Host Pointer.

7.88 Sum

Primitives for computing the sum of all the pixel values in an image.

Sum

Given an image $pSrc$ with width W and height H, the sum will be computed as

$$Sum = \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} pSrc(j, i)$$

All the results are stored in a 64-bit double precision format, except for two primitives nppiSum_8u64s_-C1R and nppiSum_8u64s_C4R.

The sum functions require additional scratch buffer for computations.

- NppStatus nppiSum_8u_C1R (const Npp8u *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64f *pSum)

  One-channel 8-bit unsigned image sum.

- NppStatus nppiSum_8u64s_C1R (const Npp8u *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64s *pSum)

  One-channel 8-bit unsigned image sum.

- NppStatus nppiSum_16u_C1R (const Npp16u *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64f *pSum)

  One-channel 16-bit unsigned image sum.

- NppStatus nppiSum_16s_C1R (const Npp16s *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64f *pSum)

  One-channel 16-bit signed image sum.

- NppStatus nppiSum_32f_C1R (const Npp32f *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64f *pSum)

  One-channel 32-bit floating point image sum.

- NppStatus nppiSum_8u_C3R (const Npp8u *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64f aSum[3])

  Three-channel 8-bit unsigned image sum.

- NppStatus nppiSum_16u_C3R (const Npp16u *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64f aSum[3])

  Three-channel 16-bit unsigned image sum.

- NppStatus nppiSum_16s_C3R (const Npp16s *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64f aSum[3])

  Three-channel 16-bit signed image sum.

- NppStatus nppiSum_32f_C3R (const Npp32f *pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u *pDeviceBuffer, Npp64f aSum[3])

  Three-channel 32-bit floating point image sum.

- NppStatus nppiSum_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aSum[3])

  Four-channel 8-bit unsigned image sum ignoring alpha channel.

- NppStatus nppiSum_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aSum[3])

  Four-channel 16-bit unsigned image sum ignoring alpha channel.

- NppStatus nppiSum_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aSum[3])

  Four-channel 16-bit signed image sum ignoring alpha channel.

- NppStatus nppiSum_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aSum[3])

  Four-channel 32-bit floating point image sum ignoring alpha channel.

- NppStatus nppiSum_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aSum[4])

  Four-channel 8-bit unsigned image sum.

- NppStatus nppiSum_8u64s_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64s aSum[4])

  Four-channel 8-bit unsigned image sum.

- NppStatus nppiSum_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aSum[4])

  Four-channel 16-bit unsigned image sum.

- NppStatus nppiSum_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aSum[4])

  Four-channel 16-bit signed image sum.

- NppStatus nppiSum_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aSum[4])

  Four-channel 32-bit floating point image sum.

SumGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the sum primitives.

- NppStatus nppiSumGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiSum_8u_C1R.

- NppStatus nppiSumGetBufferHostSize_8u64s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiSum_8u64s_C1R.

- NppStatus nppiSumGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiSum_16u_C1R.

- NppStatus nppiSumGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_16s_C1R.
- NppStatus nppiSumGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_32f_C1R.
- NppStatus nppiSumGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_8u_C3R.
- NppStatus nppiSumGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_16u_C3R.
- NppStatus nppiSumGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_16s_C3R.
- NppStatus nppiSumGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_32f_C3R.
- NppStatus nppiSumGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_8u_AC4R.
- NppStatus nppiSumGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_16u_AC4R.
- NppStatus nppiSumGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_16s_AC4R.
- NppStatus nppiSumGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_32f_AC4R.
- NppStatus nppiSumGetBufferHostSize_8u64s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_8u64s_C4R.
- NppStatus nppiSumGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_8u_C4R.
- NppStatus nppiSumGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_16u_C4R.
- NppStatus nppiSumGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_16s_C4R.
- NppStatus nppiSumGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiSum_32f_C4R.

7.88.1 Detailed Description

Primitives for computing the sum of all the pixel values in an image.

7.88.2 Function Documentation

7.88.2.1 NppStatus nppiSum_16s_AC4R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u * *pDeviceBuffer*, Npp64f *aSum*[3])

Four-channel 16-bit signed image sum ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_16s_AC4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel (alpha channel is not computed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.2 NppStatus nppiSum_16s_C1R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u * *pDeviceBuffer*, Npp64f * *pSum*)

One-channel 16-bit signed image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_16s_C1R to determine the minium number of bytes required.

pSum Pointer to the computed sum.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.3 NppStatus nppiSum_16s_C3R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u * *pDeviceBuffer*, Npp64f *aSum*[3])

Three-channel 16-bit signed image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_16s_C3R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.4 NppStatus nppiSum_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[4])

Four-channel 16-bit signed image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiSumGetBufferHostSize_16s_C4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.5 NppStatus nppiSum_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[3])

Four-channel 16-bit unsigned image sum ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_16u_AC4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel (alpha channel is not computed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.6 NppStatus nppiSum_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pSum*)

One-channel 16-bit unsigned image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_16u_C1R to determine the minium number of bytes required.

pSum Pointer to the computed sum.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.7 NppStatus nppiSum_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[3])

Three-channel 16-bit unsigned image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_16u_C3R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.8 NppStatus nppiSum_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[4])

Four-channel 16-bit unsigned image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiSumGetBufferHostSize_16u_C4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.9 NppStatus nppiSum_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[3])

Four-channel 32-bit floating point image sum ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiSumGetBufferHostSize_32f_AC4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel (alpha channel is not computed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.10 NppStatus nppiSum_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pSum*)

One-channel 32-bit floating point image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiSumGetBufferHostSize_32f_C1R to determine the minium number of bytes required.

pSum Pointer to the computed sum.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.11 NppStatus nppiSum_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[3])

Three-channel 32-bit floating point image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_32f_C3R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.12 NppStatus nppiSum_32f_C4R (const Npp32f $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp64f *aSum*[4])

Four-channel 32-bit floating point image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiSumGetBufferHostSize_32f_C4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.13 NppStatus nppiSum_8u64s_C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp64s $*$ *pSum*)

One-channel 8-bit unsigned image sum.

The result is 64-bit long long integer.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_8u64s_C1R to determine the minium number of bytes required.

pSum Pointer to the computed sum.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.14 NppStatus nppiSum_8u64s_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp64s *aSum*[4])

Four-channel 8-bit unsigned image sum.

The result is 64-bit long long integer.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiSumGetBufferHostSize_8u64s_C4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.15 NppStatus nppiSum_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[3])

Four-channel 8-bit unsigned image sum ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_8u_AC4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel (alpha channel is not computed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.16 NppStatus nppiSum_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pSum*)

One-channel 8-bit unsigned image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_8u_C1R to determine the minium number of bytes required.

pSum Pointer to the computed sum.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.17 NppStatus nppiSum_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[3])

Three-channel 8-bit unsigned image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSumGetBufferHostSize_8u_C3R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.18 NppStatus nppiSum_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aSum*[4])

Four-channel 8-bit unsigned image sum.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiSumGetBufferHostSize_8u_C4R to determine the minium number of bytes required.

aSum Array that contains computed sum for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.88.2.19 NppStatus nppiSumGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.20 NppStatus nppiSumGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.21 NppStatus nppiSumGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.22 NppStatus nppiSumGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.23 NppStatus nppiSumGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.24 NppStatus nppiSumGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiSum_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.25 NppStatus nppiSumGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiSum_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.26 NppStatus nppiSumGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiSum_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.27 NppStatus nppiSumGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.28 NppStatus nppiSumGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.29 NppStatus nppiSumGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.30 NppStatus nppiSumGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.31 NppStatus nppiSumGetBufferHostSize_8u64s_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiSum_8u64s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.32 NppStatus nppiSumGetBufferHostSize_8u64s_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiSum_8u64s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.33 NppStatus nppiSumGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiSum_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.34 NppStatus nppiSumGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.35 NppStatus nppiSumGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.88.2.36 NppStatus nppiSumGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiSum_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89 Min

Primitives for computing the minimal pixel value of an image.

Min

The scratch buffer is required by the min functions.

- NppStatus nppiMin_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u ∗pMin)

  One-channel 8-bit unsigned image min.

- NppStatus nppiMin_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u ∗pMin)

  One-channel 16-bit unsigned image min.

- NppStatus nppiMin_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s ∗pMin)

  One-channel 16-bit signed image min.

- NppStatus nppiMin_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f ∗pMin)

  One-channel 32-bit floating point image min.

- NppStatus nppiMin_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMin[3])

  Three-channel 8-bit unsigned image min.

- NppStatus nppiMin_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMin[3])

  Three-channel 16-bit unsigned image min.

- NppStatus nppiMin_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMin[3])

  Three-channel 16-bit signed image min.

- NppStatus nppiMin_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMin[3])

  Three-channel 32-bit floating point image min.

- NppStatus nppiMin_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMin[4])

  Four-channel 8-bit unsigned image min.

- NppStatus nppiMin_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMin[4])

  Four-channel 16-bit unsigned image min.

- NppStatus nppiMin_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMin[4])

Four-channel 16-bit signed image min.

- NppStatus nppiMin_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMin[4])

  Four-channel 32-bit floating point image min.

- NppStatus nppiMin_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMin[3])

  Four-channel 8-bit unsigned image min ignoring alpha channel.

- NppStatus nppiMin_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMin[3])

  Four-channel 16-bit unsigned image min ignoring alpha channel.

- NppStatus nppiMin_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMin[3])

  Four-channel 16-bit signed image min ignoring alpha channel.

- NppStatus nppiMin_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMin[3])

  Four-channel 32-bit floating point image min ignoring alpha channel.

MinGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the min primitives.

- NppStatus nppiMinGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_8u_C1R.

- NppStatus nppiMinGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_16u_C1R.

- NppStatus nppiMinGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_16s_C1R.

- NppStatus nppiMinGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_32f_C1R.

- NppStatus nppiMinGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_8u_C3R.

- NppStatus nppiMinGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_16u_C3R.

- NppStatus nppiMinGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_16s_C3R.

- NppStatus nppiMinGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_32f_C3R.

- NppStatus nppiMinGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_8u_C4R.

- NppStatus nppiMinGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_16u_C4R.

- NppStatus nppiMinGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_16s_C4R.

- NppStatus nppiMinGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_32f_C4R.

- NppStatus nppiMinGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_8u_AC4R.

- NppStatus nppiMinGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_16u_AC4R.

- NppStatus nppiMinGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_16s_AC4R.

- NppStatus nppiMinGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMin_32f_AC4R.

7.89.1 Detailed Description

Primitives for computing the minimal pixel value of an image.

7.89.2 Function Documentation

7.89.2.1 NppStatus nppiMin_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMin*[3])

Four-channel 16-bit signed image min ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_16s_AC4R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel (alpha channel is not processed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.2 NppStatus nppiMin_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s ∗ *pMin*)

One-channel 16-bit signed image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_16s_C1R to determine the minium number of bytes required.

pMin Pointer to the computed minimum result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.3 NppStatus nppiMin_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMin*[3])

Three-channel 16-bit signed image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_16s_C3R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.4 NppStatus nppiMin_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMin*[4])

Four-channel 16-bit signed image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_16s_C4R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.5 NppStatus nppiMin_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMin*[3])

Four-channel 16-bit unsigned image min ignoring alpha channel.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_16u_AC4R to determine the minium number of bytes required.
- ***aMin*** Array that contains the computed minimum results for each channel (alpha channel is not processed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.6 NppStatus nppiMin_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u ∗ *pMin*)

One-channel 16-bit unsigned image min.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_16u_C1R to determine the minium number of bytes required.
- ***pMin*** Pointer to the computed minimum result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.7 NppStatus nppiMin_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMin*[3])

Three-channel 16-bit unsigned image min.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_16u_C3R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.8 NppStatus nppiMin_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMin*[4])

Four-channel 16-bit unsigned image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_16u_C4R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.9 NppStatus nppiMin_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMin*[3])

Four-channel 32-bit floating point image min ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_32f_AC4R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel (alpha channel is not processed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.10 NppStatus nppiMin_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f ∗ *pMin*)

One-channel 32-bit floating point image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_32f_C1R to determine the minium number of bytes required.

pMin Pointer to the computed minimum result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.11 NppStatus nppiMin_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMin*[3])

Three-channel 32-bit floating point image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_32f_C3R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.12 NppStatus nppiMin_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMin*[4])

Four-channel 32-bit floating point image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_32f_C4R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.13 NppStatus nppiMin_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMin*[3])

Four-channel 8-bit unsigned image min ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_8u_AC4R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel (alpha channel is not processed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.14 NppStatus nppiMin_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u ∗ *pMin*)

One-channel 8-bit unsigned image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_8u_C1R to determine the minium number of bytes required.

pMin Pointer to the computed minimum result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.15 NppStatus nppiMin_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMin*[3])

Three-channel 8-bit unsigned image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_8u_C3R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.16 NppStatus nppiMin_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMin*[4])

Four-channel 8-bit unsigned image min.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinGetBufferHostSize_8u_C4R to determine the minium number of bytes required.

aMin Array that contains the computed minimum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.89.2.17 NppStatus nppiMinGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMin_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.18 NppStatus nppiMinGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMin_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.19 NppStatus nppiMinGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMin_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.20 NppStatus nppiMinGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMin_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.21 NppStatus nppiMinGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMin_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.22 NppStatus nppiMinGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMin_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.23 NppStatus nppiMinGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMin_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.24 NppStatus nppiMinGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMin_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.25 NppStatus nppiMinGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMin_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.26 NppStatus nppiMinGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMin_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.27 NppStatus nppiMinGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMin_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.28 NppStatus nppiMinGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMin_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.29 NppStatus nppiMinGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMin_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.30 NppStatus nppiMinGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMin_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.31 NppStatus nppiMinGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMin_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.89.2.32 NppStatus nppiMinGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMin_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90 MinIndx

Primitives for computing the minimal value and its indices (X and Y coordinates) of an image.

MinIndx

If there are several minima in the selected ROI, the function returns one on the top leftmost position.

The scratch buffer is required by the functions.

- NppStatus nppiMinIndx_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u ∗pMin, int ∗pIndexX, int ∗pIndexY)

  One-channel 8-bit unsigned image MinIndx.

- NppStatus nppiMinIndx_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u ∗pMin, int ∗pIndexX, int ∗pIndexY)

  One-channel 16-bit unsigned image MinIndx.

- NppStatus nppiMinIndx_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s ∗pMin, int ∗pIndexX, int ∗pIndexY)

  One-channel 16-bit signed image MinIndx.

- NppStatus nppiMinIndx_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f ∗pMin, int ∗pIndexX, int ∗pIndexY)

  One-channel 32-bit floating point image MinIndx.

- NppStatus nppiMinIndx_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMin[3], int aIndexX[3], int aIndexY[3])

  Three-channel 8-bit unsigned image MinIndx.

- NppStatus nppiMinIndx_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMin[3], int aIndexX[3], int aIndexY[3])

  Three-channel 16-bit unsigned image MinIndx.

- NppStatus nppiMinIndx_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMin[3], int aIndexX[3], int aIndexY[3])

  Three-channel 16-bit signed image MinIndx.

- NppStatus nppiMinIndx_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMin[3], int aIndexX[3], int aIndexY[3])

  Three-channel 32-bit floating point image MinIndx.

- NppStatus nppiMinIndx_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMin[4], int aIndexX[4], int aIndexY[4])

  Four-channel 8-bit unsigned image MinIndx.

- NppStatus nppiMinIndx_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMin[4], int aIndexX[4], int aIndexY[4])

  Four-channel 16-bit unsigned image MinIndx.

- NppStatus nppiMinIndx_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMin[4], int aIndexX[4], int aIndexY[4])

  Four-channel 16-bit signed image MinIndx.

- NppStatus nppiMinIndx_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMin[4], int aIndexX[4], int aIndexY[4])

  Four-channel 32-bit floating point image MinIndx.

- NppStatus nppiMinIndx_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMin[3], int aIndexX[3], int aIndexY[3])

  Four-channel 8-bit unsigned image MinIndx ignoring alpha channel.

- NppStatus nppiMinIndx_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMin[3], int aIndexX[3], int aIndexY[3])

  Four-channel 16-bit unsigned image MinIndx ignoring alpha channel.

- NppStatus nppiMinIndx_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMin[3], int aIndexX[3], int aIndexY[3])

  Four-channel 16-bit signed image MinIndx ignoring alpha channel.

- NppStatus nppiMinIndx_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMin[3], int aIndexX[3], int aIndexY[3])

  Four-channel 32-bit floating point image MinIndx ignoring alpha channel.

MinIndxGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the MinIndx primitives.

- NppStatus nppiMinIndxGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_C1R.

- NppStatus nppiMinIndxGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16u_C1R.

- NppStatus nppiMinIndxGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16s_C1R.

- NppStatus nppiMinIndxGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_32f_C1R.

- NppStatus nppiMinIndxGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_C3R.

- NppStatus nppiMinIndxGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16u_C3R.

- NppStatus nppiMinIndxGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16s_C3R.

- NppStatus nppiMinIndxGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_32f_C3R.

- NppStatus nppiMinIndxGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_C4R.

- NppStatus nppiMinIndxGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16u_C4R.

- NppStatus nppiMinIndxGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16s_C4R.

- NppStatus nppiMinIndxGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_32f_C4R.

- NppStatus nppiMinIndxGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_AC4R.

- NppStatus nppiMinIndxGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_AC4R.

- NppStatus nppiMinIndxGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16u_AC4R.

- NppStatus nppiMinIndxGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_32f_AC4R.

7.90.1 Detailed Description

Primitives for computing the minimal value and its indices (X and Y coordinates) of an image.

7.90.2 Function Documentation

7.90.2.1 NppStatus nppiMinIndx_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMin*[3], int *aIndexX*[3], int *aIndexY*[3])

Four-channel 16-bit signed image MinIndx ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_16s_AC4R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.2 NppStatus nppiMinIndx_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s ∗ *pMin*, int ∗ *pIndexX*, int ∗ *pIndexY*)

One-channel 16-bit signed image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_16s_C1R to determine the minium number of bytes required.

pMin Pointer to the computed min result.

pIndexX Pointer to the X coordinate of the image min value.

pIndexY Pointer to the Y coordinate of the image min value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.3 NppStatus nppiMinIndx_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMin*[3], int *aIndexX*[3], int *aIndexY*[3])

Three-channel 16-bit signed image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_16s_C3R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.4 NppStatus nppiMinIndx_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMin*[4], int *aIndexX*[4], int *aIndexY*[4])

Four-channel 16-bit signed image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_16s_C4R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.5 NppStatus nppiMinIndx_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMin*[3], int *aIndexX*[3], int *aIndexY*[3])

Four-channel 16-bit unsigned image MinIndx ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_16u_AC4R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.6 NppStatus nppiMinIndx_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u ∗ *pMin*, int ∗ *pIndexX*, int ∗ *pIndexY*)

One-channel 16-bit unsigned image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_16u_C1R to determine the minium number of bytes required.

pMin Pointer to the computed min result.

pIndexX Pointer to the X coordinate of the image min value.

pIndexY Pointer to the Y coordinate of the image min value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.7 NppStatus nppiMinIndx_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMin*[3], int *aIndexX*[3], int *aIndexY*[3])

Three-channel 16-bit unsigned image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_16u_C3R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.8 NppStatus nppiMinIndx_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMin*[4], int *aIndexX*[4], int *aIndexY*[4])

Four-channel 16-bit unsigned image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_16u_C4R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.9 NppStatus nppiMinIndx_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMin*[3], int *aIndexX*[3], int *aIndexY*[3])

Four-channel 32-bit floating point image MinIndx ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_32f_AC4R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.10 NppStatus nppiMinIndx_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f ∗ *pMin*, int ∗ *pIndexX*, int ∗ *pIndexY*)

One-channel 32-bit floating point image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_32f_C1R to determine the minium number of bytes required.

pMin Pointer to the computed min result.

pIndexX Pointer to the X coordinate of the image min value.

pIndexY Pointer to the Y coordinate of the image min value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.11 NppStatus nppiMinIndx_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMin*[3], int *aIndexX*[3], int *aIndexY*[3])

Three-channel 32-bit floating point image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_32f_C3R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.12 NppStatus nppiMinIndx_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMin*[4], int *aIndexX*[4], int *aIndexY*[4])

Four-channel 32-bit floating point image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_32f_C4R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.13 NppStatus nppiMinIndx_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMin*[3], int *aIndexX*[3], int *aIndexY*[3])

Four-channel 8-bit unsigned image MinIndx ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_8u_AC4R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.14 NppStatus nppiMinIndx_8u_C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp8u $*$ *pMin*, int $*$ *pIndexX*, int $*$ *pIndexY*)

One-channel 8-bit unsigned image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_8u_C1R to determine the minium number of bytes required.

pMin Pointer to the computed min result.

pIndexX Pointer to the X coordinate of the image min value.

pIndexY Ppointer to the Y coordinate of the image min value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.15 NppStatus nppiMinIndx_8u_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp8u *aMin*[3], int *aIndexX*[3], int *aIndexY*[3])

Three-channel 8-bit unsigned image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_8u_C3R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.16 NppStatus nppiMinIndx_8u_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp8u *aMin*[4], int *aIndexX*[4], int *aIndexY*[4])

Four-channel 8-bit unsigned image MinIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMinIndxGetBufferHostSize_8u_C4R to determine the minium number of bytes required.

aMin Array that contains the min values.

aIndexX Array that contains the X coordinates of the image min values.

aIndexY Array that contains the Y coordinates of the image min values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.90.2.17 NppStatus nppiMinIndxGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.18 NppStatus nppiMinIndxGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.19 NppStatus nppiMinIndxGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.20 NppStatus nppiMinIndxGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.21 NppStatus nppiMinIndxGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.22 NppStatus nppiMinIndxGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.23 NppStatus nppiMinIndxGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.24 NppStatus nppiMinIndxGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.25 NppStatus nppiMinIndxGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.26 NppStatus nppiMinIndxGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.27 NppStatus nppiMinIndxGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.28 NppStatus nppiMinIndxGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.29 NppStatus nppiMinIndxGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.30 NppStatus nppiMinIndxGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.31 NppStatus nppiMinIndxGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.90.2.32 NppStatus nppiMinIndxGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMinIndx_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91 Max

Primitives for computing the maximal pixel value of an image.

Max

The scratch buffer is required by the functions.

- NppStatus nppiMax_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u ∗pMax)

  One-channel 8-bit unsigned image Max.

- NppStatus nppiMax_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u ∗pMax)

  One-channel 16-bit unsigned image Max.

- NppStatus nppiMax_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s ∗pMax)

  One-channel 16-bit signed image Max.

- NppStatus nppiMax_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f ∗pMax)

  One-channel 32-bit floating point image Max.

- NppStatus nppiMax_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMax[3])

  Three-channel 8-bit unsigned image Max.

- NppStatus nppiMax_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMax[3])

  Three-channel 16-bit unsigned image Max.

- NppStatus nppiMax_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMax[3])

  Three-channel 16-bit signed image Max.

- NppStatus nppiMax_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMax[3])

  Three-channel 32-bit floating point image Max.

- NppStatus nppiMax_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMax[4])

  Four-channel 8-bit unsigned image Max.

- NppStatus nppiMax_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMax[4])

  Four-channel 16-bit unsigned image Max.

- NppStatus nppiMax_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMax[4])

Four-channel 16-bit signed image Max.

- NppStatus nppiMax_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMax[4])

  Four-channel 32-bit floating point image Max.

- NppStatus nppiMax_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMax[3])

  Four-channel 8-bit unsigned image Max ignoring alpha channel.

- NppStatus nppiMax_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMax[3])

  Four-channel 16-bit unsigned image Max ignoring alpha channel.

- NppStatus nppiMax_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMax[3])

  Four-channel 16-bit signed image Max ignoring alpha channel.

- NppStatus nppiMax_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMax[3])

  Four-channel 32-bit floating point image Max ignoring alpha channel.

MaxGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the Max primitives.

- NppStatus nppiMaxGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_8u_C1R.

- NppStatus nppiMaxGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_16u_C1R.

- NppStatus nppiMaxGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_16s_C1R.

- NppStatus nppiMaxGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_32f_C1R.

- NppStatus nppiMaxGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_8u_C3R.

- NppStatus nppiMaxGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_16u_C3R.

- NppStatus nppiMaxGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_16s_C3R.

- NppStatus nppiMaxGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_32f_C3R.

- NppStatus nppiMaxGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_8u_C4R.
- NppStatus nppiMaxGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_16u_C4R.
- NppStatus nppiMaxGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_16s_C4R.
- NppStatus nppiMaxGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_32f_C4R.
- NppStatus nppiMaxGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_8u_AC4R.
- NppStatus nppiMaxGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_16u_AC4R.
- NppStatus nppiMaxGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_16s_AC4R.
- NppStatus nppiMaxGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMax_32f_AC4R.

7.91.1 Detailed Description

Primitives for computing the maximal pixel value of an image.

7.91.2 Function Documentation

7.91.2.1 NppStatus nppiMax_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMax*[3])

Four-channel 16-bit signed image Max ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_16s_AC4R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel (alpha channel is not processed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.2 NppStatus nppiMax_16s_C1R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u * *pDeviceBuffer*, Npp16s * *pMax*)

One-channel 16-bit signed image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_16s_C1R to determaxe the maxium number of bytes required.

pMax Pointer to the computed maximum result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.3 NppStatus nppiMax_16s_C3R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u * *pDeviceBuffer*, Npp16s *aMax*[3])

Three-channel 16-bit signed image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_16s_C3R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.4 NppStatus nppiMax_16s_C4R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u * *pDeviceBuffer*, Npp16s *aMax*[4])

Four-channel 16-bit signed image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_16s_C4R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.5 NppStatus nppiMax_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMax*[3])

Four-channel 16-bit unsigned image Max ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_16u_AC4R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel (alpha channel is not processed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.6 NppStatus nppiMax_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u ∗ *pMax*)

One-channel 16-bit unsigned image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_16u_C1R to determaxe the maxium number of bytes required.

pMax Pointer to the computed maximum result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.7 NppStatus nppiMax_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMax*[3])

Three-channel 16-bit unsigned image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_16u_C3R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.8 NppStatus nppiMax_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMax*[4])

Four-channel 16-bit unsigned image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_16u_C4R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.9 NppStatus nppiMax_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMax*[3])

Four-channel 32-bit floating point image Max ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_32f_AC4R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel (alpha channel is not processed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.10 NppStatus nppiMax_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f ∗ *pMax*)

One-channel 32-bit floating point image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_32f_C1R to determaxe the maxium number of bytes required.

pMax Pointer to the computed maximum result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.11 NppStatus nppiMax_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMax*[3])

Three-channel 32-bit floating point image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_32f_C3R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.12 NppStatus nppiMax_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMax*[4])

Four-channel 32-bit floating point image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_32f_C4R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.13 NppStatus nppiMax_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMax*[3])

Four-channel 8-bit unsigned image Max ignoring alpha channel.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_8u_AC4R to determaxe the maxium number of bytes required.
- ***aMax*** Array that contains the computed maximum results for each channel (alpha channel is not processed).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.14 NppStatus nppiMax_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u ∗ *pMax*)

One-channel 8-bit unsigned image Max.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_8u_C1R to determaxe the maxium number of bytes required.
- ***pMax*** Pointer to the computed maximum result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.15 NppStatus nppiMax_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMax*[3])

Three-channel 8-bit unsigned image Max.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_8u_C3R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.16 NppStatus nppiMax_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMax*[4])

Four-channel 8-bit unsigned image Max.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxGetBufferHostSize_8u_C4R to determaxe the maxium number of bytes required.

aMax Array that contains the computed maximum results for each channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.91.2.17 NppStatus nppiMaxGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.18 NppStatus nppiMaxGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.19 NppStatus nppiMaxGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.20 NppStatus nppiMaxGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.21 NppStatus nppiMaxGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.22 NppStatus nppiMaxGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.23 NppStatus nppiMaxGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.24 NppStatus nppiMaxGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.25 NppStatus nppiMaxGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.26 NppStatus nppiMaxGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.27 NppStatus nppiMaxGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.28 NppStatus nppiMaxGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.29 NppStatus nppiMaxGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.30 NppStatus nppiMaxGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.31 NppStatus nppiMaxGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.91.2.32 NppStatus nppiMaxGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMax_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92 MaxIndx

Primitives for computing the maximal value and its indices (X and Y coordinates) of an image.

MaxIndx

If there are several maxima in the selected region of interest, the function returns one on the top leftmost position.

The scratch buffer is required by the functions.

- NppStatus nppiMaxIndx_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u ∗pMax, int ∗pIndexX, int ∗pIndexY)

  One-channel 8-bit unsigned image MaxIndx.

- NppStatus nppiMaxIndx_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u ∗pMax, int ∗pIndexX, int ∗pIndexY)

  One-channel 16-bit unsigned image MaxIndx.

- NppStatus nppiMaxIndx_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s ∗pMax, int ∗pIndexX, int ∗pIndexY)

  One-channel 16-bit signed image MaxIndx.

- NppStatus nppiMaxIndx_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f ∗pMax, int ∗pIndexX, int ∗pIndexY)

  One-channel 32-bit floating point image MaxIndx.

- NppStatus nppiMaxIndx_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMax[3], int aIndexX[3], int aIndexY[3])

  Three-channel 8-bit unsigned image MaxIndx.

- NppStatus nppiMaxIndx_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMax[3], int aIndexX[3], int aIndexY[3])

  Three-channel 16-bit unsigned image MaxIndx.

- NppStatus nppiMaxIndx_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMax[3], int aIndexX[3], int aIndexY[3])

  Three-channel 16-bit signed image MaxIndx.

- NppStatus nppiMaxIndx_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMax[3], int aIndexX[3], int aIndexY[3])

  Three-channel 32-bit floating point image MaxIndx.

- NppStatus nppiMaxIndx_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMax[4], int aIndexX[4], int aIndexY[4])

  Four-channel 8-bit unsigned image MaxIndx.

- NppStatus nppiMaxIndx_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMax[4], int aIndexX[4], int aIndexY[4])

  Four-channel 16-bit unsigned image MaxIndx.

- NppStatus nppiMaxIndx_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMax[4], int aIndexX[4], int aIndexY[4])

  Four-channel 16-bit signed image MaxIndx.

- NppStatus nppiMaxIndx_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMax[4], int aIndexX[4], int aIndexY[4])

  Four-channel 32-bit floating point image MaxIndx.

- NppStatus nppiMaxIndx_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp8u aMax[3], int aIndexX[3], int aIndexY[3])

  Four-channel 8-bit unsigned image MaxIndx ignoring alpha channel.

- NppStatus nppiMaxIndx_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16u aMax[3], int aIndexX[3], int aIndexY[3])

  Four-channel 16-bit unsigned image MaxIndx ignoring alpha channel.

- NppStatus nppiMaxIndx_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp16s aMax[3], int aIndexX[3], int aIndexY[3])

  Four-channel 16-bit signed image MaxIndx ignoring alpha channel.

- NppStatus nppiMaxIndx_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp32f aMax[3], int aIndexX[3], int aIndexY[3])

  Four-channel 32-bit floating point image MaxIndx ignoring alpha channel.

MaxIndxGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the MaxIndx primitives.

- NppStatus nppiMaxIndxGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_C1R.

- NppStatus nppiMaxIndxGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16u_C1R.

- NppStatus nppiMaxIndxGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16s_C1R.

- NppStatus nppiMaxIndxGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_32f_C1R.

- NppStatus nppiMaxIndxGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_C3R.

- NppStatus nppiMaxIndxGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16u_C3R.

- NppStatus nppiMaxIndxGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16s_C3R.

- NppStatus nppiMaxIndxGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_32f_C3R.

- NppStatus nppiMaxIndxGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_C4R.

- NppStatus nppiMaxIndxGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16u_C4R.

- NppStatus nppiMaxIndxGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16s_C4R.

- NppStatus nppiMaxIndxGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_32f_C4R.

- NppStatus nppiMaxIndxGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_AC4R.

- NppStatus nppiMaxIndxGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_AC4R.

- NppStatus nppiMaxIndxGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16u_AC4R.

- NppStatus nppiMaxIndxGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_32f_AC4R.

7.92.1 Detailed Description

Primitives for computing the maximal value and its indices (X and Y coordinates) of an image.

7.92.2 Function Documentation

7.92.2.1 NppStatus nppiMaxIndx_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMax*[3], int *aIndexX*[3], int *aIndexY*[3])

Four-channel 16-bit signed image MaxIndx ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_16s_AC4R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.2 NppStatus nppiMaxIndx_16s_C1R (const Npp16s $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp16s $*$ *pMax*, int $*$ *pIndexX*, int $*$ *pIndexY*)

One-channel 16-bit signed image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_16s_C1R to determaxe the maxium number of bytes required.

pMax Pointer to the computed max result.

pIndexX Pointer to the X coordinate of the image max value.

pIndexY Pointer to the Y coordinate of the image max value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.3 NppStatus nppiMaxIndx_16s_C3R (const Npp16s $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp16s *aMax*[3], int *aIndexX*[3], int *aIndexY*[3])

Three-channel 16-bit signed image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_16s_C3R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.4 NppStatus nppiMaxIndx_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16s *aMax*[4], int *aIndexX*[4], int *aIndexY*[4])

Four-channel 16-bit signed image MaxIndx.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_16s_C4R to determaxe the maxium number of bytes required.
- ***aMax*** Array that contains the max values.
- ***aIndexX*** Array that contains the X coordinates of the image max values.
- ***aIndexY*** Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.5 NppStatus nppiMaxIndx_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMax*[3], int *aIndexX*[3], int *aIndexY*[3])

Four-channel 16-bit unsigned image MaxIndx ignoring alpha channel.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_16u_AC4R to determaxe the maxium number of bytes required.
- ***aMax*** Array that contains the max values.
- ***aIndexX*** Array that contains the X coordinates of the image max values.
- ***aIndexY*** Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.6 NppStatus nppiMaxIndx_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u ∗ *pMax*, int ∗ *pIndexX*, int ∗ *pIndexY*)

One-channel 16-bit unsigned image MaxIndx.

Parameters:

- ***pSrc*** Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_16u_C1R to determaxe the maxium number of bytes required.

pMax Pointer to the computed max result.

pIndexX Pointer to the X coordinate of the image max value.

pIndexY Pointer to the Y coordinate of the image max value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.7 NppStatus nppiMaxIndx_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMax*[3], int *aIndexX*[3], int *aIndexY*[3])

Three-channel 16-bit unsigned image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_16u_C3R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.8 NppStatus nppiMaxIndx_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp16u *aMax*[4], int *aIndexX*[4], int *aIndexY*[4])

Four-channel 16-bit unsigned image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_16u_C4R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.9 NppStatus nppiMaxIndx_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMax*[3], int *aIndexX*[3], int *aIndexY*[3])

Four-channel 32-bit floating point image MaxIndx ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_32f_AC4R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.10 NppStatus nppiMaxIndx_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f ∗ *pMax*, int ∗ *pIndexX*, int ∗ *pIndexY*)

One-channel 32-bit floating point image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_32f_C1R to determaxe the maxium number of bytes required.

pMax Pointer to the computed max result.

pIndexX Pointer to the X coordinate of the image max value.

pIndexY Pointer to the Y coordinate of the image max value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.11 NppStatus nppiMaxIndx_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMax*[3], int *aIndexX*[3], int *aIndexY*[3])

Three-channel 32-bit floating point image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_32f_C3R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.12 NppStatus nppiMaxIndx_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp32f *aMax*[4], int *aIndexX*[4], int *aIndexY*[4])

Four-channel 32-bit floating point image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_32f_C4R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.13 NppStatus nppiMaxIndx_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMax*[3], int *aIndexX*[3], int *aIndexY*[3])

Four-channel 8-bit unsigned image MaxIndx ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_8u_AC4R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.14 NppStatus nppiMaxIndx_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u ∗ *pMax*, int ∗ *pIndexX*, int ∗ *pIndexY*)

One-channel 8-bit unsigned image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_8u_C1R to determaxe the maxium number of bytes required.

pMax Pointer to the computed max result.

pIndexX Pointer to the X coordinate of the image max value.

pIndexY Ppointer to the Y coordinate of the image max value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.15 NppStatus nppiMaxIndx_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMax*[3], int *aIndexX*[3], int *aIndexY*[3])

Three-channel 8-bit unsigned image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_8u_C3R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.16 NppStatus nppiMaxIndx_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp8u *aMax*[4], int *aIndexX*[4], int *aIndexY*[4])

Four-channel 8-bit unsigned image MaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMaxIndxGetBufferHostSize_8u_C4R to determaxe the maxium number of bytes required.

aMax Array that contains the max values.

aIndexX Array that contains the X coordinates of the image max values.

aIndexY Array that contains the Y coordinates of the image max values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.92.2.17 NppStatus nppiMaxIndxGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.18 NppStatus nppiMaxIndxGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.19 NppStatus nppiMaxIndxGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.20 NppStatus nppiMaxIndxGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.21 NppStatus nppiMaxIndxGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.22 NppStatus nppiMaxIndxGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.23 NppStatus nppiMaxIndxGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.24 NppStatus nppiMaxIndxGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.25 NppStatus nppiMaxIndxGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.26 NppStatus nppiMaxIndxGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.27 NppStatus nppiMaxIndxGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.28 NppStatus nppiMaxIndxGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.29 NppStatus nppiMaxIndxGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.30 NppStatus nppiMaxIndxGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.31 NppStatus nppiMaxIndxGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.92.2.32 NppStatus nppiMaxIndxGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the dvice scratch buffer size (in bytes) for nppiMaxIndx_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93 MinMax

Primitives for computing both the minimal and the maximal values of an image.

MinMax

The functions require the device scratch buffer.

- NppStatus nppiMinMax_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pMin, Npp8u ∗pMax, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image MinMax.

- NppStatus nppiMinMax_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16u ∗pMin, Npp16u ∗pMax, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image MinMax.

- NppStatus nppiMinMax_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16s ∗pMin, Npp16s ∗pMax, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image MinMax.

- NppStatus nppiMinMax_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32f ∗pMin, Npp32f ∗pMax, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image MinMax.

- NppStatus nppiMinMax_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u aMin[3], Npp8u aMax[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image MinMax.

- NppStatus nppiMinMax_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16u aMin[3], Npp16u aMax[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image MinMax.

- NppStatus nppiMinMax_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16s aMin[3], Npp16s aMax[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image MinMax.

- NppStatus nppiMinMax_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32f aMin[3], Npp32f aMax[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image MinMax.

- NppStatus nppiMinMax_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u aMin[3], Npp8u aMax[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image MinMax ignoring alpha channel.

- NppStatus nppiMinMax_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16u aMin[3], Npp16u aMax[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image MinMax ignoring alpha channel.

- NppStatus nppiMinMax_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16s aMin[3], Npp16s aMax[3], Npp8u ∗pDeviceBuffer)

Four-channel 16-bit signed image MinMax ignoring alpha channel.

- NppStatus nppiMinMax_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32f aMin[3], Npp32f aMax[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image MinMax ignoring alpha channel.

- NppStatus nppiMinMax_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u aMin[4], Npp8u aMax[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image MinMax.

- NppStatus nppiMinMax_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16u aMin[4], Npp16u aMax[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image MinMax.

- NppStatus nppiMinMax_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16s aMin[4], Npp16s aMax[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image MinMax.

- NppStatus nppiMinMax_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32f aMin[4], Npp32f aMax[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image MinMax.

MinMaxGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the MinMax primitives.

- NppStatus nppiMinMaxGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMax_8u_C1R.

- NppStatus nppiMinMaxGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMax_16u_C1R.

- NppStatus nppiMinMaxGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMax_16s_C1R.

- NppStatus nppiMinMaxGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMax_32f_C1R.

- NppStatus nppiMinMaxGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMax_8u_C3R.

- NppStatus nppiMinMaxGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMax_16u_C3R.

- NppStatus nppiMinMaxGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMax_16s_C3R.

- NppStatus nppiMinMaxGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMax_32f_C3R.

- NppStatus nppiMinMaxGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiMinMax_8u_AC4R.
- NppStatus nppiMinMaxGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiMinMax_16u_AC4R.
- NppStatus nppiMinMaxGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiMinMax_16s_AC4R.
- NppStatus nppiMinMaxGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiMinMax_32f_AC4R.
- NppStatus nppiMinMaxGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiMinMax_8u_C4R.
- NppStatus nppiMinMaxGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiMinMax_16u_C4R.
- NppStatus nppiMinMaxGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiMinMax_16s_C4R.
- NppStatus nppiMinMaxGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Buffer size for nppiMinMax_32f_C4R.

7.93.1 Detailed Description

Primitives for computing both the minimal and the maximal values of an image.

7.93.2 Function Documentation

7.93.2.1 NppStatus nppiMinMax_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16s *aMin*[3], Npp16s *aMax*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image MinMax ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_16s_AC4R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.2 NppStatus nppiMinMax_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16s ∗ *pMin*, Npp16s ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMin Pointer to the computed minimal result.

pMax Pointer to the computed maximal result.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_16s_C1R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.3 NppStatus nppiMinMax_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16s *aMin*[3], Npp16s *aMax*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_16s_C3R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.4 NppStatus nppiMinMax_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16s *aMin*[4], Npp16s *aMax*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_16s_C4R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.5 NppStatus nppiMinMax_16u_AC4R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16u *aMin*[3], Npp16u *aMax*[3], Npp8u * *pDeviceBuffer*)

Four-channel 16-bit unsigned image MinMax ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_16u_AC4R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.6 NppStatus nppiMinMax_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16u * *pMin*, Npp16u * *pMax*, Npp8u * *pDeviceBuffer*)

One-channel 16-bit unsigned image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMin Pointer to the computed minimal result.

pMax Pointer to the computed maximal result.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_16u_C1R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.7 NppStatus nppiMinMax_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16u *aMin*[3], Npp16u *aMax*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_16u_C3R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.8 NppStatus nppiMinMax_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16u *aMin*[4], Npp16u *aMax*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_16u_C4R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.9 NppStatus nppiMinMax_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32f *aMin*[3], Npp32f *aMax*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image MinMax ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_32f_AC4R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.10 NppStatus nppiMinMax_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32f * *pMin*, Npp32f * *pMax*, Npp8u * *pDeviceBuffer*)

One-channel 32-bit floating point image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMin Pointer to the computed minimal result.

pMax Pointer to the computed maximal result.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_32f_C1R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.11 NppStatus nppiMinMax_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32f *aMin*[3], Npp32f *aMax*[3], Npp8u * *pDeviceBuffer*)

Three-channel 32-bit floating point image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_32f_C3R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.12 NppStatus nppiMinMax_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32f *aMin*[4], Npp32f *aMax*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_32f_C4R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.13 NppStatus nppiMinMax_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u *aMin*[3], Npp8u *aMax*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image MinMax ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_8u_AC4R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.14 NppStatus nppiMinMax_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pMin*, Npp8u ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMin Pointer to the computed minimal result.

pMax Pointer to the computed maximal result.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_8u_C1R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.15 NppStatus nppiMinMax_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u *aMin*[3], Npp8u *aMax*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_8u_C3R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.16 NppStatus nppiMinMax_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u *aMin*[4], Npp8u *aMax*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image MinMax.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aMin Array that contains the minima.

aMax Array that contains the maxima.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxGetBufferHostSize_8u_C4R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.93.2.17 NppStatus nppiMinMaxGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.18 NppStatus nppiMinMaxGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.19 NppStatus nppiMinMaxGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.20 NppStatus nppiMinMaxGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.21 NppStatus nppiMinMaxGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMinMax_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.22 NppStatus nppiMinMaxGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMinMax_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.23 NppStatus nppiMinMaxGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMinMax_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.24 NppStatus nppiMinMaxGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.25 NppStatus nppiMinMaxGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.26 NppStatus nppiMinMaxGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.27 NppStatus nppiMinMaxGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.28 NppStatus nppiMinMaxGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.29 NppStatus nppiMinMaxGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.30 NppStatus nppiMinMaxGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.31 NppStatus nppiMinMaxGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.93.2.32 NppStatus nppiMinMaxGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMax_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94 MinMaxIndx

Primitives for computing the minimal and the maximal values with their indices (X and Y coordinates) of an image.

MinMaxIndx

If there are several minima and maxima in the selected region of interest, the function returns ones on the top leftmost position.

The scratch buffer is required by the functions.

- NppStatus nppiMinMaxIndx_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pMinValue, Npp8u ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Computes the minimal and the maximal pixel values with their X and Y coordinates of 1-channel 8-bit unsigned char image.

- NppStatus nppiMinMaxIndx_8s_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8s ∗pMinValue, Npp8s ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Computes the minimal and the maximal pixel values with their X and Y coordinates of 1-channel 8-bit signed char image.

- NppStatus nppiMinMaxIndx_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp16u ∗pMinValue, Npp16u ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Computes the minimal and the maximal pixel values with their X and Y coordinates of 1-channel 16-bit unsigned short image.

- NppStatus nppiMinMaxIndx_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32f ∗pMinValue, Npp32f ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Computes the minimal and the maximal pixel values with their X and Y coordinates of 1-channel 32-bit floating point image.

Masked MinMaxIndx

See Masked Operation.

- NppStatus nppiMinMaxIndx_8u_C1MR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pMinValue, Npp8u ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned image MinMaxIndx.

- NppStatus nppiMinMaxIndx_8s_C1MR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8s ∗pMinValue, Npp8s ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed image MinMaxIndx.

- NppStatus nppiMinMaxIndx_16u_C1MR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp16u ∗pMinValue, Npp16u ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned image MinMaxIndx.

- NppStatus nppiMinMaxIndx_32f_C1MR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp32f ∗pMinValue, Npp32f ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point image MinMaxIndx.

Channel MinMaxIndx

See Channel-of-Interest API.

- NppStatus nppiMinMaxIndx_8u_C3CR (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pMinValue, Npp8u ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image MinMaxIndx affecting only single channel.

- NppStatus nppiMinMaxIndx_8s_C3CR (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSizeROI, int nCOI, Npp8s ∗pMinValue, Npp8s ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit signed image MinMaxIndx affecting only single channel.

- NppStatus nppiMinMaxIndx_16u_C3CR (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, int nCOI, Npp16u ∗pMinValue, Npp16u ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image MinMaxIndx affecting only single channel.

- NppStatus nppiMinMaxIndx_32f_C3CR (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, int nCOI, Npp32f ∗pMinValue, Npp32f ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image MinMaxIndx affecting only single channel.

Masked Channel MinMaxIndx

See Masked Operation and Channel-of-Interest API.

- NppStatus nppiMinMaxIndx_8u_C3CMR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pMinValue, Npp8u ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image MinMaxIndx affecting only single channel.

- NppStatus nppiMinMaxIndx_8s_C3CMR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8s ∗pMinValue, Npp8s ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image MinMaxIndx affecting only single channel.

- NppStatus nppiMinMaxIndx_16u_C3CMR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp16u ∗pMinValue, Npp16u ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image MinMaxIndx affecting only single channel.

- NppStatus nppiMinMaxIndx_32f_C3CMR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp32f ∗pMinValue, Npp32f ∗pMaxValue, NppiPoint ∗pMinIndex, NppiPoint ∗pMaxIndex, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image MinMaxIndx affecting only single channel.

MinMaxIndxGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the MinMaxIndx primitives.

- NppStatus nppiMinMaxIndxGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_8u_C1R.

- NppStatus nppiMinMaxIndxGetBufferHostSize_8s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_8s_C1R.

- NppStatus nppiMinMaxIndxGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_16u_C1R.

- NppStatus nppiMinMaxIndxGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_32f_C1R.

- NppStatus nppiMinMaxIndxGetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_8u_C1MR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_8s_C1MR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_16u_C1MR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_32f_C1MR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_8u_C3CR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_8u_C3CR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_8s_C3CR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_8s_C3CR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_16u_C3CR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_16u_C3CR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_32f_C3CR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_32f_C3CR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_8u_C3CMR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_8s_C3CMR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_16u_C3CMR.

- NppStatus nppiMinMaxIndxGetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMinMaxIndx_32f_C3CMR.

7.94.1 Detailed Description

Primitives for computing the minimal and the maximal values with their indices (X and Y coordinates) of an image.

7.94.2 Function Documentation

7.94.2.1 NppStatus nppiMinMaxIndx_16u_C1MR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp16u ∗ *pMinValue*, Npp16u ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 16-bit unsigned image MinMaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_16u_C1MR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes. If the mask is filled with zeros, then all the returned values are zeros, i.e., pMinIndex = {0, 0}, pMaxIndex = {0, 0}, pMinValue = 0, pMaxValue = 0. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.2 NppStatus nppiMinMaxIndx_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp16u ∗ *pMinValue*, Npp16u ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Computes the minimal and the maximal pixel values with their X and Y coordinates of 1-channel 16-bit unsigned short image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_16u_C1R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.3 NppStatus nppiMinMaxIndx_16u_C3CMR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp16u ∗ *pMinValue*, Npp16u ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image MinMaxIndx affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_16u_C3CMR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified. If the mask is filled with zeros, then all the returned values are zeros, i.e., pMinIndex = {0, 0}, pMaxIndex = {0, 0}, pMinValue = 0, pMaxValue = 0. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.4 NppStatus nppiMinMaxIndx_16u_C3CR (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *nCOI*, Npp16u ∗ *pMinValue*, Npp16u ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image MinMaxIndx affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_16u_C3CR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.5 NppStatus nppiMinMaxIndx_32f_C1MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp32f ∗ *pMinValue*, Npp32f ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 32-bit floating point image MinMaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_32f_C1MR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified. If the mask is filled with zeros, then all the returned values are zeros, i.e., pMinIndex = {0, 0}, pMaxIndex = {0, 0}, pMinValue = 0, pMaxValue = 0. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.6 NppStatus nppiMinMaxIndx_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32f ∗ *pMinValue*, Npp32f ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Computes the minimal and the maximal pixel values with their X and Y coordinates of 1-channel 32-bit floating point image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_32f_C1R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.7 NppStatus nppiMinMaxIndx_32f_C3CMR (const Npp32f * *pSrc*, int *nSrcStep*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp32f * *pMinValue*, Npp32f * *pMaxValue*, NppiPoint * *pMinIndex*, NppiPoint * *pMaxIndex*, Npp8u * *pDeviceBuffer*)

Masked three-channel 32-bit floating point image MinMaxIndx affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_32f_C3CMR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_COI_ERROR if an invalid channel of interest is specified. If the mask is filled with zeros, then all the returned values are zeros, i.e., pMinIndex = {0, 0}, pMaxIndex = {0, 0}, pMinValue = 0, pMaxValue = 0. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.8 NppStatus nppiMinMaxIndx_32f_C3CR (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *nCOI*, Npp32f * *pMinValue*, Npp32f * *pMaxValue*, NppiPoint * *pMinIndex*, NppiPoint * *pMaxIndex*, Npp8u * *pDeviceBuffer*)

Three-channel 32-bit floating point image MinMaxIndx affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_32f_C3CR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_COI_ERROR if an invalid channel of interest is specified. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.9 NppStatus nppiMinMaxIndx_8s_C1MR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8s ∗ *pMinValue*, Npp8s ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed image MinMaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_8s_C1MR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes. If the mask is filled with zeros, then all the returned values are zeros, i.e., pMinIndex = {0, 0}, pMaxIndex = {0, 0}, pMinValue = 0, pMaxValue = 0. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.10 NppStatus nppiMinMaxIndx_8s_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8s ∗ *pMinValue*, Npp8s ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Computes the minimal and the maximal pixel values with their X and Y coordinates of 1-channel 8-bit signed char image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_8s_C1R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.11 NppStatus nppiMinMaxIndx_8s_C3CMR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8s ∗ *pMinValue*, Npp8s ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image MinMaxIndx affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_8s_C3CMR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified. If the mask is filled with zeros, then all the returned values are zeros, i.e., pMinIndex = {0, 0}, pMaxIndex = {0, 0}, pMinValue = 0, pMaxValue = 0. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.12 NppStatus nppiMinMaxIndx_8s_C3CR (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8s ∗ *pMinValue*, Npp8s ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit signed image MinMaxIndx affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_8s_C3CR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.13 NppStatus nppiMinMaxIndx_8u_C1MR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pMinValue*, Npp8u ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit unsigned image MinMaxIndx.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_8u_C1MR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes. If the mask is filled with zeros, then all the returned values are zeros, i.e., pMinIndex = {0, 0}, pMaxIndex = {0, 0}, pMinValue = 0, pMaxValue = 0. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.14 NppStatus nppiMinMaxIndx_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pMinValue*, Npp8u ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Computes the minimal and the maximal pixel values with their X and Y coordinates of 1-channel 8-bit unsigned char image.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_8u_C1R to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.15 NppStatus nppiMinMaxIndx_8u_C3CMR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pMinValue*, Npp8u ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image MinMaxIndx affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_8u_C3CMR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified. If the mask is filled with zeros, then all the returned values are zeros, i.e., pMinIndex = {0, 0}, pMaxIndex = {0, 0}, pMinValue = 0, pMaxValue = 0. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.16 NppStatus nppiMinMaxIndx_8u_C3CR (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pMinValue*, Npp8u ∗ *pMaxValue*, NppiPoint ∗ *pMinIndex*, NppiPoint ∗ *pMaxIndex*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image MinMaxIndx affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pMinValue Pointer to the minimum value.

pMaxValue Pointer to the maximum value.

pMinIndex Pointer to the indicies (X and Y coordinates) of the minimum value.

pMaxIndex Pointer to the indicies (X and Y coordinates) of the maximum value.

pDeviceBuffer Buffer to a scratch memory. Use nppiMinMaxIndxGetBufferHostSize_8u_C3CR to determine the minium number of bytes required.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified. If any of pMinValue, pMaxValue, pMinIndex, or pMaxIndex is not needed, zero pointer must be passed correspondingly.

7.94.2.17 NppStatus nppiMinMaxIndxGetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.18 NppStatus nppiMinMaxIndxGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.19 NppStatus nppiMinMaxIndxGetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.20 NppStatus nppiMinMaxIndxGetBufferHostSize_16u_C3CR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_16u_C3CR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.21 NppStatus nppiMinMaxIndxGetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.22 NppStatus nppiMinMaxIndxGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.23 NppStatus nppiMinMaxIndxGetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.24 NppStatus nppiMinMaxIndxGetBufferHostSize_32f_C3CR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_32f_C3CR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.25 NppStatus nppiMinMaxIndxGetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.26 NppStatus nppiMinMaxIndxGetBufferHostSize_8s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_8s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.27 NppStatus nppiMinMaxIndxGetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.28 NppStatus nppiMinMaxIndxGetBufferHostSize_8s_C3CR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_8s_C3CR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.29 NppStatus nppiMinMaxIndxGetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.30 NppStatus nppiMinMaxIndxGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.31 NppStatus nppiMinMaxIndxGetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.94.2.32 NppStatus nppiMinMaxIndxGetBufferHostSize_8u_C3CR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMinMaxIndx_8u_C3CR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95 Mean

Primitives for computing the arithmetic mean of all the pixel values in an image.

Mean

Given an image $pSrc$ with width W and height H, the arithmetic mean will be computed as

$$Mean = \frac{1}{W \cdot H} \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} pSrc(j,i)$$

The mean functions require additional scratch buffer for computations.

- NppStatus nppiMean_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  One-channel 8-bit unsigned image Mean.

- NppStatus nppiMean_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  One-channel 16-bit unsigned image Mean.

- NppStatus nppiMean_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  One-channel 16-bit signed image Mean.

- NppStatus nppiMean_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  One-channel 32-bit floating point image Mean.

- NppStatus nppiMean_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[3])

  Three-channel 8-bit unsigned image Mean.

- NppStatus nppiMean_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[3])

  Three-channel 16-bit unsigned image Mean.

- NppStatus nppiMean_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[3])

  Three-channel 16-bit signed image Mean.

- NppStatus nppiMean_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[3])

  Three-channel 32-bit floating point image Mean.

- NppStatus nppiMean_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[4])

  Four-channel 8-bit unsigned image Mean.

- NppStatus nppiMean_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[4])

  Four-channel 16-bit unsigned image Mean.

- NppStatus nppiMean_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[4])

  Four-channel 16-bit signed image Mean.

- NppStatus nppiMean_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[4])

  Four-channel 32-bit floating point image Mean.

- NppStatus nppiMean_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[3])

  Four-channel 8-bit unsigned image Mean ignoring alpha channel.

- NppStatus nppiMean_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[3])

  Four-channel 16-bit unsigned image Mean ignoring alpha channel.

- NppStatus nppiMean_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[3])

  Four-channel 16-bit signed image Mean ignoring alpha channel.

- NppStatus nppiMean_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f aMean[3])

  Four-channel 32-bit floating point image Mean ignoring alpha channel.

Masked Mean

See Masked Operation.

- NppStatus nppiMean_8u_C1MR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  Masked one-channel 8-bit unsigned image Mean.

- NppStatus nppiMean_8s_C1MR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  Masked one-channel 8-bit signed image Mean.

- NppStatus nppiMean_16u_C1MR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  Masked one-channel 16-bit unsigned image Mean.

- NppStatus nppiMean_32f_C1MR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  Masked one-channel 32-bit floating point image Mean.

Masked Channel Mean

See Channel-of-Interest API and Masked Operation.

- NppStatus nppiMean_8u_C3CMR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  Masked three-channel 8-bit unsigned image Mean affecting only single channel.

- NppStatus nppiMean_8s_C3CMR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  Masked three-channel 8-bit signed image Mean affecting only single channel.

- NppStatus nppiMean_16u_C3CMR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  Masked three-channel 16-bit unsigned image Mean affecting only single channel.

- NppStatus nppiMean_32f_C3CMR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean)

  Masked three-channel 32-bit floating point image Mean affecting only single channel.

MeanGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the Mean primitives.

- NppStatus nppiMeanGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_8u_C1R.

- NppStatus nppiMeanGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16u_C1R.

- NppStatus nppiMeanGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16s_C1R.

- NppStatus nppiMeanGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_32f_C1R.

- NppStatus nppiMeanGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_8u_C3R.

- NppStatus nppiMeanGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16u_C3R.

- NppStatus nppiMeanGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16s_C3R.

- NppStatus nppiMeanGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_32f_C3R.

- NppStatus nppiMeanGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

Buffer size for nppiMean_8u_AC4R.

- NppStatus nppiMeanGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16u_AC4R.

- NppStatus nppiMeanGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16s_AC4R.

- NppStatus nppiMeanGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_32f_AC4R.

- NppStatus nppiMeanGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_8u_C4R.

- NppStatus nppiMeanGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16u_C4R.

- NppStatus nppiMeanGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16s_C4R.

- NppStatus nppiMeanGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_32f_C4R.

- NppStatus nppiMeanGetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_8u_C1MR.

- NppStatus nppiMeanGetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_8s_C1MR.

- NppStatus nppiMeanGetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16u_C1MR.

- NppStatus nppiMeanGetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_32f_C1MR.

- NppStatus nppiMeanGetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_8u_C3CMR.

- NppStatus nppiMeanGetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_8s_C3CMR.

- NppStatus nppiMeanGetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_16u_C3CMR.

- NppStatus nppiMeanGetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_32f_C3CMR.

7.95.1 Detailed Description

Primitives for computing the arithmetic mean of all the pixel values in an image.

7.95.2 Function Documentation

7.95.2.1 NppStatus nppiMean_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[3])

Four-channel 16-bit signed image Mean ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16s_AC4R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.2 NppStatus nppiMean_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

One-channel 16-bit signed image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16s_C1R to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.3 NppStatus nppiMean_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[3])

Three-channel 16-bit signed image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16s_C3R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.4 NppStatus nppiMean_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[4])

Four-channel 16-bit signed image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16s_C4R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.5 NppStatus nppiMean_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[3])

Four-channel 16-bit unsigned image Mean ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16u_AC4R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.6 NppStatus nppiMean_16u_C1MR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

Masked one-channel 16-bit unsigned image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16u_C1MR to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.95.2.7 NppStatus nppiMean_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

One-channel 16-bit unsigned image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16u_C1R to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.8 NppStatus nppiMean_16u_C3CMR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

Masked three-channel 16-bit unsigned image Mean affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16u_C3CMR to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.95.2.9 NppStatus nppiMean_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[3])

Three-channel 16-bit unsigned image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16u_C3R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.10 NppStatus nppiMean_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[4])

Four-channel 16-bit unsigned image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_16u_C4R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.11 NppStatus nppiMean_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[3])

Four-channel 32-bit floating point image Mean ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_32f_AC4R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.95.2.12 NppStatus nppiMean_32f_C1MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

Masked one-channel 32-bit floating point image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_32f_C1MR to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.95.2.13 NppStatus nppiMean_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

One-channel 32-bit floating point image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_32f_C1R to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.95.2.14 NppStatus nppiMean_32f_C3CMR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

Masked three-channel 32-bit floating point image Mean affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_32f_C3CMR to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.95.2.15 NppStatus nppiMean_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[3])

Three-channel 32-bit floating point image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_32f_C3R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.95.2.16 NppStatus nppiMean_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[4])

Four-channel 32-bit floating point image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_32f_C4R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.95.2.17 NppStatus nppiMean_8s_C1MR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

Masked one-channel 8-bit signed image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_8s_C1MR to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.95.2.18 NppStatus nppiMean_8s_C3CMR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

Masked three-channel 8-bit signed image Mean affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_8s_C3CMR to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.95.2.19 NppStatus nppiMean_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[3])

Four-channel 8-bit unsigned image Mean ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_8u_AC4R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.20 NppStatus nppiMean_8u_C1MR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

Masked one-channel 8-bit unsigned image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_8u_C1MR to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.95.2.21 NppStatus nppiMean_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

One-channel 8-bit unsigned image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_8u_C1R to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.22 NppStatus nppiMean_8u_C3CMR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*)

Masked three-channel 8-bit unsigned image Mean affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_8u_C3CMR to determine the minium number of bytes required.

pMean Pointer to the computed mean result.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.95.2.23 NppStatus nppiMean_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[3])

Three-channel 8-bit unsigned image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_8u_C3R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.24 NppStatus nppiMean_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f *aMean*[4])

Four-channel 8-bit unsigned image Mean.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanGetBufferHostSize_8u_C4R to determine the minium number of bytes required.

aMean Array that contains the computed mean results.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.95.2.25 NppStatus nppiMeanGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.26 NppStatus nppiMeanGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.27 NppStatus nppiMeanGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.28 NppStatus nppiMeanGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.29 NppStatus nppiMeanGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.30 NppStatus nppiMeanGetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.31 NppStatus nppiMeanGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.32 NppStatus nppiMeanGetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.33 NppStatus nppiMeanGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.34 NppStatus nppiMeanGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.35 NppStatus nppiMeanGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.36 NppStatus nppiMeanGetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.37 NppStatus nppiMeanGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.38 NppStatus nppiMeanGetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.39 NppStatus nppiMeanGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.40 NppStatus nppiMeanGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.41 NppStatus nppiMeanGetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.42 NppStatus nppiMeanGetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.43 NppStatus nppiMeanGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.44 NppStatus nppiMeanGetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.45 NppStatus nppiMeanGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.46 NppStatus nppiMeanGetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.47 NppStatus nppiMeanGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.95.2.48 NppStatus nppiMeanGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96 Mean_StdDev

Primitives for computing both the arithmetic mean and the standard deviation of an image.

Mean_StdDev

Given an image $pSrc$ with width W and height H, the mean and the standard deviation will be computed as

$$Mean = \frac{1}{W \cdot H} \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} pSrc(j,i)$$

$$StdDev = \sqrt{\frac{1}{W \cdot H} \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} (pSrc(j,i) - Mean)^2}$$

The Mean_StdDev primitives require additional scratch buffer for computations.

- NppStatus nppiMean_StdDev_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  One-channel 8-bit unsigned image Mean_StdDev.

- NppStatus nppiMean_StdDev_8s_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  One-channel 8-bit signed image Mean_StdDev.

- NppStatus nppiMean_StdDev_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  One-channel 16-bit unsigned image Mean_StdDev.

- NppStatus nppiMean_StdDev_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  One-channel 32-bit floating point image Mean_StdDev.

Masked Mean_StdDev

See Masked Operation.

- NppStatus nppiMean_StdDev_8u_C1MR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Masked one-channel 8-bit unsigned image Mean_StdDev.

- NppStatus nppiMean_StdDev_8s_C1MR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Masked one-channel 8-bit signed image Mean_StdDev.

- NppStatus nppiMean_StdDev_16u_C1MR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Masked one-channel 16-bit unsigned image Mean_StdDev.

- NppStatus nppiMean_StdDev_32f_C1MR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Masked one-channel 32-bit floating point image Mean_StdDev.

Channel Mean_StdDev

See Channel-of-Interest API.

- NppStatus nppiMean_StdDev_8u_C3CR (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Three-channel 8-bit unsigned image Mean_StdDev affecting only single channel.

- NppStatus nppiMean_StdDev_8s_C3CR (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Three-channel 8-bit signed image Mean_StdDev affecting only single channel.

- NppStatus nppiMean_StdDev_16u_C3CR (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Three-channel 16-bit unsigned image Mean_StdDev affecting only single channel.

- NppStatus nppiMean_StdDev_32f_C3CR (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Three-channel 32-bit floating point image Mean_StdDev affecting only single channel.

Masked Channel Mean_StdDev

See Masked Operation and Channel-of-Interest API.

- NppStatus nppiMean_StdDev_8u_C3CMR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Masked three-channel 8-bit unsigned image Mean_StdDev.

- NppStatus nppiMean_StdDev_8s_C3CMR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Masked three-channel 8-bit signed image Mean_StdDev.

- NppStatus nppiMean_StdDev_16u_C3CMR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Masked three-channel 16-bit unsigned image Mean_StdDev.

- NppStatus nppiMean_StdDev_32f_C3CMR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp8u ∗pDeviceBuffer, Npp64f ∗pMean, Npp64f ∗pStdDev)

  Masked three-channel 32-bit floating point image Mean_StdDev.

MeanStdDevGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the Mean_StdDev primitives.

- NppStatus nppiMeanStdDevGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_8u_C1R.

- NppStatus nppiMeanStdDevGetBufferHostSize_8s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_8s_C1R.

- NppStatus nppiMeanStdDevGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_16u_C1R.

- NppStatus nppiMeanStdDevGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_32f_C1R.

- NppStatus nppiMeanStdDevGetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_8u_C1MR.

- NppStatus nppiMeanStdDevGetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_8s_C1MR.

- NppStatus nppiMeanStdDevGetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_16u_C1MR.

- NppStatus nppiMeanStdDevGetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_32f_C1MR.

- NppStatus nppiMeanStdDevGetBufferHostSize_8u_C3CR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_8u_C3CR.

- NppStatus nppiMeanStdDevGetBufferHostSize_8s_C3CR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_8s_C3CR.

- NppStatus nppiMeanStdDevGetBufferHostSize_16u_C3CR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_16u_C3CR.

- NppStatus nppiMeanStdDevGetBufferHostSize_32f_C3CR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_32f_C3CR.

- NppStatus nppiMeanStdDevGetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_8u_C3CMR.

- NppStatus nppiMeanStdDevGetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_8s_C3CMR.

- NppStatus nppiMeanStdDevGetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_16u_C3CMR.

- NppStatus nppiMeanStdDevGetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiMean_StdDev_32f_C3CMR.

7.96.1 Detailed Description

Primitives for computing both the arithmetic mean and the standard deviation of an image.

7.96.2 Function Documentation

7.96.2.1 NppStatus nppiMean_StdDev_16u_C1MR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Masked one-channel 16-bit unsigned image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_16u_C1MR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.96.2.2 NppStatus nppiMean_StdDev_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u * *pDeviceBuffer*, Npp64f * *pMean*, Npp64f * *pStdDev*)

One-channel 16-bit unsigned image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_16u_C1R to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.96.2.3 NppStatus nppiMean_StdDev_16u_C3CMR (const Npp16u * *pSrc*, int *nSrcStep*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u * *pDeviceBuffer*, Npp64f * *pMean*, Npp64f * *pStdDev*)

Masked three-channel 16-bit unsigned image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_16u_C3CMR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.96.2.4 NppStatus nppiMean_StdDev_16u_C3CR (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Three-channel 16-bit unsigned image Mean_StdDev affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_16u_C3CR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.96.2.5 NppStatus nppiMean_StdDev_32f_C1MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Masked one-channel 32-bit floating point image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_32f_C1MR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.96.2.6 NppStatus nppiMean_StdDev_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

One-channel 32-bit floating point image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_32f_C1R to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.96.2.7 NppStatus nppiMean_StdDev_32f_C3CMR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Masked three-channel 32-bit floating point image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_32f_C3CMR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.96.2.8 NppStatus nppiMean_StdDev_32f_C3CR (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Three-channel 32-bit floating point image Mean_StdDev affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_32f_C3CR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.96.2.9 NppStatus nppiMean_StdDev_8s_C1MR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Masked one-channel 8-bit signed image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_8s_C1MR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.96.2.10 NppStatus nppiMean_StdDev_8s_C1R (const Npp8s $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp64f $*$ *pMean*, Npp64f $*$ *pStdDev*)

One-channel 8-bit signed image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_8s_C1R to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.96.2.11 NppStatus nppiMean_StdDev_8s_C3CMR (const Npp8s $*$ *pSrc*, int *nSrcStep*, const Npp8u $*$ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u $*$ *pDeviceBuffer*, Npp64f $*$ *pMean*, Npp64f $*$ *pStdDev*)

Masked three-channel 8-bit signed image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_8s_C3CMR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.96.2.12 NppStatus nppiMean_StdDev_8s_C3CR (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Three-channel 8-bit signed image Mean_StdDev affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_8s_C3CR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.96.2.13 NppStatus nppiMean_StdDev_8u_C1MR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Masked one-channel 8-bit unsigned image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_8u_C1MR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.96.2.14 NppStatus nppiMean_StdDev_8u_C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp8u $*$ *pDeviceBuffer*, Npp64f $*$ *pMean*, Npp64f $*$ *pStdDev*)

One-channel 8-bit unsigned image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_8u_C1R to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.96.2.15 NppStatus nppiMean_StdDev_8u_C3CMR (const Npp8u $*$ *pSrc*, int *nSrcStep*, const Npp8u $*$ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u $*$ *pDeviceBuffer*, Npp64f $*$ *pMean*, Npp64f $*$ *pStdDev*)

Masked three-channel 8-bit unsigned image Mean_StdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_8u_C3CMR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.96.2.16 NppStatus nppiMean_StdDev_8u_C3CR (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *nCOI*, Npp8u ∗ *pDeviceBuffer*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*)

Three-channel 8-bit unsigned image Mean_StdDev affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer Use nppiMeanStdDevGetBufferHostSize_8u_C3CR to determine the minium number of bytes required.

pMean Pointer to the computed mean.

pStdDev Pointer to the computed standard deviation.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.96.2.17 NppStatus nppiMeanStdDevGetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_StdDev_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.18 NppStatus nppiMeanStdDevGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_StdDev_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.19 NppStatus nppiMeanStdDevGetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.20 NppStatus nppiMeanStdDevGetBufferHostSize_16u_C3CR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_16u_C3CR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.21 NppStatus nppiMeanStdDevGetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.22 NppStatus nppiMeanStdDevGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.23 NppStatus nppiMeanStdDevGetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.24 NppStatus nppiMeanStdDevGetBufferHostSize_32f_C3CR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_32f_C3CR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.25 NppStatus nppiMeanStdDevGetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.26 NppStatus nppiMeanStdDevGetBufferHostSize_8s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_StdDev_8s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.27 NppStatus nppiMeanStdDevGetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_StdDev_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.28 NppStatus nppiMeanStdDevGetBufferHostSize_8s_C3CR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_StdDev_8s_C3CR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.29 NppStatus nppiMeanStdDevGetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiMean_StdDev_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.30 NppStatus nppiMeanStdDevGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.31 NppStatus nppiMeanStdDevGetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.96.2.32 NppStatus nppiMeanStdDevGetBufferHostSize_8u_C3CR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiMean_StdDev_8u_C3CR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.97 Image Norms

Primitives for computing the norms of an image, the norms of difference, and the relative errors of two images.

Modules

- Norm_Inf

  Primitives for computing the infinity norm of an image.

- Norm_L1

  Primitives for computing the L1 norm of an image.

- Norm_L2

  Primitives for computing the L2 norm of an image.

- NormDiff_Inf

  Primitives for computing the infinity norm of difference of pixels between two images.

- NormDiff_L1

  Primitives for computing the L1 norm of difference of pixels between two images.

- NormDiff_L2

  Primitives for computing the L2 norm of difference of pixels between two images.

- NormRel_Inf

  Primitives for computing the relative error of infinity norm between two images.

- NormRel_L1

  Primitives for computing the relative error of L1 norm between two images.

- NormRel_L2

  Primitives for computing the relative error of L2 norm between two images.

7.97.1 Detailed Description

Primitives for computing the norms of an image, the norms of difference, and the relative errors of two images.

Given an image $pSrc$ with width W and height H,

1. The infinity norm (Norm_Inf) is defined as the largest absolute pixel value of the image.
2. The L1 norm (Norm_L1) is defined as the sum of the absolute pixel value of the image, i.e.,

$$Norm\_L1 = \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} |pSrc(j,i)|$$

.

3. The L2 norm (Norm_L2) is defined as the square root of the sum of the squared absolute pixel value of the image, i.e.,

$$Norm\_L2 = \sqrt{\sum_{j=0}^{H-1}\sum_{i=0}^{W-1} |pSrc(j,i)|^2}$$

.

Given two images $pSrc1$ and $pSrc2$ both with width W and height H,

1. The infinity norm of differece (NormDiff_Inf) is defined as the largest absolute difference between pixels of two images.

2. The L1 norm of differece (NormDiff_L1) is defined as the sum of the absolute difference between pixels of two images, i.e.,

$$NormDiff\_L1 = \sum_{j=0}^{H-1}\sum_{i=0}^{W-1} |pSrc1(j,i) - pSrc2(j,i)|$$

.

3. The L2 norm of differece (NormDiff_L2) is defined as the squared root of the sum of the squared absolute difference between pixels of two images, i.e.,

$$NormDiff\_L2 = \sqrt{\sum_{j=0}^{H-1}\sum_{i=0}^{W-1} |pSrc1(j,i) - pSrc2(j,i)|^2}$$

.

Given two images $pSrc1$ and $pSrc2$ both with width W and height H,

1. The relative error for the infinity norm of differece (NormRel_Inf) is defined as NormDiff_Inf divided by the infinity norm of the second image, i.e.,

$$NormRel\_Inf = \frac{NormDiff\_Inf}{Norm\_Inf_{src2}}$$

2. The relative error for the L1 norm of differece (NormRel_L1) is defined as NormDiff_L1 divided by the L1 norm of the second image, i.e.,

$$NormRel\_L1 = \frac{NormDiff\_L1}{Norm\_L1_{src2}}$$

3. The relative error for the L2 norm of differece (NormRel_L2) is defined as NormDiff_L2 divided by the L2 norm of the second image, i.e.,

$$NormRel\_L2 = \frac{NormDiff\_L2}{Norm\_L2_{src2}}$$

The norm functions require the addition device scratch buffer for the computations.

7.98 Norm_Inf

Primitives for computing the infinity norm of an image.

Basic Norm_Inf

- NppStatus nppiNorm_Inf_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image Norm_Inf.

- NppStatus nppiNorm_Inf_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image Norm_Inf.

- NppStatus nppiNorm_Inf_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image Norm_Inf.

- NppStatus nppiNorm_Inf_32s_C1R (const Npp32s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit signed image Norm_Inf.

- NppStatus nppiNorm_Inf_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image Norm_Inf.

- NppStatus nppiNorm_Inf_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image Norm_Inf.

- NppStatus nppiNorm_Inf_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image Norm_Inf.

- NppStatus nppiNorm_Inf_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image Norm_Inf.

- NppStatus nppiNorm_Inf_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image Norm_Inf.

- NppStatus nppiNorm_Inf_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image Norm_Inf ignoring alpha channel.

- NppStatus nppiNorm_Inf_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image Norm_Inf ignoring alpha channel.

- NppStatus nppiNorm_Inf_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image Norm_Inf ignoring alpha channel.

- NppStatus nppiNorm_Inf_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image Norm_Inf ignoring alpha channel.

- NppStatus nppiNorm_Inf_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image Norm_Inf.

- NppStatus nppiNorm_Inf_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image Norm_Inf.

- NppStatus nppiNorm_Inf_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image Norm_Inf.

- NppStatus nppiNorm_Inf_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image Norm_Inf.

Masked Norm_Inf

See Masked Operation.

- NppStatus nppiNorm_Inf_8u_C1MR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned image Norm_Inf.

- NppStatus nppiNorm_Inf_8s_C1MR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed image Norm_Inf.

- NppStatus nppiNorm_Inf_16u_C1MR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned image Norm_Inf.

- NppStatus nppiNorm_Inf_32f_C1MR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point image Norm_Inf.

Masked Channel Norm_Inf

See Channel-of-Interest API and Masked Operation.

- NppStatus nppiNorm_Inf_8u_C3CMR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image Norm_Inf affecting only single channel.

- NppStatus nppiNorm_Inf_8s_C3CMR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image Norm_Inf affecting only single channel.

- NppStatus nppiNorm_Inf_16u_C3CMR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image Norm_Inf affecting only single channel.

- NppStatus nppiNorm_Inf_32f_C3CMR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image Norm_Inf affecting only single channel.

NormInfGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the Norm_Inf primitives.

- NppStatus nppiNormInfGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_8u_C1R.

- NppStatus nppiNormInfGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16u_C1R.

- NppStatus nppiNormInfGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16s_C1R.

- NppStatus nppiNormInfGetBufferHostSize_32s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_32s_C1R.

- NppStatus nppiNormInfGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_32f_C1R.

- NppStatus nppiNormInfGetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_8u_C1MR.

- NppStatus nppiNormInfGetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_8s_C1MR.

- NppStatus nppiNormInfGetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16u_C1MR.

- NppStatus nppiNormInfGetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_32f_C1MR.

- NppStatus nppiNormInfGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

Buffer size for nppiNorm_Inf_8u_C3R.

- NppStatus nppiNormInfGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16u_C3R.

- NppStatus nppiNormInfGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16s_C3R.

- NppStatus nppiNormInfGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_32f_C3R.

- NppStatus nppiNormInfGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_8u_AC4R.

- NppStatus nppiNormInfGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16u_AC4R.

- NppStatus nppiNormInfGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16s_AC4R.

- NppStatus nppiNormInfGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_32f_AC4R.

- NppStatus nppiNormInfGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_8u_C4R.

- NppStatus nppiNormInfGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16u_C4R.

- NppStatus nppiNormInfGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16s_C4R.

- NppStatus nppiNormInfGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_32f_C4R.

- NppStatus nppiNormInfGetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_8u_C3CMR.

- NppStatus nppiNormInfGetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_8s_C3CMR.

- NppStatus nppiNormInfGetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_16u_C3CMR.

- NppStatus nppiNormInfGetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_Inf_32f_C3CMR.

7.98.1 Detailed Description

Primitives for computing the infinity norm of an image.

7.98.2 Function Documentation

7.98.2.1 NppStatus nppiNorm_Inf_16s_AC4R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u * *pDeviceBuffer*)

Four-channel 16-bit signed image Norm_Inf ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.2 NppStatus nppiNorm_Inf_16s_C1R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

One-channel 16-bit signed image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.3 NppStatus nppiNorm_Inf_16s_C3R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u * *pDeviceBuffer*)

Three-channel 16-bit signed image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.4 NppStatus nppiNorm_Inf_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.5 NppStatus nppiNorm_Inf_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image Norm_Inf ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.6 NppStatus nppiNorm_Inf_16u_C1MR (const Npp16u * *pSrc*, int *nSrcStep*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

Masked one-channel 16-bit unsigned image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.7 NppStatus nppiNorm_Inf_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

One-channel 16-bit unsigned image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.8 NppStatus nppiNorm_Inf_16u_C3CMR (const Npp16u * *pSrc*, int *nSrcStep*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image Norm_Inf affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.98.2.9 NppStatus nppiNorm_Inf_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.10 NppStatus nppiNorm_Inf_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.11 NppStatus nppiNorm_Inf_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image Norm_Inf ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.12 NppStatus nppiNorm_Inf_32f_C1MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 32-bit floating point image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.13 NppStatus nppiNorm_Inf_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.14 NppStatus nppiNorm_Inf_32f_C3CMR (const Npp32f * *pSrc*, int *nSrcStep*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

Masked three-channel 32-bit floating point image Norm_Inf affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.98.2.15 NppStatus nppiNorm_Inf_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u * *pDeviceBuffer*)

Three-channel 32-bit floating point image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.16 NppStatus nppiNorm_Inf_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.17 NppStatus nppiNorm_Inf_32s_C1R (const Npp32s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit signed image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_32s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.18 NppStatus nppiNorm_Inf_8s_C1MR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.19 NppStatus nppiNorm_Inf_8s_C3CMR (const Npp8s * *pSrc*, int *nSrcStep*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

Masked three-channel 8-bit signed image Norm_Inf affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.98.2.20 NppStatus nppiNorm_Inf_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u * *pDeviceBuffer*)

Four-channel 8-bit unsigned image Norm_Inf ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.21 NppStatus nppiNorm_Inf_8u_C1MR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit unsigned image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.22 NppStatus nppiNorm_Inf_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.23 NppStatus nppiNorm_Inf_8u_C3CMR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image Norm_Inf affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.98.2.24 NppStatus nppiNorm_Inf_8u_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u $*$ *pDeviceBuffer*)

Three-channel 8-bit unsigned image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.25 NppStatus nppiNorm_Inf_8u_C4R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u $*$ *pDeviceBuffer*)

Four-channel 8-bit unsigned image Norm_Inf.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormInfGetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.98.2.26 NppStatus nppiNormInfGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.27 NppStatus nppiNormInfGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.28 NppStatus nppiNormInfGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.29 NppStatus nppiNormInfGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.30 NppStatus nppiNormInfGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.31 NppStatus nppiNormInfGetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.32 NppStatus nppiNormInfGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.33 NppStatus nppiNormInfGetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_Inf_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.34 NppStatus nppiNormInfGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_Inf_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.35 NppStatus nppiNormInfGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_Inf_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.36 NppStatus nppiNormInfGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_Inf_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.37 NppStatus nppiNormInfGetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.38 NppStatus nppiNormInfGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.39 NppStatus nppiNormInfGetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.40 NppStatus nppiNormInfGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.41 NppStatus nppiNormInfGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.42 NppStatus nppiNormInfGetBufferHostSize_32s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_32s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.43 NppStatus nppiNormInfGetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.44 NppStatus nppiNormInfGetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_Inf_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.45 NppStatus nppiNormInfGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_Inf_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.46 NppStatus nppiNormInfGetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_Inf_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.47 NppStatus nppiNormInfGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.48 NppStatus nppiNormInfGetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.49 NppStatus nppiNormInfGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.98.2.50 NppStatus nppiNormInfGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_Inf_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99 Norm_L1

Primitives for computing the L1 norm of an image.

Basic Norm_L1

- NppStatus nppiNorm_L1_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image Norm_L1.

- NppStatus nppiNorm_L1_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image Norm_L1.

- NppStatus nppiNorm_L1_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image Norm_L1.

- NppStatus nppiNorm_L1_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image Norm_L1.

- NppStatus nppiNorm_L1_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image Norm_L1.

- NppStatus nppiNorm_L1_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image Norm_L1.

- NppStatus nppiNorm_L1_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image Norm_L1.

- NppStatus nppiNorm_L1_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image Norm_L1.

- NppStatus nppiNorm_L1_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image Norm_L1 ignoring alpha channel.

- NppStatus nppiNorm_L1_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image Norm_L1 ignoring alpha channel.

- NppStatus nppiNorm_L1_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image Norm_L1 ignoring alpha channel.

- NppStatus nppiNorm_L1_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image Norm_L1 ignoring alpha channel.

- NppStatus nppiNorm_L1_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image Norm_L1.

- NppStatus nppiNorm_L1_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image Norm_L1.

- NppStatus nppiNorm_L1_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image Norm_L1.

- NppStatus nppiNorm_L1_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image Norm_L1.

Masked Norm_L1

See Masked Operation.

- NppStatus nppiNorm_L1_8u_C1MR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned image Norm_L1.

- NppStatus nppiNorm_L1_8s_C1MR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed image Norm_L1.

- NppStatus nppiNorm_L1_16u_C1MR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned image Norm_L1.

- NppStatus nppiNorm_L1_32f_C1MR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point image Norm_L1.

Masked Channel Norm_L1

See Channel-of-Interest API and Masked Operation.

- NppStatus nppiNorm_L1_8u_C3CMR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image Norm_L1 affecting only single channel.

- NppStatus nppiNorm_L1_8s_C3CMR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image Norm_L1 affecting only single channel.

- NppStatus nppiNorm_L1_16u_C3CMR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image Norm_L1 affecting only single channel.

- NppStatus nppiNorm_L1_32f_C3CMR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image Norm_L1 affecting only single channel.

NormL1GetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the Norm_L1 primitives.

- NppStatus nppiNormL1GetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_8u_C1R.

- NppStatus nppiNormL1GetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16u_C1R.

- NppStatus nppiNormL1GetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16s_C1R.

- NppStatus nppiNormL1GetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_32f_C1R.

- NppStatus nppiNormL1GetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_8u_C1MR.

- NppStatus nppiNormL1GetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_8s_C1MR.

- NppStatus nppiNormL1GetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16u_C1MR.

- NppStatus nppiNormL1GetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_32f_C1MR.

- NppStatus nppiNormL1GetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_8u_C3R.

- NppStatus nppiNormL1GetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16u_C3R.

- NppStatus nppiNormL1GetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16s_C3R.

- NppStatus nppiNormL1GetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_32f_C3R.

- NppStatus nppiNormL1GetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_8u_AC4R.

- NppStatus nppiNormL1GetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16u_AC4R.

- NppStatus nppiNormL1GetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16s_AC4R.

- NppStatus nppiNormL1GetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_32f_AC4R.

- NppStatus nppiNormL1GetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_8u_C4R.

- NppStatus nppiNormL1GetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16u_C4R.

- NppStatus nppiNormL1GetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16s_C4R.

- NppStatus nppiNormL1GetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_32f_C4R.

- NppStatus nppiNormL1GetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_8u_C3CMR.

- NppStatus nppiNormL1GetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_8s_C3CMR.

- NppStatus nppiNormL1GetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_16u_C3CMR.

- NppStatus nppiNormL1GetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L1_32f_C3CMR.

7.99.1 Detailed Description

Primitives for computing the L1 norm of an image.

7.99.2 Function Documentation

7.99.2.1 NppStatus nppiNorm_L1_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image Norm_L1 ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.2 NppStatus nppiNorm_L1_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.3 NppStatus nppiNorm_L1_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.4 NppStatus nppiNorm_L1_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.5 NppStatus nppiNorm_L1_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image Norm_L1 ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.6 NppStatus nppiNorm_L1_16u_C1MR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 16-bit unsigned image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.7 NppStatus nppiNorm_L1_16u_C1R (const Npp16u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f $*$ *pNorm*, Npp8u $*$ *pDeviceBuffer*)

One-channel 16-bit unsigned image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.8 NppStatus nppiNorm_L1_16u_C3CMR (const Npp16u $*$ *pSrc*, int *nSrcStep*, const Npp8u $*$ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f $*$ *pNorm*, Npp8u $*$ *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image Norm_L1 affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.99.2.9 NppStatus nppiNorm_L1_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.10 NppStatus nppiNorm_L1_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.11 NppStatus nppiNorm_L1_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image Norm_L1 ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.12 NppStatus nppiNorm_L1_32f_C1MR (const Npp32f $*$ *pSrc*, int *nSrcStep*, const Npp8u $*$ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f $*$ *pNorm*, Npp8u $*$ *pDeviceBuffer*)

Masked one-channel 32-bit floating point image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.13 NppStatus nppiNorm_L1_32f_C1R (const Npp32f $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f $*$ *pNorm*, Npp8u $*$ *pDeviceBuffer*)

One-channel 32-bit floating point image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.14 NppStatus nppiNorm_L1_32f_C3CMR (const Npp32f * *pSrc*, int *nSrcStep*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

Masked three-channel 32-bit floating point image Norm_L1 affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if the step of the source image cannot be divided by 4, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.99.2.15 NppStatus nppiNorm_L1_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u * *pDeviceBuffer*)

Three-channel 32-bit floating point image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.16 NppStatus nppiNorm_L1_32f_C4R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u * *pDeviceBuffer*)

Four-channel 32-bit floating point image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.17 NppStatus nppiNorm_L1_8s_C1MR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.18 NppStatus nppiNorm_L1_8s_C3CMR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image Norm_L1 affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.99.2.19 NppStatus nppiNorm_L1_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image Norm_L1 ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.20 NppStatus nppiNorm_L1_8u_C1MR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit unsigned image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.21 NppStatus nppiNorm_L1_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.22 NppStatus nppiNorm_L1_8u_C3CMR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image Norm_L1 affecting only single channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.99.2.23 NppStatus nppiNorm_L1_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.24 NppStatus nppiNorm_L1_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image Norm_L1.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL1GetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.99.2.25 NppStatus nppiNormL1GetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.26 NppStatus nppiNormL1GetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.27 NppStatus nppiNormL1GetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.28 NppStatus nppiNormL1GetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.29 NppStatus nppiNormL1GetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.30 NppStatus nppiNormL1GetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.31 NppStatus nppiNormL1GetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.32 NppStatus nppiNormL1GetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.33 NppStatus nppiNormL1GetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.34 NppStatus nppiNormL1GetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.35 NppStatus nppiNormL1GetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.36 NppStatus nppiNormL1GetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.37 NppStatus nppiNormL1GetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.38 NppStatus nppiNormL1GetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.39 NppStatus nppiNormL1GetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.40 NppStatus nppiNormL1GetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.41 NppStatus nppiNormL1GetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.42 NppStatus nppiNormL1GetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.43 NppStatus nppiNormL1GetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.44 NppStatus nppiNormL1GetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L1_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.45 NppStatus nppiNormL1GetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.46 NppStatus nppiNormL1GetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.47 NppStatus nppiNormL1GetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.99.2.48 NppStatus nppiNormL1GetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L1_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100 Norm_L2

Primitives for computing the L2 norm of an image.

Basic Norm_L2

Computes the L2 norm of an image.

- NppStatus nppiNorm_L2_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image Norm_L2.

- NppStatus nppiNorm_L2_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image Norm_L2.

- NppStatus nppiNorm_L2_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image Norm_L2.

- NppStatus nppiNorm_L2_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image Norm_L2.

- NppStatus nppiNorm_L2_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image Norm_L2 ignoring alpha channel.

- NppStatus nppiNorm_L2_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image Norm_L2 ignoring alpha channel.

- NppStatus nppiNorm_L2_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

Four-channel 16-bit signed image Norm_L2 ignoring alpha channel.

- NppStatus nppiNorm_L2_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image Norm_L2 ignoring alpha channel.

- NppStatus nppiNorm_L2_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image Norm_L2.

- NppStatus nppiNorm_L2_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp64f aNorm[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image Norm_L2.

Masked Norm_L2

See Masked Operation.

- NppStatus nppiNorm_L2_8u_C1MR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_8s_C1MR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed image Norm_L2.

- NppStatus nppiNorm_L2_16u_C1MR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_32f_C1MR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point image Norm_L2.

Masked Channel Norm_L2

See Channel-of-Interest API and Masked Operation.

- NppStatus nppiNorm_L2_8u_C3CMR (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

Masked three-channel 8-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_8s_C3CMR (const Npp8s ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image Norm_L2.

- NppStatus nppiNorm_L2_16u_C3CMR (const Npp16u ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image Norm_L2.

- NppStatus nppiNorm_L2_32f_C3CMR (const Npp32f ∗pSrc, int nSrcStep, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image Norm_L2.

NormL2GetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the Norm_L2 primitives.

- NppStatus nppiNormL2GetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_8u_C1R.

- NppStatus nppiNormL2GetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16u_C1R.

- NppStatus nppiNormL2GetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16s_C1R.

- NppStatus nppiNormL2GetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_32f_C1R.

- NppStatus nppiNormL2GetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_8u_C1MR.

- NppStatus nppiNormL2GetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_8s_C1MR.

- NppStatus nppiNormL2GetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16u_C1MR.

- NppStatus nppiNormL2GetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_32f_C1MR.

- NppStatus nppiNormL2GetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_8u_C3R.

- NppStatus nppiNormL2GetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16u_C3R.

- NppStatus nppiNormL2GetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

Buffer size for nppiNorm_L2_16s_C3R.

- NppStatus nppiNormL2GetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_32f_C3R.

- NppStatus nppiNormL2GetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_8u_AC4R.

- NppStatus nppiNormL2GetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16u_AC4R.

- NppStatus nppiNormL2GetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16s_AC4R.

- NppStatus nppiNormL2GetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_32f_AC4R.

- NppStatus nppiNormL2GetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_8u_C4R.

- NppStatus nppiNormL2GetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16u_C4R.

- NppStatus nppiNormL2GetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16s_C4R.

- NppStatus nppiNormL2GetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_32f_C4R.

- NppStatus nppiNormL2GetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_8u_C3CMR.

- NppStatus nppiNormL2GetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_8s_C3CMR.

- NppStatus nppiNormL2GetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_16u_C3CMR.

- NppStatus nppiNormL2GetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNorm_L2_32f_C3CMR.

7.100.1 Detailed Description

Primitives for computing the L2 norm of an image.

7.100.2 Function Documentation

7.100.2.1 NppStatus nppiNorm_L2_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image Norm_L2 ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.2 NppStatus nppiNorm_L2_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.3 NppStatus nppiNorm_L2_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.4 NppStatus nppiNorm_L2_16s_C4R (const Npp16s $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u $*$ *pDeviceBuffer*)

Four-channel 16-bit signed image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.5 NppStatus nppiNorm_L2_16u_AC4R (const Npp16u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u $*$ *pDeviceBuffer*)

Four-channel 16-bit unsigned image Norm_L2 ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.6 NppStatus nppiNorm_L2_16u_C1MR (const Npp16u $*$ *pSrc*, int *nSrcStep*, const Npp8u $*$ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f $*$ *pNorm*, Npp8u $*$ *pDeviceBuffer*)

Masked one-channel 16-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.7 NppStatus nppiNorm_L2_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.8 NppStatus nppiNorm_L2_16u_C3CMR (const Npp16u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.100.2.9 NppStatus nppiNorm_L2_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.10 NppStatus nppiNorm_L2_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.11 NppStatus nppiNorm_L2_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image Norm_L2 ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.12 NppStatus nppiNorm_L2_32f_C1MR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 32-bit floating point image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if the step of the source image cannot be divided by 4.

7.100.2.13 NppStatus nppiNorm_L2_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.14 NppStatus nppiNorm_L2_32f_C3CMR (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 32-bit floating point image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if the step of the source image cannot be divided by 4, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.100.2.15 NppStatus nppiNorm_L2_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.16 NppStatus nppiNorm_L2_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.17 NppStatus nppiNorm_L2_8s_C1MR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.18 NppStatus nppiNorm_L2_8s_C3CMR (const Npp8s ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.100.2.19 NppStatus nppiNorm_L2_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image Norm_L2 ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.20 NppStatus nppiNorm_L2_8u_C1MR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.21 NppStatus nppiNorm_L2_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.22 NppStatus nppiNorm_L2_8u_C3CMR (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNorm Pointer to the norm value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.100.2.23 NppStatus nppiNorm_L2_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Three-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.24 NppStatus nppiNorm_L2_8u_C4R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp64f *aNorm*[4], Npp8u * *pDeviceBuffer*)

Four-channel 8-bit unsigned image Norm_L2.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNorm Array that contains the norm values of Four-channels.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormL2GetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.100.2.25 NppStatus nppiNormL2GetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.26 NppStatus nppiNormL2GetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.27 NppStatus nppiNormL2GetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.28 NppStatus nppiNormL2GetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.29 NppStatus nppiNormL2GetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.30 NppStatus nppiNormL2GetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.31 NppStatus nppiNormL2GetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.32 NppStatus nppiNormL2GetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.33 NppStatus nppiNormL2GetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.34 NppStatus nppiNormL2GetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.35 NppStatus nppiNormL2GetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.36 NppStatus nppiNormL2GetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.37 NppStatus nppiNormL2GetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.38 NppStatus nppiNormL2GetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.39 NppStatus nppiNormL2GetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.40 NppStatus nppiNormL2GetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.41 NppStatus nppiNormL2GetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.42 NppStatus nppiNormL2GetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.43 NppStatus nppiNormL2GetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.44 NppStatus nppiNormL2GetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.45 NppStatus nppiNormL2GetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.46 NppStatus nppiNormL2GetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.47 NppStatus nppiNormL2GetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNorm_L2_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.100.2.48 NppStatus nppiNormL2GetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNorm_L2_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101 NormDiff_Inf

Primitives for computing the infinity norm of difference of pixels between two images.

Basic NormDiff_Inf

- NppStatus nppiNormDiff_Inf_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_16s_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormDiff_Inf ignoring alpha channel.

- NppStatus nppiNormDiff_Inf_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormDiff_Inf ignoring alpha channel.

- NppStatus nppiNormDiff_Inf_16s_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormDiff_Inf ignoring alpha channel.

- NppStatus nppiNormDiff_Inf_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormDiff_Inf ignoring alpha channel.

- NppStatus nppiNormDiff_Inf_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_16s_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormDiff_Inf.

Masked NormDiff_Inf

See Masked Operation.

- NppStatus nppiNormDiff_Inf_8u_C1MR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned images NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_8s_C1MR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed images NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_16u_C1MR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned images NormDiff_Inf.

- NppStatus nppiNormDiff_Inf_32f_C1MR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point images NormDiff_Inf.

Masked Channel Mean

See Masked Operation and Channel-of-Interest API.

- NppStatus nppiNormDiff_Inf_8u_C3CMR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image NormDiff_Inf affecting only single channel.

- NppStatus nppiNormDiff_Inf_8s_C3CMR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image NormDiff_Inf affecting only single channel.

- NppStatus nppiNormDiff_Inf_16u_C3CMR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image NormDiff_Inf affecting only single channel.

- NppStatus nppiNormDiff_Inf_32f_C3CMR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image NormDiff_Inf affecting only single channel.

NormDiffInfGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the NormDiff_Inf primitives.

- NppStatus nppiNormDiffInfGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_8u_C1R.

- NppStatus nppiNormDiffInfGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16u_C1R.

- NppStatus nppiNormDiffInfGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16s_C1R.

- NppStatus nppiNormDiffInfGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_32f_C1R.

- NppStatus nppiNormDiffInfGetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_8u_C1MR.

- NppStatus nppiNormDiffInfGetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_8s_C1MR.

- NppStatus nppiNormDiffInfGetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

Buffer size for nppiNormDiff_Inf_16u_C1MR.

- NppStatus nppiNormDiffInfGetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_32f_C1MR.

- NppStatus nppiNormDiffInfGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_8u_C3R.

- NppStatus nppiNormDiffInfGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16u_C3R.

- NppStatus nppiNormDiffInfGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16s_C3R.

- NppStatus nppiNormDiffInfGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_32f_C3R.

- NppStatus nppiNormDiffInfGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_8u_C4R.

- NppStatus nppiNormDiffInfGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16u_C4R.

- NppStatus nppiNormDiffInfGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16s_C4R.

- NppStatus nppiNormDiffInfGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_32f_C4R.

- NppStatus nppiNormDiffInfGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_8u_AC4R.

- NppStatus nppiNormDiffInfGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16u_AC4R.

- NppStatus nppiNormDiffInfGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16s_AC4R.

- NppStatus nppiNormDiffInfGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_32f_AC4R.

- NppStatus nppiNormDiffInfGetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_8u_C3CMR.

- NppStatus nppiNormDiffInfGetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_8s_C3CMR.

- NppStatus nppiNormDiffInfGetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_16u_C3CMR.

- NppStatus nppiNormDiffInfGetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size for nppiNormDiff_Inf_32f_C3CMR.

7.101.1 Detailed Description

Primitives for computing the infinity norm of difference of pixels between two images.

7.101.2 Function Documentation

7.101.2.1 NppStatus nppiNormDiff_Inf_16s_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormDiff_Inf ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.2 NppStatus nppiNormDiff_Inf_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.3 NppStatus nppiNormDiff_Inf_16s_C3R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.4 NppStatus nppiNormDiff_Inf_16s_C4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.5 NppStatus nppiNormDiff_Inf_16u_AC4R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u * *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormDiff_Inf ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.6 NppStatus nppiNormDiff_Inf_16u_C1MR (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

Masked one-channel 16-bit unsigned images NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.7 NppStatus nppiNormDiff_Inf_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.8 NppStatus nppiNormDiff_Inf_16u_C3CMR (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image NormDiff_Inf affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.101.2.9 NppStatus nppiNormDiff_Inf_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.10 NppStatus nppiNormDiff_Inf_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.11 NppStatus nppiNormDiff_Inf_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormDiff_Inf ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.101.2.12 NppStatus nppiNormDiff_Inf_32f_C1MR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 32-bit floating point images NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.101.2.13 NppStatus nppiNormDiff_Inf_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.101.2.14 NppStatus nppiNormDiff_Inf_32f_C3CMR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 32-bit floating point image NormDiff_Inf affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.101.2.15 NppStatus nppiNormDiff_Inf_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.101.2.16 NppStatus nppiNormDiff_Inf_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.101.2.17 NppStatus nppiNormDiff_Inf_8s_C1MR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed images NormDiff_Inf.

Parameters:

- ***pSrc1*** Source-Image Pointer.
- ***nSrc1Step*** Source-Image Line Step.
- ***pSrc2*** Source-Image Pointer.
- ***nSrc2Step*** Source-Image Line Step.
- ***pMask*** Mask-Image Pointer.
- ***nMaskStep*** Mask-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pNormDiff*** Pointer to the computed Inf-norm of differences.
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.18 NppStatus nppiNormDiff_Inf_8s_C3CMR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image NormDiff_Inf affecting only single channel.

Parameters:

- ***pSrc1*** Source-Image Pointer.
- ***nSrc1Step*** Source-Image Line Step.
- ***pSrc2*** Source-Image Pointer.
- ***nSrc2Step*** Source-Image Line Step.
- ***pMask*** Mask-Image Pointer.
- ***nMaskStep*** Mask-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***nCOI*** Channel_of_Interest Number.
- ***pNormDiff*** Pointer to the computed Inf-norm of differences.
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.101.2.19 NppStatus nppiNormDiff_Inf_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormDiff_Inf ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.20 NppStatus nppiNormDiff_Inf_8u_C1MR (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, const Npp8u $*$ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f $*$ *pNormDiff*, Npp8u $*$ *pDeviceBuffer*)

Masked one-channel 8-bit unsigned images NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.21 NppStatus nppiNormDiff_Inf_8u_C1R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f $*$ *pNormDiff*, Npp8u $*$ *pDeviceBuffer*)

One-channel 8-bit unsigned image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.22 NppStatus nppiNormDiff_Inf_8u_C3CMR (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, const Npp8u $*$ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f $*$ *pNormDiff*, Npp8u $*$ *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image NormDiff_Inf affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.101.2.23 NppStatus nppiNormDiff_Inf_8u_C3R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u $*$ *pDeviceBuffer*)

Three-channel 8-bit unsigned image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.24 NppStatus nppiNormDiff_Inf_8u_C4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u * *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormDiff_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffInfGetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.101.2.25 NppStatus nppiNormDiffInfGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.26 NppStatus nppiNormDiffInfGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.27 NppStatus nppiNormDiffInfGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.28 NppStatus nppiNormDiffInfGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.29 NppStatus nppiNormDiffInfGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.30 NppStatus nppiNormDiffInfGetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.31 NppStatus nppiNormDiffInfGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.32 NppStatus nppiNormDiffInfGetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.33 NppStatus nppiNormDiffInfGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.34 NppStatus nppiNormDiffInfGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.35 NppStatus nppiNormDiffInfGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.36 NppStatus nppiNormDiffInfGetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.37 NppStatus nppiNormDiffInfGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.38 NppStatus nppiNormDiffInfGetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.39 NppStatus nppiNormDiffInfGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.40 NppStatus nppiNormDiffInfGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.41 NppStatus nppiNormDiffInfGetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.42 NppStatus nppiNormDiffInfGetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.43 NppStatus nppiNormDiffInfGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.44 NppStatus nppiNormDiffInfGetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.45 NppStatus nppiNormDiffInfGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.46 NppStatus nppiNormDiffInfGetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.47 NppStatus nppiNormDiffInfGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.101.2.48 NppStatus nppiNormDiffInfGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size for nppiNormDiff_Inf_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102 NormDiff_L1

Primitives for computing the L1 norm of difference of pixels between two images.

Basic NormDiff_L1

- NppStatus nppiNormDiff_L1_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image NormDiff_L1.

- NppStatus nppiNormDiff_L1_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image NormDiff_L1.

- NppStatus nppiNormDiff_L1_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image NormDiff_L1.

- NppStatus nppiNormDiff_L1_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image NormDiff_L1.

- NppStatus nppiNormDiff_L1_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image NormDiff_L1.

- NppStatus nppiNormDiff_L1_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image NormDiff_L1.

- NppStatus nppiNormDiff_L1_16s_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image NormDiff_L1.

- NppStatus nppiNormDiff_L1_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image NormDiff_L1.

- NppStatus nppiNormDiff_L1_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormDiff_L1 ignoring alpha channel.

- NppStatus nppiNormDiff_L1_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormDiff_L1 ignoring alpha channel.

- NppStatus nppiNormDiff_L1_16s_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormDiff_L1 ignoring alpha channel.

- NppStatus nppiNormDiff_L1_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormDiff_L1 ignoring alpha channel.

- NppStatus nppiNormDiff_L1_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormDiff_L1.

- NppStatus nppiNormDiff_L1_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormDiff_L1.

- NppStatus nppiNormDiff_L1_16s_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormDiff_L1.

- NppStatus nppiNormDiff_L1_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormDiff_L1.

Masked NormDiff_L1

See Masked Operation.

- NppStatus nppiNormDiff_L1_8u_C1MR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned image NormDiff_L1.

- NppStatus nppiNormDiff_L1_8s_C1MR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed image NormDiff_L1.

- NppStatus nppiNormDiff_L1_16u_C1MR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned image NormDiff_L1.

- NppStatus nppiNormDiff_L1_32f_C1MR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point image NormDiff_L1.

Masked Channel NormDiff_L1

See Masked Operation and Channel-of-Interest API.

- NppStatus nppiNormDiff_L1_8u_C3CMR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image NormDiff_L1 affecting only single channel.

- NppStatus nppiNormDiff_L1_8s_C3CMR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image NormDiff_L1 affecting only single channel.

- NppStatus nppiNormDiff_L1_16u_C3CMR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image NormDiff_L1 affecting only single channel.

- NppStatus nppiNormDiff_L1_32f_C3CMR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image NormDiff_L1 affecting only single channel.

NormDiffL1GetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the NormDiff_L1 primitives.

- NppStatus nppiNormDiffL1GetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C1R.

- NppStatus nppiNormDiffL1GetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C1R.

- NppStatus nppiNormDiffL1GetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16s_C1R.

- NppStatus nppiNormDiffL1GetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C1R.

- NppStatus nppiNormDiffL1GetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C1MR.

- NppStatus nppiNormDiffL1GetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8s_C1MR.

- NppStatus nppiNormDiffL1GetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C1MR.

- NppStatus nppiNormDiffL1GetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C1MR.

- NppStatus nppiNormDiffL1GetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C3R.

- NppStatus nppiNormDiffL1GetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C3R.

- NppStatus nppiNormDiffL1GetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16s_C3R.

- NppStatus nppiNormDiffL1GetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C3R.

- NppStatus nppiNormDiffL1GetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C4R.

- NppStatus nppiNormDiffL1GetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C4R.

- NppStatus nppiNormDiffL1GetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16s_C4R.

- NppStatus nppiNormDiffL1GetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C4R.

- NppStatus nppiNormDiffL1GetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_AC4R.

- NppStatus nppiNormDiffL1GetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_AC4R.

- NppStatus nppiNormDiffL1GetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16s_AC4R.

- NppStatus nppiNormDiffL1GetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_AC4R.

- NppStatus nppiNormDiffL1GetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C3CMR.

- NppStatus nppiNormDiffL1GetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8s_C3CMR.

- NppStatus nppiNormDiffL1GetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C3CMR.

- NppStatus nppiNormDiffL1GetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C3CMR.

7.102.1 Detailed Description

Primitives for computing the L1 norm of difference of pixels between two images.

7.102.2 Function Documentation

7.102.2.1 NppStatus nppiNormDiff_L1_16s_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormDiff_L1 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.2 NppStatus nppiNormDiff_L1_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.3 NppStatus nppiNormDiff_L1_16s_C3R (const Npp16s * *pSrc1*, int *nSrc1Step*, const Npp16s * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u * *pDeviceBuffer*)

Three-channel 16-bit signed image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.4 NppStatus nppiNormDiff_L1_16s_C4R (const Npp16s * *pSrc1*, int *nSrc1Step*, const Npp16s * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u * *pDeviceBuffer*)

Four-channel 16-bit signed image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.5 NppStatus nppiNormDiff_L1_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormDiff_L1 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.6 NppStatus nppiNormDiff_L1_16u_C1MR (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 16-bit unsigned image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.7 NppStatus nppiNormDiff_L1_16u_C1R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

One-channel 16-bit unsigned image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.8 NppStatus nppiNormDiff_L1_16u_C3CMR (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image NormDiff_L1 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.102.2.9 NppStatus nppiNormDiff_L1_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.10 NppStatus nppiNormDiff_L1_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.11 NppStatus nppiNormDiff_L1_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormDiff_L1 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.102.2.12 NppStatus nppiNormDiff_L1_32f_C1MR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 32-bit floating point image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.102.2.13 NppStatus nppiNormDiff_L1_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.102.2.14 NppStatus nppiNormDiff_L1_32f_C3CMR (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

Masked three-channel 32-bit floating point image NormDiff_L1 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.102.2.15 NppStatus nppiNormDiff_L1_32f_C3R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u * *pDeviceBuffer*)

Three-channel 32-bit floating point image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.102.2.16 NppStatus nppiNormDiff_L1_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.102.2.17 NppStatus nppiNormDiff_L1_8s_C1MR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.18 NppStatus nppiNormDiff_L1_8s_C3CMR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image NormDiff_L1 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.102.2.19 NppStatus nppiNormDiff_L1_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormDiff_L1 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.20 NppStatus nppiNormDiff_L1_8u_C1MR (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit unsigned image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.21 NppStatus nppiNormDiff_L1_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.22 NppStatus nppiNormDiff_L1_8u_C3CMR (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image NormDiff_L1 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.102.2.23 NppStatus nppiNormDiff_L1_8u_C3R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u * *pDeviceBuffer*)

Three-channel 8-bit unsigned image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.24 NppStatus nppiNormDiff_L1_8u_C4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u * *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormDiff_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL1GetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.102.2.25 NppStatus nppiNormDiffL1GetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.26 NppStatus nppiNormDiffL1GetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.27 NppStatus nppiNormDiffL1GetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.28 NppStatus nppiNormDiffL1GetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.29 NppStatus nppiNormDiffL1GetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.30 NppStatus nppiNormDiffL1GetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.31 NppStatus nppiNormDiffL1GetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.32 NppStatus nppiNormDiffL1GetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.33 NppStatus nppiNormDiffL1GetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.34 NppStatus nppiNormDiffL1GetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.35 NppStatus nppiNormDiffL1GetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.36 NppStatus nppiNormDiffL1GetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.37 NppStatus nppiNormDiffL1GetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.38 NppStatus nppiNormDiffL1GetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.39 NppStatus nppiNormDiffL1GetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.40 NppStatus nppiNormDiffL1GetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.41 NppStatus nppiNormDiffL1GetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.42 NppStatus nppiNormDiffL1GetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.43 NppStatus nppiNormDiffL1GetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.44 NppStatus nppiNormDiffL1GetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.45 NppStatus nppiNormDiffL1GetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.46 NppStatus nppiNormDiffL1GetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.47 NppStatus nppiNormDiffL1GetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.102.2.48 NppStatus nppiNormDiffL1GetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L1_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103 NormDiff_L2

Primitives for computing the L2 norm of difference of pixels between two images.

Basic NormDiff_L2

- NppStatus nppiNormDiff_L2_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image NormDiff_L2.

- NppStatus nppiNormDiff_L2_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image NormDiff_L2.

- NppStatus nppiNormDiff_L2_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image NormDiff_L2.

- NppStatus nppiNormDiff_L2_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image NormDiff_L2.

- NppStatus nppiNormDiff_L2_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image NormDiff_L2.

- NppStatus nppiNormDiff_L2_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image NormDiff_L2.

- NppStatus nppiNormDiff_L2_16s_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image NormDiff_L2.

- NppStatus nppiNormDiff_L2_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image NormDiff_L2.

- NppStatus nppiNormDiff_L2_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormDiff_L2 ignoring alpha channel.

- NppStatus nppiNormDiff_L2_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormDiff_L2 ignoring alpha channel.

- NppStatus nppiNormDiff_L2_16s_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormDiff_L2 ignoring alpha channel.

- NppStatus nppiNormDiff_L2_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormDiff_L2 ignoring alpha channel.

- NppStatus nppiNormDiff_L2_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormDiff_L2.

- NppStatus nppiNormDiff_L2_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormDiff_L2.

- NppStatus nppiNormDiff_L2_16s_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormDiff_L2.

- NppStatus nppiNormDiff_L2_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormDiff[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormDiff_L2.

Masked NormDiff_L2

See Masked Operation.

- NppStatus nppiNormDiff_L2_8u_C1MR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned image NormDiff_L2.

- NppStatus nppiNormDiff_L2_8s_C1MR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed image NormDiff_L2.

- NppStatus nppiNormDiff_L2_16u_C1MR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned image NormDiff_L2.

- NppStatus nppiNormDiff_L2_32f_C1MR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point image NormDiff_L2.

Masked Channel NormDiff_L2

See Masked Operation and Channel-of-Interest API.

- NppStatus nppiNormDiff_L2_8u_C3CMR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image NormDiff_L2 affecting only single channel.

- NppStatus nppiNormDiff_L2_8s_C3CMR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image NormDiff_L2 affecting only single channel.

- NppStatus nppiNormDiff_L2_16u_C3CMR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image NormDiff_L2 affecting only single channel.

- NppStatus nppiNormDiff_L2_32f_C3CMR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormDiff, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image NormDiff_L2 affecting only single channel.

NormDiffL2GetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the NormDiff_L2 primitives.

- NppStatus nppiNormDiffL2GetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C1R.

- NppStatus nppiNormDiffL2GetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C1R.

- NppStatus nppiNormDiffL2GetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16s_C1R.

- NppStatus nppiNormDiffL2GetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C1R.

- NppStatus nppiNormDiffL2GetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C1MR.

- NppStatus nppiNormDiffL2GetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8s_C1MR.

- NppStatus nppiNormDiffL2GetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C1MR.

- NppStatus nppiNormDiffL2GetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C1MR.

- NppStatus nppiNormDiffL2GetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C3R.

- NppStatus nppiNormDiffL2GetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C3R.

- NppStatus nppiNormDiffL2GetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16s_C3R.

- NppStatus nppiNormDiffL2GetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C3R.

- NppStatus nppiNormDiffL2GetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C4R.

- NppStatus nppiNormDiffL2GetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C4R.

- NppStatus nppiNormDiffL2GetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16s_C4R.

- NppStatus nppiNormDiffL2GetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C4R.

- NppStatus nppiNormDiffL2GetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_AC4R.

- NppStatus nppiNormDiffL2GetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_AC4R.

- NppStatus nppiNormDiffL2GetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16s_AC4R.

- NppStatus nppiNormDiffL2GetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_AC4R.

- NppStatus nppiNormDiffL2GetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C3CMR.

- NppStatus nppiNormDiffL2GetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8s_C3CMR.

- NppStatus nppiNormDiffL2GetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C3CMR.

- NppStatus nppiNormDiffL2GetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C3CMR.

7.103.1 Detailed Description

Primitives for computing the L2 norm of difference of pixels between two images.

7.103.2 Function Documentation

7.103.2.1 NppStatus nppiNormDiff_L2_16s_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormDiff_L2 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.2 NppStatus nppiNormDiff_L2_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.3 NppStatus nppiNormDiff_L2_16s_C3R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.4 NppStatus nppiNormDiff_L2_16s_C4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.5 NppStatus nppiNormDiff_L2_16u_AC4R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u * *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormDiff_L2 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.6 NppStatus nppiNormDiff_L2_16u_C1MR (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

Masked one-channel 16-bit unsigned image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.7 NppStatus nppiNormDiff_L2_16u_C1R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

One-channel 16-bit unsigned image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.8 NppStatus nppiNormDiff_L2_16u_C3CMR (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image NormDiff_L2 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.103.2.9 NppStatus nppiNormDiff_L2_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.10 NppStatus nppiNormDiff_L2_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.11 NppStatus nppiNormDiff_L2_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormDiff_L2 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.103.2.12 NppStatus nppiNormDiff_L2_32f_C1MR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 32-bit floating point image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.103.2.13 NppStatus nppiNormDiff_L2_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.103.2.14 NppStatus nppiNormDiff_L2_32f_C3CMR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 32-bit floating point image NormDiff_L2 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.103.2.15 NppStatus nppiNormDiff_L2_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.103.2.16 NppStatus nppiNormDiff_L2_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified.

7.103.2.17 NppStatus nppiNormDiff_L2_8s_C1MR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.18 NppStatus nppiNormDiff_L2_8s_C3CMR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image NormDiff_L2 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.103.2.19 NppStatus nppiNormDiff_L2_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormDiff_L2 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.20 NppStatus nppiNormDiff_L2_8u_C1MR (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit unsigned image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.21 NppStatus nppiNormDiff_L2_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormDiff*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.22 NppStatus nppiNormDiff_L2_8u_C3CMR (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNormDiff*, Npp8u * *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image NormDiff_L2 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormDiff Pointer to the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified.

7.103.2.23 NppStatus nppiNormDiff_L2_8u_C3R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[3], Npp8u * *pDeviceBuffer*)

Three-channel 8-bit unsigned image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.24 NppStatus nppiNormDiff_L2_8u_C4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormDiff*[4], Npp8u * *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormDiff_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormDiff Array that contains computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormDiffL2GetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.103.2.25 NppStatus nppiNormDiffL2GetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.26 NppStatus nppiNormDiffL2GetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.27 NppStatus nppiNormDiffL2GetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.28 NppStatus nppiNormDiffL2GetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.29 NppStatus nppiNormDiffL2GetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.30 NppStatus nppiNormDiffL2GetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.31 NppStatus nppiNormDiffL2GetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.32 NppStatus nppiNormDiffL2GetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.33 NppStatus nppiNormDiffL2GetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.34 NppStatus nppiNormDiffL2GetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.35 NppStatus nppiNormDiffL2GetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.36 NppStatus nppiNormDiffL2GetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.37 NppStatus nppiNormDiffL2GetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.38 NppStatus nppiNormDiffL2GetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.39 NppStatus nppiNormDiffL2GetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.40 NppStatus nppiNormDiffL2GetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.41 NppStatus nppiNormDiffL2GetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.42 NppStatus nppiNormDiffL2GetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.43 NppStatus nppiNormDiffL2GetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.44 NppStatus nppiNormDiffL2GetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.45 NppStatus nppiNormDiffL2GetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.46 NppStatus nppiNormDiffL2GetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.47 NppStatus nppiNormDiffL2GetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.103.2.48 NppStatus nppiNormDiffL2GetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormDiff_L2_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104 NormRel_Inf

Primitives for computing the relative error of infinity norm between two images.

Basic NormRel_Inf

- NppStatus nppiNormRel_Inf_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image NormRel_Inf.

- NppStatus nppiNormRel_Inf_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image NormRel_Inf.

- NppStatus nppiNormRel_Inf_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image NormRel_Inf.

- NppStatus nppiNormRel_Inf_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image NormRel_Inf.

- NppStatus nppiNormRel_Inf_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image NormRel_Inf.

- NppStatus nppiNormRel_Inf_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image NormRel_Inf.

- NppStatus nppiNormRel_Inf_16s_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image NormRel_Inf.

- NppStatus nppiNormRel_Inf_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image NormRel_Inf.

- NppStatus nppiNormRel_Inf_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormRel_Inf ignoring alpha channel.

- NppStatus nppiNormRel_Inf_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormRel_Inf ignoring alpha channel.

- NppStatus nppiNormRel_Inf_16s_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormRel_Inf ignoring alpha channel.

- NppStatus nppiNormRel_Inf_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormRel_Inf ignoring alpha channel.

- NppStatus nppiNormRel_Inf_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormRel_Inf.

- NppStatus nppiNormRel_Inf_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormRel_Inf.

- NppStatus nppiNormRel_Inf_16s_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormRel_Inf.

- NppStatus nppiNormRel_Inf_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormRel_Inf.

Masked NormRel_Inf

See Masked Operation.

- NppStatus nppiNormRel_Inf_8u_C1MR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned image NormRel_Inf.

- NppStatus nppiNormRel_Inf_8s_C1MR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed image NormRel_Inf.

- NppStatus nppiNormRel_Inf_16u_C1MR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned image NormRel_Inf.

- NppStatus nppiNormRel_Inf_32f_C1MR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point image NormRel_Inf.

Masked Channel NormRel_Inf

See Masked Operation and Channel-of-Interest API.

- NppStatus nppiNormRel_Inf_8u_C3CMR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image NormRel_Inf affecting only signle channel.

- NppStatus nppiNormRel_Inf_8s_C3CMR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image NormRel_Inf affecting only signle channel.

- NppStatus nppiNormRel_Inf_16u_C3CMR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image NormRel_Inf affecting only signle channel.

- NppStatus nppiNormRel_Inf_32f_C3CMR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image NormRel_Inf affecting only signle channel.

NormRelInfGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the NormRel_Inf primitives.

- NppStatus nppiNormRelInfGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C1R.

- NppStatus nppiNormRelInfGetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C1R.

- NppStatus nppiNormRelInfGetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16s_C1R.

- NppStatus nppiNormRelInfGetBufferHostSize_32s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32s_C1R.

- NppStatus nppiNormRelInfGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C1R.

- NppStatus nppiNormRelInfGetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C1MR.

- NppStatus nppiNormRelInfGetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8s_C1MR.

- NppStatus nppiNormRelInfGetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C1MR.

- NppStatus nppiNormRelInfGetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C1MR.

- NppStatus nppiNormRelInfGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C3R.

- NppStatus nppiNormRelInfGetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C3R.

- NppStatus nppiNormRelInfGetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16s_C3R.

- NppStatus nppiNormRelInfGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C3R.

- NppStatus nppiNormRelInfGetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C4R.

- NppStatus nppiNormRelInfGetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C4R.

- NppStatus nppiNormRelInfGetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16s_C4R.

- NppStatus nppiNormRelInfGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C4R.

- NppStatus nppiNormRelInfGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_AC4R.

- NppStatus nppiNormRelInfGetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_AC4R.

- NppStatus nppiNormRelInfGetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16s_AC4R.

- NppStatus nppiNormRelInfGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_AC4R.

- NppStatus nppiNormRelInfGetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C3CMR.

- NppStatus nppiNormRelInfGetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8s_C3CMR.

- NppStatus nppiNormRelInfGetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C3CMR.

- NppStatus nppiNormRelInfGetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C3CMR.

7.104.1 Detailed Description

Primitives for computing the relative error of infinity norm between two images.

7.104.2 Function Documentation

7.104.2.1 NppStatus nppiNormRel_Inf_16s_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormRel_Inf ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.2 NppStatus nppiNormRel_Inf_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.3 NppStatus nppiNormRel_Inf_16s_C3R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.4 NppStatus nppiNormRel_Inf_16s_C4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.5 NppStatus nppiNormRel_Inf_16u_AC4R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u * *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormRel_Inf ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.6 NppStatus nppiNormRel_Inf_16u_C1MR (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f * *pNormRel*, Npp8u * *pDeviceBuffer*)

Masked one-channel 16-bit unsigned image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.7 NppStatus nppiNormRel_Inf_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.8 NppStatus nppiNormRel_Inf_16u_C3CMR (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image NormRel_Inf affecting only signle channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.9 NppStatus nppiNormRel_Inf_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.10 NppStatus nppiNormRel_Inf_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.11 NppStatus nppiNormRel_Inf_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormRel_Inf ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.12 NppStatus nppiNormRel_Inf_32f_C1MR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 32-bit floating point image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.13 NppStatus nppiNormRel_Inf_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image NormRel_Inf.

Parameters:

- ***pSrc1*** Source-Image Pointer.
- ***nSrc1Step*** Source-Image Line Step.
- ***pSrc2*** Source-Image Pointer.
- ***nSrc2Step*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pNormRel*** Pointer to the computed relative error for the infinity norm of two images.
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.14 NppStatus nppiNormRel_Inf_32f_C3CMR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 32-bit floating point image NormRel_Inf affecting only signle channel.

Parameters:

- ***pSrc1*** Source-Image Pointer.
- ***nSrc1Step*** Source-Image Line Step.
- ***pSrc2*** Source-Image Pointer.
- ***nSrc2Step*** Source-Image Line Step.
- ***pMask*** Mask-Image Pointer.
- ***nMaskStep*** Mask-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***nCOI*** Channel_of_Interest Number.
- ***pNormRel*** Pointer to the computed relative error for the infinity norm of two images.
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.15 NppStatus nppiNormRel_Inf_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.16 NppStatus nppiNormRel_Inf_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.17 NppStatus nppiNormRel_Inf_8s_C1MR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.18 NppStatus nppiNormRel_Inf_8s_C3CMR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image NormRel_Inf affecting only signle channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.19 NppStatus nppiNormRel_Inf_8u_AC4R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u * *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormRel_Inf ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.20 NppStatus nppiNormRel_Inf_8u_C1MR (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f * *pNormRel*, Npp8u * *pDeviceBuffer*)

Masked one-channel 8-bit unsigned image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.21 NppStatus nppiNormRel_Inf_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.22 NppStatus nppiNormRel_Inf_8u_C3CMR (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image NormRel_Inf affecting only signle channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.23 NppStatus nppiNormRel_Inf_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.24 NppStatus nppiNormRel_Inf_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormRel_Inf.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the infinity norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelInfGetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the infinity norm of the second image is zero.

7.104.2.25 NppStatus nppiNormRelInfGetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.26 NppStatus nppiNormRelInfGetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.27 NppStatus nppiNormRelInfGetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.28 NppStatus nppiNormRelInfGetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.29 NppStatus nppiNormRelInfGetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.30 NppStatus nppiNormRelInfGetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.31 NppStatus nppiNormRelInfGetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.32 NppStatus nppiNormRelInfGetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.33 NppStatus nppiNormRelInfGetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.34 NppStatus nppiNormRelInfGetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.35 NppStatus nppiNormRelInfGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.36 NppStatus nppiNormRelInfGetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.37 NppStatus nppiNormRelInfGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.38 NppStatus nppiNormRelInfGetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.39 NppStatus nppiNormRelInfGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.40 NppStatus nppiNormRelInfGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.41 NppStatus nppiNormRelInfGetBufferHostSize_32s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_32s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.42 NppStatus nppiNormRelInfGetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.43 NppStatus nppiNormRelInfGetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.44 NppStatus nppiNormRelInfGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.45 NppStatus nppiNormRelInfGetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.46 NppStatus nppiNormRelInfGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.47 NppStatus nppiNormRelInfGetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.48 NppStatus nppiNormRelInfGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.104.2.49 NppStatus nppiNormRelInfGetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_Inf_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105 NormRel_L1

Primitives for computing the relative error of L1 norm between two images.

Basic NormRel_L1

- NppStatus nppiNormRel_L1_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image NormRel_L1.

- NppStatus nppiNormRel_L1_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image NormRel_L1.

- NppStatus nppiNormRel_L1_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image NormRel_L1.

- NppStatus nppiNormRel_L1_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image NormRel_L1.

- NppStatus nppiNormRel_L1_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image NormRel_L1.

- NppStatus nppiNormRel_L1_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image NormRel_L1.

- NppStatus nppiNormRel_L1_16s_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image NormRel_L1.

- NppStatus nppiNormRel_L1_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image NormRel_L1.

- NppStatus nppiNormRel_L1_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image NormRel_L1 ignoring alpha channel.

- NppStatus nppiNormRel_L1_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormRel_L1 ignoring alpha channel.

- NppStatus nppiNormRel_L1_16s_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormRel_L1 ignoring alpha channel.

- NppStatus nppiNormRel_L1_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormRel_L1 ignoring alpha channel.

- NppStatus nppiNormRel_L1_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormRel_L1.

- NppStatus nppiNormRel_L1_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormRel_L1.

- NppStatus nppiNormRel_L1_16s_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormRel_L1.

- NppStatus nppiNormRel_L1_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormRel_L1.

Masked NormRel_L1

See Masked Operation.

- NppStatus nppiNormRel_L1_8u_C1MR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image NormRel_L1.

- NppStatus nppiNormRel_L1_8s_C1MR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit signed image NormRel_L1.

- NppStatus nppiNormRel_L1_16u_C1MR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image NormRel_L1.

- NppStatus nppiNormRel_L1_32f_C1MR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image NormRel_L1.

Masked Channel NormRel_L1

See Masked Operation and Channel-of-Interest API.

- NppStatus nppiNormRel_L1_8u_C3CMR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image NormRel_L1 affecting only single channel.

- NppStatus nppiNormRel_L1_8s_C3CMR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image NormRel_L1 affecting only single channel.

- NppStatus nppiNormRel_L1_16u_C3CMR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image NormRel_L1 affecting only single channel.

- NppStatus nppiNormRel_L1_32f_C3CMR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image NormRel_L1 affecting only single channel.

NormRelL1GetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the NormRel_L1 primitives.

- NppStatus nppiNormRelL1GetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C1R.

- NppStatus nppiNormRelL1GetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C1R.

- NppStatus nppiNormRelL1GetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16s_C1R.

- NppStatus nppiNormRelL1GetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C1R.

- NppStatus nppiNormRelL1GetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C1MR.

- NppStatus nppiNormRelL1GetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8s_C1MR.

- NppStatus nppiNormRelL1GetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C1MR.

- NppStatus nppiNormRelL1GetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C1MR.

- NppStatus nppiNormRelL1GetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C3R.

- NppStatus nppiNormRelL1GetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C3R.

- NppStatus nppiNormRelL1GetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16s_C3R.

- NppStatus nppiNormRelL1GetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C3R.

- NppStatus nppiNormRelL1GetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C4R.

- NppStatus nppiNormRelL1GetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C4R.

- NppStatus nppiNormRelL1GetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16s_C4R.

- NppStatus nppiNormRelL1GetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C4R.

- NppStatus nppiNormRelL1GetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_AC4R.

- NppStatus nppiNormRelL1GetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_AC4R.

- NppStatus nppiNormRelL1GetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16s_AC4R.

- NppStatus nppiNormRelL1GetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_AC4R.

- NppStatus nppiNormRelL1GetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C3CMR.

- NppStatus nppiNormRelL1GetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8s_C3CMR.

- NppStatus nppiNormRelL1GetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C3CMR.

- NppStatus nppiNormRelL1GetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C3CMR.

7.105.1 Detailed Description

Primitives for computing the relative error of L1 norm between two images.

7.105.2 Function Documentation

7.105.2.1 NppStatus nppiNormRel_L1_16s_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormRel_L1 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.2 NppStatus nppiNormRel_L1_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.3 NppStatus nppiNormRel_L1_16s_C3R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.4 NppStatus nppiNormRel_L1_16s_C4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.5 NppStatus nppiNormRel_L1_16u_AC4R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u * *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormRel_L1 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.6 NppStatus nppiNormRel_L1_16u_C1MR (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f * *pNormRel*, Npp8u * *pDeviceBuffer*)

One-channel 16-bit unsigned image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.7 NppStatus nppiNormRel_L1_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.8 NppStatus nppiNormRel_L1_16u_C3CMR (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image NormRel_L1 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.9 NppStatus nppiNormRel_L1_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.10 NppStatus nppiNormRel_L1_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.11 NppStatus nppiNormRel_L1_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormRel_L1 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.12 NppStatus nppiNormRel_L1_32f_C1MR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.13 NppStatus nppiNormRel_L1_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.14 NppStatus nppiNormRel_L1_32f_C3CMR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 32-bit floating point image NormRel_L1 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.15 NppStatus nppiNormRel_L1_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.16 NppStatus nppiNormRel_L1_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.17 NppStatus nppiNormRel_L1_8s_C1MR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit signed image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.18 NppStatus nppiNormRel_L1_8s_C3CMR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image NormRel_L1 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.19 NppStatus nppiNormRel_L1_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit signed image NormRel_L1 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.20 NppStatus nppiNormRel_L1_8u_C1MR (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.21 NppStatus nppiNormRel_L1_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.22 NppStatus nppiNormRel_L1_8u_C3CMR (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, const Npp8u $*$ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f $*$ *pNormRel*, Npp8u $*$ *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image NormRel_L1 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.23 NppStatus nppiNormRel_L1_8u_C3R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u $*$ *pDeviceBuffer*)

Three-channel 8-bit unsigned image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.24 NppStatus nppiNormRel_L1_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormRel_L1.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L1 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL1GetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L1 norm of the second image is zero.

7.105.2.25 NppStatus nppiNormRelL1GetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.26 NppStatus nppiNormRelL1GetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.27 NppStatus nppiNormRelL1GetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.28 NppStatus nppiNormRelL1GetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.29 NppStatus nppiNormRelL1GetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.30 NppStatus nppiNormRelL1GetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.31 NppStatus nppiNormRelL1GetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.32 NppStatus nppiNormRelL1GetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.33 NppStatus nppiNormRelL1GetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.34 NppStatus nppiNormRelL1GetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.35 NppStatus nppiNormRelL1GetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.36 NppStatus nppiNormRelL1GetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.37 NppStatus nppiNormRelL1GetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.38 NppStatus nppiNormRelL1GetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.39 NppStatus nppiNormRelL1GetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.40 NppStatus nppiNormRelL1GetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.41 NppStatus nppiNormRelL1GetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.42 NppStatus nppiNormRelL1GetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.43 NppStatus nppiNormRelL1GetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.44 NppStatus nppiNormRelL1GetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.45 NppStatus nppiNormRelL1GetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.46 NppStatus nppiNormRelL1GetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.47 NppStatus nppiNormRelL1GetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.105.2.48 NppStatus nppiNormRelL1GetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L1_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106 NormRel_L2

Primitives for computing the relative error of L2 norm between two images.

Basic NormRel_L2

- NppStatus nppiNormRel_L2_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image NormRel_L2.

- NppStatus nppiNormRel_L2_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image NormRel_L2.

- NppStatus nppiNormRel_L2_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image NormRel_L2.

- NppStatus nppiNormRel_L2_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image NormRel_L2.

- NppStatus nppiNormRel_L2_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image NormRel_L2.

- NppStatus nppiNormRel_L2_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image NormRel_L2.

- NppStatus nppiNormRel_L2_16s_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image NormRel_L2.

- NppStatus nppiNormRel_L2_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image NormRel_L2.

- NppStatus nppiNormRel_L2_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormRel_L2 ignoring alpha channel.

- NppStatus nppiNormRel_L2_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormRel_L2 ignoring alpha channel.

- NppStatus nppiNormRel_L2_16s_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormRel_L2 ignoring alpha channel.

- NppStatus nppiNormRel_L2_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormRel_L2 ignoring alpha channel.

- NppStatus nppiNormRel_L2_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image NormRel_L2.

- NppStatus nppiNormRel_L2_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image NormRel_L2.

- NppStatus nppiNormRel_L2_16s_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image NormRel_L2.

- NppStatus nppiNormRel_L2_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aNormRel[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image NormRel_L2.

Masked NormRel_L2

See Masked Operation.

- NppStatus nppiNormRel_L2_8u_C1MR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit unsigned image NormRel_L2.

- NppStatus nppiNormRel_L2_8s_C1MR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked one-channel 8-bit signed image NormRel_L2.

- NppStatus nppiNormRel_L2_16u_C1MR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked one-channel 16-bit unsigned image NormRel_L2.

- NppStatus nppiNormRel_L2_32f_C1MR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked one-channel 32-bit floating point image NormRel_L2.

Masked Channel NormRel_L2

See Masked Operation and Channel-of-Interest API.

- NppStatus nppiNormRel_L2_8u_C3CMR (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit unsigned image NormRel_L2 affecting only single channel.

- NppStatus nppiNormRel_L2_8s_C3CMR (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 8-bit signed image NormRel_L2 affecting only single channel.

- NppStatus nppiNormRel_L2_16u_C3CMR (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 16-bit unsigned image NormRel_L2 affecting only single channel.

- NppStatus nppiNormRel_L2_32f_C3CMR (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, const Npp8u ∗pMask, int nMaskStep, NppiSize oSizeROI, int nCOI, Npp64f ∗pNormRel, Npp8u ∗pDeviceBuffer)

  Masked three-channel 32-bit floating point image NormRel_L2 affecting only single channel.

NormRelL2GetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the NormRel_L2 primitives.

- NppStatus nppiNormRelL2GetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C1R.

- NppStatus nppiNormRelL2GetBufferHostSize_16u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C1R.

- NppStatus nppiNormRelL2GetBufferHostSize_16s_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16s_C1R.

- NppStatus nppiNormRelL2GetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C1R.

- NppStatus nppiNormRelL2GetBufferHostSize_8u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C1MR.

- NppStatus nppiNormRelL2GetBufferHostSize_8s_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8s_C1MR.

- NppStatus nppiNormRelL2GetBufferHostSize_16u_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C1MR.

- NppStatus nppiNormRelL2GetBufferHostSize_32f_C1MR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C1MR.

- NppStatus nppiNormRelL2GetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C3R.

- NppStatus nppiNormRelL2GetBufferHostSize_16u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C3R.

- NppStatus nppiNormRelL2GetBufferHostSize_16s_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16s_C3R.

- NppStatus nppiNormRelL2GetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C3R.

- NppStatus nppiNormRelL2GetBufferHostSize_8u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C4R.

- NppStatus nppiNormRelL2GetBufferHostSize_16u_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C4R.

- NppStatus nppiNormRelL2GetBufferHostSize_16s_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16s_C4R.

- NppStatus nppiNormRelL2GetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C4R.

- NppStatus nppiNormRelL2GetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_AC4R.

- NppStatus nppiNormRelL2GetBufferHostSize_16u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_AC4R.

- NppStatus nppiNormRelL2GetBufferHostSize_16s_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16s_AC4R.

- NppStatus nppiNormRelL2GetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_AC4R.

- NppStatus nppiNormRelL2GetBufferHostSize_8u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C3CMR.

- NppStatus nppiNormRelL2GetBufferHostSize_8s_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8s_C3CMR.

- NppStatus nppiNormRelL2GetBufferHostSize_16u_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C3CMR.

- NppStatus nppiNormRelL2GetBufferHostSize_32f_C3CMR (NppiSize oSizeROI, int ∗hpBufferSize)

  Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C3CMR.

7.106.1 Detailed Description

Primitives for computing the relative error of L2 norm between two images.

7.106.2 Function Documentation

7.106.2.1 NppStatus nppiNormRel_L2_16s_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormRel_L2 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16s_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.2 NppStatus nppiNormRel_L2_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16s_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.3 NppStatus nppiNormRel_L2_16s_C3R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16s_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.4 NppStatus nppiNormRel_L2_16s_C4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16s_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.5 NppStatus nppiNormRel_L2_16u_AC4R (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u * *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormRel_L2 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.6 NppStatus nppiNormRel_L2_16u_C1MR (const Npp16u * *pSrc1*, int *nSrc1Step*, const Npp16u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f * *pNormRel*, Npp8u * *pDeviceBuffer*)

Masked one-channel 16-bit unsigned image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.7 NppStatus nppiNormRel_L2_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.8 NppStatus nppiNormRel_L2_16u_C3CMR (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 16-bit unsigned image NormRel_L2 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.9 NppStatus nppiNormRel_L2_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.10 NppStatus nppiNormRel_L2_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_16u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.11 NppStatus nppiNormRel_L2_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormRel_L2 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.12 NppStatus nppiNormRel_L2_32f_C1MR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 32-bit floating point image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_32f_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.13 NppStatus nppiNormRel_L2_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image NormRel_L2.

Parameters:

- ***pSrc1*** Source-Image Pointer.
- ***nSrc1Step*** Source-Image Line Step.
- ***pSrc2*** Source-Image Pointer.
- ***nSrc2Step*** Source-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***pNormRel*** Pointer to the computed relative error for the L2 norm of two images.
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.14 NppStatus nppiNormRel_L2_32f_C3CMR (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 32-bit floating point image NormRel_L2 affecting only single channel.

Parameters:

- ***pSrc1*** Source-Image Pointer.
- ***nSrc1Step*** Source-Image Line Step.
- ***pSrc2*** Source-Image Pointer.
- ***nSrc2Step*** Source-Image Line Step.
- ***pMask*** Mask-Image Pointer.
- ***nMaskStep*** Mask-Image Line Step.
- ***oSizeROI*** Region-of-Interest (ROI).
- ***nCOI*** Channel_of_Interest Number.
- ***pNormRel*** Pointer to the computed relative error for the L2 norm of two images.
- ***pDeviceBuffer*** Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_32f_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.15 NppStatus nppiNormRel_L2_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.16 NppStatus nppiNormRel_L2_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_EVEN_STEP_ERROR if an invalid floating-point image is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.17 NppStatus nppiNormRel_L2_8s_C1MR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit signed image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_8s_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.18 NppStatus nppiNormRel_L2_8s_C3CMR (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked three-channel 8-bit signed image NormRel_L2 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_8s_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.19 NppStatus nppiNormRel_L2_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormRel_L2 ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.20 NppStatus nppiNormRel_L2_8u_C1MR (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, const Npp8u ∗ *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

Masked one-channel 8-bit unsigned image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_8u_C1MR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.21 NppStatus nppiNormRel_L2_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pNormRel*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.22 NppStatus nppiNormRel_L2_8u_C3CMR (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, const Npp8u * *pMask*, int *nMaskStep*, NppiSize *oSizeROI*, int *nCOI*, Npp64f * *pNormRel*, Npp8u * *pDeviceBuffer*)

Masked three-channel 8-bit unsigned image NormRel_L2 affecting only single channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pMask Mask-Image Pointer.

nMaskStep Mask-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nCOI Channel_of_Interest Number.

pNormRel Pointer to the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_8u_C3CMR to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_COI_ERROR if an invalid channel of interest is specified, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.23 NppStatus nppiNormRel_L2_8u_C3R (const Npp8u * *pSrc1*, int *nSrc1Step*, const Npp8u * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[3], Npp8u * *pDeviceBuffer*)

Three-channel 8-bit unsigned image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.24 NppStatus nppiNormRel_L2_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aNormRel*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image NormRel_L2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aNormRel Array that contains the computed relative error for the L2 norm of two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiNormRelL2GetBufferHostSize_8u_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_DIVISOR_ERROR if the L2 norm of the second image is zero.

7.106.2.25 NppStatus nppiNormRelL2GetBufferHostSize_16s_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.26 NppStatus nppiNormRelL2GetBufferHostSize_16s_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.27 NppStatus nppiNormRelL2GetBufferHostSize_16s_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.28 NppStatus nppiNormRelL2GetBufferHostSize_16s_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.29 NppStatus nppiNormRelL2GetBufferHostSize_16u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.30 NppStatus nppiNormRelL2GetBufferHostSize_16u_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.31 NppStatus nppiNormRelL2GetBufferHostSize_16u_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.32 NppStatus nppiNormRelL2GetBufferHostSize_16u_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.33 NppStatus nppiNormRelL2GetBufferHostSize_16u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.34 NppStatus nppiNormRelL2GetBufferHostSize_16u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.35 NppStatus nppiNormRelL2GetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.36 NppStatus nppiNormRelL2GetBufferHostSize_32f_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.37 NppStatus nppiNormRelL2GetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.38 NppStatus nppiNormRelL2GetBufferHostSize_32f_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.39 NppStatus nppiNormRelL2GetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.40 NppStatus nppiNormRelL2GetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.41 NppStatus nppiNormRelL2GetBufferHostSize_8s_C1MR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8s_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.42 NppStatus nppiNormRelL2GetBufferHostSize_8s_C3CMR (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8s_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.43 NppStatus nppiNormRelL2GetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.44 NppStatus nppiNormRelL2GetBufferHostSize_8u_C1MR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C1MR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.45 NppStatus nppiNormRelL2GetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.46 NppStatus nppiNormRelL2GetBufferHostSize_8u_C3CMR (NppiSize *oSizeROI*, int * *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C3CMR.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.47 NppStatus nppiNormRelL2GetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.106.2.48 NppStatus nppiNormRelL2GetBufferHostSize_8u_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Computes the device scratch buffer size (in bytes) for nppiNormRel_L2_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107 DotProd

Primitives for computing the dot product of two images.

DotProd

Given two images $pSrc1$ and $pSrc2$ both with width W and height H, the dot product will be computed as

$$DotProd = \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} [pSrc1(j,i) \cdot pSrc2(j,i)]$$

The functions require additional scratch buffer for computations.

- NppStatus nppiDotProd_8u64f_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image DotProd.

- NppStatus nppiDotProd_8s64f_C1R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit signed image DotProd.

- NppStatus nppiDotProd_16u64f_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image DotProd.

- NppStatus nppiDotProd_16s64f_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit signed image DotProd.

- NppStatus nppiDotProd_32u64f_C1R (const Npp32u ∗pSrc1, int nSrc1Step, const Npp32u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit unsigned image DotProd.

- NppStatus nppiDotProd_32s64f_C1R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit signed image DotProd.

- NppStatus nppiDotProd_32f64f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image DotProd.

- NppStatus nppiDotProd_8u64f_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image DotProd.

- NppStatus nppiDotProd_8s64f_C3R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit signed image DotProd.

- NppStatus nppiDotProd_16u64f_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

Three-channel 16-bit unsigned image DotProd.

- NppStatus nppiDotProd_16s64f_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit signed image DotProd.

- NppStatus nppiDotProd_32u64f_C3R (const Npp32u ∗pSrc1, int nSrc1Step, const Npp32u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit unsigned image DotProd.

- NppStatus nppiDotProd_32s64f_C3R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit signed image DotProd.

- NppStatus nppiDotProd_32f64f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image DotProd.

- NppStatus nppiDotProd_8u64f_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image DotProd.

- NppStatus nppiDotProd_8s64f_C4R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[4], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image DotProd.

- NppStatus nppiDotProd_16u64f_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image DotProd.

- NppStatus nppiDotProd_16s64f_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[4], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image DotProd.

- NppStatus nppiDotProd_32u64f_C4R (const Npp32u ∗pSrc1, int nSrc1Step, const Npp32u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit unsigned image DotProd.

- NppStatus nppiDotProd_32s64f_C4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit signed image DotProd.

- NppStatus nppiDotProd_32f64f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[4], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image DotProd.

- NppStatus nppiDotProd_8u64f_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image DotProd ignoring alpha channel.

- NppStatus nppiDotProd_8s64f_AC4R (const Npp8s ∗pSrc1, int nSrc1Step, const Npp8s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image DotProd ignoring alpha channel.

- NppStatus nppiDotProd_16u64f_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image DotProd ignoring alpha channel.

- NppStatus nppiDotProd_16s64f_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit signed image DotProd ignoring alpha channel.

- NppStatus nppiDotProd_32u64f_AC4R (const Npp32u ∗pSrc1, int nSrc1Step, const Npp32u ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit unsigned image DotProd ignoring alpha channel.

- NppStatus nppiDotProd_32s64f_AC4R (const Npp32s ∗pSrc1, int nSrc1Step, const Npp32s ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit signed image DotProd ignoring alpha channel.

- NppStatus nppiDotProd_32f64f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oSizeROI, Npp64f aDp[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image DotProd ignoring alpha channel.

DotProdGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the Mean_StdDev primitives.

- NppStatus nppiDotProdGetBufferHostSize_8u64f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_8u64f_C1R.

- NppStatus nppiDotProdGetBufferHostSize_8s64f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_8s64f_C1R.

- NppStatus nppiDotProdGetBufferHostSize_16u64f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_16u64f_C1R.

- NppStatus nppiDotProdGetBufferHostSize_16s64f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_16s64f_C1R.

- NppStatus nppiDotProdGetBufferHostSize_32u64f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_32u64f_C1R.

- NppStatus nppiDotProdGetBufferHostSize_32s64f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_32s64f_C1R.

- NppStatus nppiDotProdGetBufferHostSize_32f64f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_32f64f_C1R.

- NppStatus nppiDotProdGetBufferHostSize_8u64f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_8u64f_C3R.
- NppStatus nppiDotProdGetBufferHostSize_8s64f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_8s64f_C3R.
- NppStatus nppiDotProdGetBufferHostSize_16u64f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_16u64f_C3R.
- NppStatus nppiDotProdGetBufferHostSize_16s64f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_16s64f_C3R.
- NppStatus nppiDotProdGetBufferHostSize_32u64f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_32u64f_C3R.
- NppStatus nppiDotProdGetBufferHostSize_32s64f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_32s64f_C3R.
- NppStatus nppiDotProdGetBufferHostSize_32f64f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_32f64f_C3R.
- NppStatus nppiDotProdGetBufferHostSize_8u64f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_8u64f_C4R.
- NppStatus nppiDotProdGetBufferHostSize_8s64f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_8s64f_C4R.
- NppStatus nppiDotProdGetBufferHostSize_16u64f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_16u64f_C4R.
- NppStatus nppiDotProdGetBufferHostSize_16s64f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_16s64f_C4R.
- NppStatus nppiDotProdGetBufferHostSize_32u64f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_32u64f_C4R.
- NppStatus nppiDotProdGetBufferHostSize_32s64f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_32s64f_C4R.
- NppStatus nppiDotProdGetBufferHostSize_32f64f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_32f64f_C4R.
- NppStatus nppiDotProdGetBufferHostSize_8u64f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_8u64f_AC4R.
- NppStatus nppiDotProdGetBufferHostSize_8s64f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)
  Device scratch buffer size (in bytes) for nppiDotProd_8s64f_AC4R.

- NppStatus nppiDotProdGetBufferHostSize_16u64f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_16u64f_AC4R.

- NppStatus nppiDotProdGetBufferHostSize_16s64f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_16s64f_AC4R.

- NppStatus nppiDotProdGetBufferHostSize_32u64f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_32u64f_AC4R.

- NppStatus nppiDotProdGetBufferHostSize_32s64f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_32s64f_AC4R.

- NppStatus nppiDotProdGetBufferHostSize_32f64f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiDotProd_32f64f_AC4R.

7.107.1 Detailed Description

Primitives for computing the dot product of two images.

7.107.2 Function Documentation

7.107.2.1 NppStatus nppiDotProd_16s64f_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image DotProd ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_16s64f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.2 NppStatus nppiDotProd_16s64f_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDp Pointer to the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_16s64f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.3 NppStatus nppiDotProd_16s64f_C3R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_16s64f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.4 NppStatus nppiDotProd_16s64f_C4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_16s64f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.5 NppStatus nppiDotProd_16u64f_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image DotProd ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_16u64f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.6 NppStatus nppiDotProd_16u64f_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDp Pointer to the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_16u64f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.7 NppStatus nppiDotProd_16u64f_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_16u64f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.8 NppStatus nppiDotProd_16u64f_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed Inf-norm of differences.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_16u64f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.9 NppStatus nppiDotProd_32f64f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image DotProd ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32f64f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.10 NppStatus nppiDotProd_32f64f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDp Pointer to the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32f64f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.11 NppStatus nppiDotProd_32f64f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32f64f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.12 NppStatus nppiDotProd_32f64f_C4R (const Npp32f $*$ *pSrc1*, int *nSrc1Step*, const Npp32f $*$ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[4], Npp8u $*$ *pDeviceBuffer*)

Four-channel 32-bit floating point image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32f64f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.13 NppStatus nppiDotProd_32s64f_AC4R (const Npp32s $*$ *pSrc1*, int *nSrc1Step*, const Npp32s $*$ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u $*$ *pDeviceBuffer*)

Four-channel 32-bit signed image DotProd ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32s64f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.14 NppStatus nppiDotProd_32s64f_C1R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f * *pDp*, Npp8u * *pDeviceBuffer*)

One-channel 32-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDp Pointer to the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32s64f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.15 NppStatus nppiDotProd_32s64f_C3R (const Npp32s * *pSrc1*, int *nSrc1Step*, const Npp32s * *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u * *pDeviceBuffer*)

Three-channel 32-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32s64f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.16 NppStatus nppiDotProd_32s64f_C4R (const Npp32s ∗ *pSrc1*, int *nSrc1Step*, const Npp32s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32s64f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.17 NppStatus nppiDotProd_32u64f_AC4R (const Npp32u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit unsigned image DotProd ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32u64f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.18 NppStatus nppiDotProd_32u64f_C1R (const Npp32u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDp Pointer to the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32u64f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.19 NppStatus nppiDotProd_32u64f_C3R (const Npp32u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32u64f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.20 NppStatus nppiDotProd_32u64f_C4R (const Npp32u ∗ *pSrc1*, int *nSrc1Step*, const Npp32u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_32u64f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.21 NppStatus nppiDotProd_8s64f_AC4R (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit signed image DotProd ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_8s64f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.22 NppStatus nppiDotProd_8s64f_C1R (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDp Pointer to the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_8s64f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.23 NppStatus nppiDotProd_8s64f_C3R (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_8s64f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.24 NppStatus nppiDotProd_8s64f_C4R (const Npp8s ∗ *pSrc1*, int *nSrc1Step*, const Npp8s ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[4], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit signed image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_8s64f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.25 NppStatus nppiDotProd_8u64f_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image DotProd ignoring alpha channel.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_8u64f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.26 NppStatus nppiDotProd_8u64f_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pDp Pointer to the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_8u64f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.27 NppStatus nppiDotProd_8u64f_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_8u64f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.28 NppStatus nppiDotProd_8u64f_C4R (const Npp8u $*$ *pSrc1*, int *nSrc1Step*, const Npp8u $*$ *pSrc2*, int *nSrc2Step*, NppiSize *oSizeROI*, Npp64f *aDp*[4], Npp8u $*$ *pDeviceBuffer*)

Four-channel 8-bit unsigned image DotProd.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aDp Array that contains the computed dot product of the two images.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiDotProdGetBufferHostSize_8u64f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.107.2.29 NppStatus nppiDotProdGetBufferHostSize_16s64f_AC4R (NppiSize *oSizeROI*, int $*$ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_16s64f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.30 NppStatus nppiDotProdGetBufferHostSize_16s64f_C1R (NppiSize *oSizeROI*, int $*$ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_16s64f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.31 NppStatus nppiDotProdGetBufferHostSize_16s64f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_16s64f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.32 NppStatus nppiDotProdGetBufferHostSize_16s64f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_16s64f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.33 NppStatus nppiDotProdGetBufferHostSize_16u64f_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_16u64f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.34 NppStatus nppiDotProdGetBufferHostSize_16u64f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_16u64f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.35 NppStatus nppiDotProdGetBufferHostSize_16u64f_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_16u64f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.36 NppStatus nppiDotProdGetBufferHostSize_16u64f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_16u64f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.37 NppStatus nppiDotProdGetBufferHostSize_32f64f_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32f64f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.38 NppStatus nppiDotProdGetBufferHostSize_32f64f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32f64f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.39 NppStatus nppiDotProdGetBufferHostSize_32f64f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32f64f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.40 NppStatus nppiDotProdGetBufferHostSize_32f64f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32f64f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.41 NppStatus nppiDotProdGetBufferHostSize_32s64f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32s64f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.42 NppStatus nppiDotProdGetBufferHostSize_32s64f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32s64f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.43 NppStatus nppiDotProdGetBufferHostSize_32s64f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32s64f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.44 NppStatus nppiDotProdGetBufferHostSize_32s64f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32s64f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.45 NppStatus nppiDotProdGetBufferHostSize_32u64f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32u64f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.46 NppStatus nppiDotProdGetBufferHostSize_32u64f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32u64f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.47 NppStatus nppiDotProdGetBufferHostSize_32u64f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32u64f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.48 NppStatus nppiDotProdGetBufferHostSize_32u64f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_32u64f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.49 NppStatus nppiDotProdGetBufferHostSize_8s64f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_8s64f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.50 NppStatus nppiDotProdGetBufferHostSize_8s64f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_8s64f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.51 NppStatus nppiDotProdGetBufferHostSize_8s64f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_8s64f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.52 NppStatus nppiDotProdGetBufferHostSize_8s64f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_8s64f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.53 NppStatus nppiDotProdGetBufferHostSize_8u64f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_8u64f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.54 NppStatus nppiDotProdGetBufferHostSize_8u64f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_8u64f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.55 NppStatus nppiDotProdGetBufferHostSize_8u64f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_8u64f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.107.2.56 NppStatus nppiDotProdGetBufferHostSize_8u64f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiDotProd_8u64f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.108 CountInRange.

Primitives for computing the amount of pixels that fall into the specified intensity range.

CountInRange

The lower bound and the upper bound are inclusive.

The functions require additional scratch buffer for computations.

- NppStatus nppiCountInRange_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, int ∗pCounts, Npp8u nLowerBound, Npp8u nUpperBound, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image CountInRange.

- NppStatus nppiCountInRange_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, int ∗pCounts, Npp32f nLowerBound, Npp32f nUpperBound, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image CountInRange.

- NppStatus nppiCountInRange_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, int aCounts[3], Npp8u aLowerBound[3], Npp8u aUpperBound[3], Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image CountInRange.

- NppStatus nppiCountInRange_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, int aCounts[3], Npp32f aLowerBound[3], Npp32f aUpperBound[3], Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image CountInRange.

- NppStatus nppiCountInRange_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, int aCounts[3], Npp8u aLowerBound[3], Npp8u aUpperBound[3], Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CountInRange ignoring alpha channel.

- NppStatus nppiCountInRange_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, int aCounts[3], Npp32f aLowerBound[3], Npp32f aUpperBound[3], Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image CountInRange ignoring alpha channel.

CountInRangeGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the CountInRange primitives.

- NppStatus nppiCountInRangeGetBufferHostSize_8u_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiCountInRange_8u_C1R.

- NppStatus nppiCountInRangeGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiCountInRange_32f_C1R.

- NppStatus nppiCountInRangeGetBufferHostSize_8u_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

Device scratch buffer size (in bytes) for nppiCountInRange_8u_C3R.

- NppStatus nppiCountInRangeGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiCountInRange_32f_C3R.

- NppStatus nppiCountInRangeGetBufferHostSize_8u_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiCountInRange_8u_AC4R.

- NppStatus nppiCountInRangeGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppiCountInRange_32f_AC4R.

7.108.1 Detailed Description

Primitives for computing the amount of pixels that fall into the specified intensity range.

7.108.2 Function Documentation

7.108.2.1 NppStatus nppiCountInRange_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *aCounts*[3], Npp32f *aLowerBound*[3], Npp32f *aUpperBound*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image CountInRange ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCounts Array that contains the number of pixels that fall into the specified range for Three-channels.

aLowerBound Fixed size array of the lower bound of the specified range, one per channel.

aUpperBound Fixed size array of the upper bound of the specified range, one per channel.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiCountInRangeGetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_RANGE_ERROR if the lower bound is larger than the upper bound.

7.108.2.2 NppStatus nppiCountInRange_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int ∗ *pCounts*, Npp32f *nLowerBound*, Npp32f *nUpperBound*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image CountInRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pCounts Pointer to the number of pixels that fall into the specified range.

nLowerBound Lower bound of the specified range.

nUpperBound Upper bound of the specified range.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiCountInRangeGetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_RANGE_ERROR if the lower bound is larger than the upper bound.

7.108.2.3 NppStatus nppiCountInRange_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *aCounts*[3], Npp32f *aLowerBound*[3], Npp32f *aUpperBound*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image CountInRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCounts Array that contains the number of pixels that fall into the specified range for Three-channels.

aLowerBound Fixed size array of the lower bound of the specified range, one per channel.

aUpperBound Fixed size array of the upper bound of the specified range, one per channel.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiCountInRangeGetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_RANGE_ERROR if the lower bound is larger than the upper bound.

7.108.2.4 NppStatus nppiCountInRange_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *aCounts*[3], Npp8u *aLowerBound*[3], Npp8u *aUpperBound*[3], Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CountInRange ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCounts Array that contains the number of pixels that fall into the specified range for Three-channels.

aLowerBound Fixed size array of the lower bound of the specified range, one per channel.

aUpperBound Fixed size array of the upper bound of the specified range, one per channel.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiCountInRangeGetBufferHostSize_8u_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_RANGE_ERROR if the lower bound is larger than the upper bound.

7.108.2.5 NppStatus nppiCountInRange_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int ∗ *pCounts*, Npp8u *nLowerBound*, Npp8u *nUpperBound*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image CountInRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pCounts Pointer to the number of pixels that fall into the specified range.

nLowerBound Lower bound of the specified range.

nUpperBound Upper bound of the specified range.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiCountInRangeGetBufferHostSize_8u_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_RANGE_ERROR if the lower bound is larger than the upper bound.

7.108.2.6 NppStatus nppiCountInRange_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, int *aCounts*[3], Npp8u *aLowerBound*[3], Npp8u *aUpperBound*[3], Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image CountInRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

aCounts Array that contains the number of pixels that fall into the specified range for Three-channels.

aLowerBound Fixed size array of the lower bound of the specified range, one per channel.

aUpperBound Fixed size array of the upper bound of the specified range, one per channel.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiCountInRangeGetBufferHostSize_8u_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_RANGE_ERROR if the lower bound is larger than the upper bound.

7.108.2.7 NppStatus nppiCountInRangeGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiCountInRange_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.108.2.8 NppStatus nppiCountInRangeGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiCountInRange_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.108.2.9 NppStatus nppiCountInRangeGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiCountInRange_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.108.2.10 NppStatus nppiCountInRangeGetBufferHostSize_8u_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiCountInRange_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.108.2.11 NppStatus nppiCountInRangeGetBufferHostSize_8u_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiCountInRange_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.108.2.12 NppStatus nppiCountInRangeGetBufferHostSize_8u_C3R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppiCountInRange_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.109 MaxEvery

Primitives for computing the maximal value of the pixel pair from two images.

MaxEvery

The maximum is stored into the second image.

- NppStatus nppiMaxEvery_8u_C1IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One-channel 8-bit unsigned image MaxEvery.

- NppStatus nppiMaxEvery_16u_C1IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One-channel 16-bit unsigned image MaxEvery.

- NppStatus nppiMaxEvery_16s_C1IR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One-channel 16-bit signed image MaxEvery.

- NppStatus nppiMaxEvery_32f_C1IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One-channel 32-bit floating point image MaxEvery.

- NppStatus nppiMaxEvery_8u_C3IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three-channel 8-bit unsigned image MaxEvery.

- NppStatus nppiMaxEvery_16u_C3IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three-channel 16-bit unsigned image MaxEvery.

- NppStatus nppiMaxEvery_16s_C3IR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three-channel 16-bit signed image MaxEvery.

- NppStatus nppiMaxEvery_32f_C3IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three-channel 32-bit floating point image MaxEvery.

- NppStatus nppiMaxEvery_8u_C4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned image MaxEvery.

- NppStatus nppiMaxEvery_16u_C4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned image MaxEvery.

- NppStatus nppiMaxEvery_16s_C4IR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

Four-channel 16-bit signed image MaxEvery.

- NppStatus nppiMaxEvery_32f_C4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating point image MaxEvery.

- NppStatus nppiMaxEvery_8u_AC4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned image MaxEvery ignoring alpha channel.

- NppStatus nppiMaxEvery_16u_AC4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned image MaxEvery ignoring alpha channel.

- NppStatus nppiMaxEvery_16s_AC4IR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 16-bit signed image MaxEvery ignoring alpha channel.

- NppStatus nppiMaxEvery_32f_AC4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating point image MaxEvery ignoring alpha channel.

7.109.1 Detailed Description

Primitives for computing the maximal value of the pixel pair from two images.

7.109.2 Function Documentation

7.109.2.1 NppStatus nppiMaxEvery_16s_AC4IR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit signed image MaxEvery ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.2 NppStatus nppiMaxEvery_16s_C1IR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One-channel 16-bit signed image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.3 NppStatus nppiMaxEvery_16s_C3IR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit signed image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.4 NppStatus nppiMaxEvery_16s_C4IR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit signed image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.5 NppStatus nppiMaxEvery_16u_AC4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned image MaxEvery ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.6 NppStatus nppiMaxEvery_16u_C1IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One-channel 16-bit unsigned image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.7 NppStatus nppiMaxEvery_16u_C3IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit unsigned image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.8 NppStatus nppiMaxEvery_16u_C4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.9 NppStatus nppiMaxEvery_32f_AC4IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating point image MaxEvery ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.10 NppStatus nppiMaxEvery_32f_C1IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One-channel 32-bit floating point image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.11 NppStatus nppiMaxEvery_32f_C3IR (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit floating point image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.12 NppStatus nppiMaxEvery_32f_C4IR (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating point image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.13 NppStatus nppiMaxEvery_8u_AC4IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned image MaxEvery ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.14 NppStatus nppiMaxEvery_8u_C1IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One-channel 8-bit unsigned image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.15 NppStatus nppiMaxEvery_8u_C3IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three-channel 8-bit unsigned image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.109.2.16 NppStatus nppiMaxEvery_8u_C4IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned image MaxEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110 MinEvery

Primitives for computing the minimal value of the pixel pair from two images.

MinEvery

The minimum is stored into the second image.

- NppStatus nppiMinEvery_8u_C1IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One-channel 8-bit unsigned image MinEvery.

- NppStatus nppiMinEvery_16u_C1IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One-channel 16-bit unsigned image MinEvery.

- NppStatus nppiMinEvery_16s_C1IR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One-channel 16-bit signed image MinEvery.

- NppStatus nppiMinEvery_32f_C1IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  One-channel 32-bit floating point image MinEvery.

- NppStatus nppiMinEvery_8u_C3IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three-channel 8-bit unsigned image MinEvery.

- NppStatus nppiMinEvery_16u_C3IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three-channel 16-bit unsigned image MinEvery.

- NppStatus nppiMinEvery_16s_C3IR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three-channel 16-bit signed image MinEvery.

- NppStatus nppiMinEvery_32f_C3IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Three-channel 32-bit floating point image MinEvery.

- NppStatus nppiMinEvery_8u_C4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned image MinEvery.

- NppStatus nppiMinEvery_16u_C4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned image MinEvery.

- NppStatus nppiMinEvery_16s_C4IR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

Four-channel 16-bit signed image MinEvery.

- NppStatus nppiMinEvery_32f_C4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating point image MinEvery.

- NppStatus nppiMinEvery_8u_AC4IR (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 8-bit unsigned image MinEvery ignoring alpha channel.

- NppStatus nppiMinEvery_16u_AC4IR (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 16-bit unsigned image MinEvery ignoring alpha channel.

- NppStatus nppiMinEvery_16s_AC4IR (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 16-bit signed image MinEvery ignoring alpha channel.

- NppStatus nppiMinEvery_32f_AC4IR (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI)

  Four-channel 32-bit floating point image MinEvery ignoring alpha channel.

7.110.1 Detailed Description

Primitives for computing the minimal value of the pixel pair from two images.

7.110.2 Function Documentation

7.110.2.1 NppStatus nppiMinEvery_16s_AC4IR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit signed image MinEvery ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.2 NppStatus nppiMinEvery_16s_C1IR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One-channel 16-bit signed image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.3 NppStatus nppiMinEvery_16s_C3IR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit signed image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.4 NppStatus nppiMinEvery_16s_C4IR (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit signed image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.5 NppStatus nppiMinEvery_16u_AC4IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned image MinEvery ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.6 NppStatus nppiMinEvery_16u_C1IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One-channel 16-bit unsigned image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.7 NppStatus nppiMinEvery_16u_C3IR (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three-channel 16-bit unsigned image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.8 NppStatus nppiMinEvery_16u_C4IR (const Npp16u $*$ *pSrc*, int *nSrcStep*, Npp16u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 16-bit unsigned image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.9 NppStatus nppiMinEvery_32f_AC4IR (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating point image MinEvery ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.10 NppStatus nppiMinEvery_32f_C1IR (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One-channel 32-bit floating point image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.11 NppStatus nppiMinEvery_32f_C3IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three-channel 32-bit floating point image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.12 NppStatus nppiMinEvery_32f_C4IR (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 32-bit floating point image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.13 NppStatus nppiMinEvery_8u_AC4IR (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned image MinEvery ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.14 NppStatus nppiMinEvery_8u_C1IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

One-channel 8-bit unsigned image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.15 NppStatus nppiMinEvery_8u_C3IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Three-channel 8-bit unsigned image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.110.2.16 NppStatus nppiMinEvery_8u_C4IR (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*)

Four-channel 8-bit unsigned image MinEvery.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSrcDst In-Place Image Pointer.

nSrcDstStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.111 Integral

Primitives for computing the integral image of a given image.

Integral

Given an input image $pSrc$ and the specified value $nVal$, the pixel value of the integral image $pDst$ at coordinate (i, j) will be computed as

$$pDst(j,i) = nVal + \sum_{l=0}^{j-1}\sum_{k=0}^{i-1} pSrc(l,k)$$

If the size of the input image is $W \times H$, the size of the integral image will be $(W+1) \times (H+1)$.

- NppStatus nppiIntegral_8u32s_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, NppiSize oROI, Npp32s nVal)

  One-channel 8-bit unsigned image Integral with 32-bit signed output.

- NppStatus nppiIntegral_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oROI, Npp32f nVal)

  One-channel 8-bit unsigned image Integral with 32-bit floating point output.

7.111.1 Detailed Description

Primitives for computing the integral image of a given image.

7.111.2 Function Documentation

7.111.2.1 NppStatus nppiIntegral_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oROI*, Npp32f *nVal*)

One-channel 8-bit unsigned image Integral with 32-bit floating point output.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

nVal The value to add to pDst image pixels

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.111.2.2 NppStatus nppiIntegral_8u32s_C1R (const Npp8u * *pSrc*, int *nSrcStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oROI*, Npp32s *nVal*)

One-channel 8-bit unsigned image Integral with 32-bit signed output.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oROI Region-of-Interest (ROI).

nVal The value to add to pDst image pixels

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.112 SqrIntegral

Primitives for computing both the integral and the squared integral images of a given image.

SqrIntegral

Given an input image $pSrc$ and the specified value $nVal$, the pixel value of the integral image $pDst$ at coordinate (i, j) will be computed as

$$pDst(j,i) = nVal + \sum_{l=0}^{j-1}\sum_{k=0}^{i-1} pSrc(l,k)$$

Given an input image $pSrc$ and the specified value $nValSqr$, the pixel value of the squared integral image $pSqr$ at coordinate (i, j) will be computed as

$$pSqr(j,i) = nValSqr + \sum_{l=0}^{j-1}\sum_{k=0}^{i-1} pSrc(l,k)^2$$

If the size of the input image is $W \times H$, the size of the squared integral image will be $(W+1) \times (H+1)$.

- NppStatus nppiSqrIntegral_8u32s_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, Npp32s ∗pSqr, int nSqrStep, NppiSize oSrcROI, Npp32s nVal, Npp32s nValSqr)

  One-channel 8-bit unsigned image SqrIntegral.

- NppStatus nppiSqrIntegral_8u32s64f_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32s ∗pDst, int nDstStep, Npp64f ∗pSqr, int nSqrStep, NppiSize oSrcROI, Npp32s nVal, Npp64f nValSqr)

  One-channel 8-bit unsigned image SqrIntegral.

- NppStatus nppiSqrIntegral_8u32f64f_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, Npp64f ∗pSqr, int nSqrStep, NppiSize oSrcROI, Npp32f nVal, Npp64f nValSqr)

  One-channel 8-bit unsigned image SqrIntegral.

7.112.1 Detailed Description

Primitives for computing both the integral and the squared integral images of a given image.

7.112.2 Function Documentation

7.112.2.1 NppStatus nppiSqrIntegral_8u32f64f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, Npp64f ∗ *pSqr*, int *nSqrStep*, NppiSize *oSrcROI*, Npp32f *nVal*, Npp64f *nValSqr*)

One-channel 8-bit unsigned image SqrIntegral.

Destination integral image is 32-bit floating point. Destination square integral image is 64-bit double floating point.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pSqr Destination-Image Pointer.

nSqrStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

nVal The value to add to pDst image pixels

nValSqr The value to add to pSqr image pixels

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.112.2.2 NppStatus nppiSqrIntegral_8u32s64f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, Npp64f ∗ *pSqr*, int *nSqrStep*, NppiSize *oSrcROI*, Npp32s *nVal*, Npp64f *nValSqr*)

One-channel 8-bit unsigned image SqrIntegral.

Destination integral image is 32-bit signed int. Destination square integral image is 64-bit double floating point.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pSqr Destination-Image Pointer.

nSqrStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

nVal The value to add to pDst image pixels

nValSqr The value to add to pSqr image pixels

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.112.2.3 NppStatus nppiSqrIntegral_8u32s_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp32s ∗ *pDst*, int *nDstStep*, Npp32s ∗ *pSqr*, int *nSqrStep*, NppiSize *oSrcROI*, Npp32s *nVal*, Npp32s *nValSqr*)

One-channel 8-bit unsigned image SqrIntegral.

Destination integral image and square integral image are 32-bit signed int.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pSqr Destination-Image Pointer.

nSqrStep Destination-Image Line Step.

oSrcROI Region-of-Interest (ROI).

nVal The value to add to pDst image pixels

nValSqr The value to add to pSqr image pixels

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.113 RectStdDev

Primitives for computing the standard deviation of the integral images.

RectStdDev

- NppStatus nppiRectStdDev_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, const Npp64f ∗pSqr, int nSqrStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, NppiRect oRect)

  One-channel 32-bit floating point image RectStdDev.

- NppStatus nppiRectStdDev_32s_C1RSfs (const Npp32s ∗pSrc, int nSrcStep, const Npp32s ∗pSqr, int nSqrStep, Npp32s ∗pDst, int nDstStep, NppiSize oSizeROI, NppiRect oRect, int nScaleFactor)

  One-channel 32-bit signed image RectStdDev, scaled by $2^{(} - nScaleFactor)$.

- NppStatus nppiRectStdDev_32s32f_C1R (const Npp32s ∗pSrc, int nSrcStep, const Npp64f ∗pSqr, int nSqrStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, NppiRect oRect)

  One-channel 32-bit signed image RectStdDev.

7.113.1 Detailed Description

Primitives for computing the standard deviation of the integral images.

The function computes the standard deviation of the pixel in the rectangular window with the integral image $pSrc$ and the squared integral image $pSqr$, which can be obtained by calling Integral and SqrIntegral.

The standard deviation of the pixel (j, i) can be computed using the formula:

$$pDst(j,i) = \sqrt{max(0, \frac{\sum(SqrIntegral) \cdot N - (\sum(Integral))^2}{N^2})}$$

where $\sum(SqrIntegral) = pSqr[j + oRect.y + oRect.height, i + oRect.x + oRect.width] - pSqr[j + oRect.y, i + oRect.x + oRect.width] - pSqr[j + oRect.y + oRect.height, i + oRect.x] + pSqr[j + oRect.y, i + oRect.x]$, $\sum(Integral) = pSrc[j + oRect.y + oRect.height, i + oRect.x + oRect.width] - pSrc[j + oRect.y, i + oRect.x + oRect.width] - pSrc[j + oRect.y + oRect.height, i + oRect.x] + pSrc[j + oRect.y, i + oRect.x]$, $N = oRect.width \cdot oRect.height$.

The size of the $pSrc$ and $pSqr$ should be $(oSizeROI.width + oRect.x + oRect.width, oSizeROI.height + oRect.y + oRect.height)$.

7.113.2 Function Documentation

7.113.2.1 NppStatus nppiRectStdDev_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp64f ∗ *pSqr*, int *nSqrStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiRect *oRect*)

One-channel 32-bit floating point image RectStdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSqr Destination-Image Pointer.

nSqrStep Destination-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oRect rectangular window

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.113.2.2 NppStatus nppiRectStdDev_32s32f_C1R (const Npp32s * *pSrc*, int *nSrcStep*, const Npp64f * *pSqr*, int *nSqrStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiRect *oRect*)

One-channel 32-bit signed image RectStdDev.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSqr Destination-Image Pointer.

nSqrStep Destination-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oRect rectangular window

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.113.2.3 NppStatus nppiRectStdDev_32s_C1RSfs (const Npp32s * *pSrc*, int *nSrcStep*, const Npp32s * *pSqr*, int *nSqrStep*, Npp32s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppiRect *oRect*, int *nScaleFactor*)

One-channel 32-bit signed image RectStdDev, scaled by $2^(-nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pSqr Destination-Image Pointer.

nSqrStep Destination-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

oRect rectangular window

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114 HistogramEven

Primitives for computing the histogram of an image with evenly distributed bins.

HistogramEven

The $nLowerLevel$ (inclusive) and $nUpperLevel$ (exclusive) define the boundaries of the range, which are evenly segmented into $nLevel - 1$ bins.

The computed histogram is stored in $pHist$. The levels are calculated by another primitive nppiEvenLevelsHost_32s and are stored in a host pointer $hpLevels$. The number of levels is also $nLevel - 1$. The histogram $pHist[k]$ is defined as the total number of pixels that fall into the range: $hpLevels[k] <= pSrc(j, i) < hpLevels[k + 1]$. The functions require additional scratch buffer for computations.

- NppStatus nppiEvenLevelsHost_32s (Npp32s ∗hpLevels, int nLevels, Npp32s nLowerLevel, Npp32s nUpperLevel)

  Compute levels with even distribution.

- NppStatus nppiHistogramEven_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist, int nLevels, Npp32s nLowerLevel, Npp32s nUpperLevel, Npp8u ∗pBuffer)

  One-channel 8-bit unsigned HistogramEven.

- NppStatus nppiHistogramEven_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], int nLevels[3], Npp32s nLowerLevel[3], Npp32s nUpperLevel[3], Npp8u ∗pBuffer)

  Three-channel 8-bit unsigned HistogramEven.

- NppStatus nppiHistogramEven_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[4], int nLevels[4], Npp32s nLowerLevel[4], Npp32s nUpperLevel[4], Npp8u ∗pBuffer)

  Four-channel 8-bit unsigned HistogramEven.

- NppStatus nppiHistogramEven_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], int nLevels[3], Npp32s nLowerLevel[3], Npp32s nUpperLevel[3], Npp8u ∗pBuffer)

  Four-channel 8-bit unsigned HistogramEven ignoring alpha channel.

- NppStatus nppiHistogramEven_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist, int nLevels, Npp32s nLowerLevel, Npp32s nUpperLevel, Npp8u ∗pBuffer)

  One-channel 16-bit unsigned HistogramEven.

- NppStatus nppiHistogramEven_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], int nLevels[3], Npp32s nLowerLevel[3], Npp32s nUpperLevel[3], Npp8u ∗pBuffer)

  Three-channel 16-bit unsigned HistogramEven.

- NppStatus nppiHistogramEven_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[4], int nLevels[4], Npp32s nLowerLevel[4], Npp32s nUpperLevel[4], Npp8u ∗pBuffer)

  Four-channel 16-bit unsigned HistogramEven.

- NppStatus nppiHistogramEven_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], int nLevels[3], Npp32s nLowerLevel[3], Npp32s nUpperLevel[3], Npp8u ∗pBuffer)

  Four-channel 16-bit unsigned HistogramEven ignoring alpha channel.

- NppStatus nppiHistogramEven_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist, int nLevels, Npp32s nLowerLevel, Npp32s nUpperLevel, Npp8u ∗pBuffer)

  One-channel 16-bit signed HistogramEven.

- NppStatus nppiHistogramEven_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], int nLevels[3], Npp32s nLowerLevel[3], Npp32s nUpperLevel[3], Npp8u ∗pBuffer)

  Three-channel 16-bit signed HistogramEven.

- NppStatus nppiHistogramEven_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[4], int nLevels[4], Npp32s nLowerLevel[4], Npp32s nUpperLevel[4], Npp8u ∗pBuffer)

  Four-channel 16-bit signed HistogramEven.

- NppStatus nppiHistogramEven_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], int nLevels[3], Npp32s nLowerLevel[3], Npp32s nUpperLevel[3], Npp8u ∗pBuffer)

  Four-channel 16-bit signed HistogramEven ignoring alpha channel.

HistogramEvenGetBufferSize

Companion primitives for computing the device buffer size (in bytes) required by the HistogramEven primitives.

- NppStatus nppiHistogramEvenGetBufferSize_8u_C1R (NppiSize oSizeROI, int nLevels, int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_8u_C1R.

- NppStatus nppiHistogramEvenGetBufferSize_8u_C3R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_8u_C3R.

- NppStatus nppiHistogramEvenGetBufferSize_8u_C4R (NppiSize oSizeROI, int nLevels[4], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_8u_C4R.

- NppStatus nppiHistogramEvenGetBufferSize_8u_AC4R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_8u_AC4R.

- NppStatus nppiHistogramEvenGetBufferSize_16u_C1R (NppiSize oSizeROI, int nLevels, int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_16u_C1R.

- NppStatus nppiHistogramEvenGetBufferSize_16u_C3R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_16u_C3R.

- NppStatus nppiHistogramEvenGetBufferSize_16u_C4R (NppiSize oSizeROI, int nLevels[4], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_16u_C4R.

- NppStatus nppiHistogramEvenGetBufferSize_16u_AC4R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_16u_AC4R.

- NppStatus nppiHistogramEvenGetBufferSize_16s_C1R (NppiSize oSizeROI, int nLevels, int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_16s_C1R.

- NppStatus nppiHistogramEvenGetBufferSize_16s_C3R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_16s_C3R.

- NppStatus nppiHistogramEvenGetBufferSize_16s_C4R (NppiSize oSizeROI, int nLevels[4], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_16s_C4R.

- NppStatus nppiHistogramEvenGetBufferSize_16s_AC4R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Buffer size for nppiHistogramEven_16s_AC4R.

7.114.1 Detailed Description

Primitives for computing the histogram of an image with evenly distributed bins.

7.114.2 Function Documentation

7.114.2.1 NppStatus nppiEvenLevelsHost_32s (Npp32s ∗ *hpLevels*, int *nLevels*, Npp32s *nLowerLevel*, Npp32s *nUpperLevel*)

Compute levels with even distribution.

Parameters:

hpLevels A host pointer to array which receives the levels being computed. The array needs to be of size nLevels.

nLevels The number of levels being computed. nLevels must be at least 2.

nLowerLevel Lower boundary value of the lowest level.

nUpperLevel Upper boundary value of the greatest level.

Returns:

image_data_error_codes, or NPP_HISTO_NUMBER_OF_LEVELS_ERROR if an invalid nLevels is specified.

7.114.2.2 NppStatus nppiHistogramEven_16s_AC4R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s * *pHist*[3], int *nLevels*[3], Npp32s *nLowerLevel*[3], Npp32s *nUpperLevel*[3], Npp8u * *pBuffer*)

Four-channel 16-bit signed HistogramEven ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_16s_AC4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.3 NppStatus nppiHistogramEven_16s_C1R (const Npp16s * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s * *pHist*, int *nLevels*, Npp32s *nLowerLevel*, Npp32s *nUpperLevel*, Npp8u * *pBuffer*)

One-channel 16-bit signed HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Pointer to array that receives the computed histogram. The array must be of size nLevels-1.

nLevels Number of levels.

nLowerLevel Lower boundary of lowest level bin.

nUpperLevel Upper boundary of highest level bin.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_16s_C1R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.4 NppStatus nppiHistogramEven_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], int *nLevels*[3], Npp32s *nLowerLevel*[3], Npp32s *nUpperLevel*[3], Npp8u ∗ *pBuffer*)

Three-channel 16-bit signed HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_16s_C3R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.5 NppStatus nppiHistogramEven_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[4], int *nLevels*[4], Npp32s *nLowerLevel*[4], Npp32s *nUpperLevel*[4], Npp8u ∗ *pBuffer*)

Four-channel 16-bit signed HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_16s_C4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.6 NppStatus nppiHistogramEven_16u_AC4R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s * *pHist*[3], int *nLevels*[3], Npp32s *nLowerLevel*[3], Npp32s *nUpperLevel*[3], Npp8u * *pBuffer*)

Four-channel 16-bit unsigned HistogramEven ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_16u_AC4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.7 NppStatus nppiHistogramEven_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s * *pHist*, int *nLevels*, Npp32s *nLowerLevel*, Npp32s *nUpperLevel*, Npp8u * *pBuffer*)

One-channel 16-bit unsigned HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Pointer to array that receives the computed histogram. The array must be of size nLevels-1.

nLevels Number of levels.

nLowerLevel Lower boundary of lowest level bin.

nUpperLevel Upper boundary of highest level bin.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_16u_C1R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.8 NppStatus nppiHistogramEven_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], int *nLevels*[3], Npp32s *nLowerLevel*[3], Npp32s *nUpperLevel*[3], Npp8u ∗ *pBuffer*)

Three-channel 16-bit unsigned HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_16u_C3R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.9 NppStatus nppiHistogramEven_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[4], int *nLevels*[4], Npp32s *nLowerLevel*[4], Npp32s *nUpperLevel*[4], Npp8u ∗ *pBuffer*)

Four-channel 16-bit unsigned HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_16u_C4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.10 NppStatus nppiHistogramEven_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], int *nLevels*[3], Npp32s *nLowerLevel*[3], Npp32s *nUpperLevel*[3], Npp8u ∗ *pBuffer*)

Four-channel 8-bit unsigned HistogramEven ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_8u_AC4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.114.2.11 NppStatus nppiHistogramEven_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*, int *nLevels*, Npp32s *nLowerLevel*, Npp32s *nUpperLevel*, Npp8u ∗ *pBuffer*)

One-channel 8-bit unsigned HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Pointer to array that receives the computed histogram. The array must be of size nLevels-1.

nLevels Number of levels.

nLowerLevel Lower boundary of lowest level bin.

nUpperLevel Upper boundary of highest level bin.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_8u_C1R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.114.2.12 NppStatus nppiHistogramEven_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], int *nLevels*[3], Npp32s *nLowerLevel*[3], Npp32s *nUpperLevel*[3], Npp8u ∗ *pBuffer*)

Three-channel 8-bit unsigned HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_8u_C3R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.114.2.13 NppStatus nppiHistogramEven_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[4], int *nLevels*[4], Npp32s *nLowerLevel*[4], Npp32s *nUpperLevel*[4], Npp8u ∗ *pBuffer*)

Four-channel 8-bit unsigned HistogramEven.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving computed histograms per color channel. Array pointed by pHist[i] be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

nLowerLevel Array containing lower-level of lowest bin per color channel.

nUpperLevel Array containing upper-level of highest bin per color channel.

pBuffer Pointer to appropriately sized (nppiHistogramEvenGetBufferSize_8u_C4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.114.2.14 NppStatus nppiHistogramEvenGetBufferSize_16s_AC4R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.15 NppStatus nppiHistogramEvenGetBufferSize_16s_C1R (NppiSize *oSizeROI*, int *nLevels*, int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Number of levels in the histogram.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.16 NppStatus nppiHistogramEvenGetBufferSize_16s_C3R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.17 NppStatus nppiHistogramEvenGetBufferSize_16s_C4R (NppiSize *oSizeROI*, int *nLevels*[4], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.18 NppStatus nppiHistogramEvenGetBufferSize_16u_AC4R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.19 NppStatus nppiHistogramEvenGetBufferSize_16u_C1R (NppiSize *oSizeROI*, int *nLevels*, int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Number of levels in the histogram.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.20 NppStatus nppiHistogramEvenGetBufferSize_16u_C3R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.21 NppStatus nppiHistogramEvenGetBufferSize_16u_C4R (NppiSize *oSizeROI*, int *nLevels*[4], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.22 NppStatus nppiHistogramEvenGetBufferSize_8u_AC4R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.23 NppStatus nppiHistogramEvenGetBufferSize_8u_C1R (NppiSize *oSizeROI*, int *nLevels*, int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Number of levels in the histogram.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.24 NppStatus nppiHistogramEvenGetBufferSize_8u_C3R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Number of levels in the histogram.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.114.2.25 NppStatus nppiHistogramEvenGetBufferSize_8u_C4R (NppiSize *oSizeROI*, int *nLevels*[4], int ∗ *hpBufferSize*)

Buffer size for nppiHistogramEven_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115 HistogramRange

Primitives for computing the histogram of an image within specified ranges.

HistogramEven

The histogram is computed according to the ranges provided in $pLevels$.

The histogram $pHist[k]$ is defined as the total number of pixels that fall into the range: $pLevels[k] <= pSrc(j, i) < pLevels[k + 1]$. The number of the histogram bins is $nLevel - 1$. The functions require additional scratch buffer for computations.

- NppStatus nppiHistogramRange_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist, const Npp32s ∗pLevels, int nLevels, Npp8u ∗pBuffer)

  One-channel 8-bit unsigned HistogramRange.

- NppStatus nppiHistogramRange_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], const Npp32s ∗pLevels[3], int nLevels[3], Npp8u ∗pBuffer)

  Three-channel 8-bit unsigned HistogramRange.

- NppStatus nppiHistogramRange_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[4], const Npp32s ∗pLevels[4], int nLevels[4], Npp8u ∗pBuffer)

  Four-channel 8-bit unsigned HistogramRange.

- NppStatus nppiHistogramRange_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], const Npp32s ∗pLevels[3], int nLevels[3], Npp8u ∗pBuffer)

  Four-channel 8-bit unsigned HistogramRange ignoring alpha channel.

- NppStatus nppiHistogramRange_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist, const Npp32s ∗pLevels, int nLevels, Npp8u ∗pBuffer)

  One-channel 16-bit unsigned HistogramRange.

- NppStatus nppiHistogramRange_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], const Npp32s ∗pLevels[3], int nLevels[3], Npp8u ∗pBuffer)

  Three-channel 16-bit unsigned HistogramRange.

- NppStatus nppiHistogramRange_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[4], const Npp32s ∗pLevels[4], int nLevels[4], Npp8u ∗pBuffer)

  Four-channel 16-bit unsigned HistogramRange.

- NppStatus nppiHistogramRange_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], const Npp32s ∗pLevels[3], int nLevels[3], Npp8u ∗pBuffer)

  Four-channel 16-bit unsigned HistogramRange ignoring alpha channel.

- NppStatus nppiHistogramRange_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist, const Npp32s ∗pLevels, int nLevels, Npp8u ∗pBuffer)

  One-channel 16-bit signed HistogramRange.

- NppStatus nppiHistogramRange_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], const Npp32s ∗pLevels[3], int nLevels[3], Npp8u ∗pBuffer)

  Three-channel 16-bit signed HistogramRange.

- NppStatus nppiHistogramRange_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[4], const Npp32s ∗pLevels[4], int nLevels[4], Npp8u ∗pBuffer)

  Four-channel 16-bit signed HistogramRange.

- NppStatus nppiHistogramRange_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], const Npp32s ∗pLevels[3], int nLevels[3], Npp8u ∗pBuffer)

  Four-channel 16-bit signed HistogramRange.

- NppStatus nppiHistogramRange_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist, const Npp32f ∗pLevels, int nLevels, Npp8u ∗pBuffer)

  One-channel 32-bit floating point HistogramRange.

- NppStatus nppiHistogramRange_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], const Npp32f ∗pLevels[3], int nLevels[3], Npp8u ∗pBuffer)

  Three-channel 32-bit floating point HistogramRange.

- NppStatus nppiHistogramRange_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[4], const Npp32f ∗pLevels[4], int nLevels[4], Npp8u ∗pBuffer)

  Four-channel 32-bit floating point HistogramRange.

- NppStatus nppiHistogramRange_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSizeROI, Npp32s ∗pHist[3], const Npp32f ∗pLevels[3], int nLevels[3], Npp8u ∗pBuffer)

  Four-channel 32-bit floating point HistogramRange ignoring alpha channel.

HistogramRangeGetBufferSize

Companion primitives for computing the device buffer size (in bytes) required by the HistogramRange primitives.

- NppStatus nppiHistogramRangeGetBufferSize_8u_C1R (NppiSize oSizeROI, int nLevels, int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_8u_C1R.

- NppStatus nppiHistogramRangeGetBufferSize_8u_C3R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_8u_C3R.

- NppStatus nppiHistogramRangeGetBufferSize_8u_C4R (NppiSize oSizeROI, int nLevels[4], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_8u_C4R.

- NppStatus nppiHistogramRangeGetBufferSize_8u_AC4R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_8u_AC4R.

- NppStatus nppiHistogramRangeGetBufferSize_16u_C1R (NppiSize oSizeROI, int nLevels, int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_16u_C1R.

- NppStatus nppiHistogramRangeGetBufferSize_16u_C3R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_16u_C3R.

- NppStatus nppiHistogramRangeGetBufferSize_16u_C4R (NppiSize oSizeROI, int nLevels[4], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_16u_C4R.

- NppStatus nppiHistogramRangeGetBufferSize_16u_AC4R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_16u_AC4R.

- NppStatus nppiHistogramRangeGetBufferSize_16s_C1R (NppiSize oSizeROI, int nLevels, int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_16s_C1R.

- NppStatus nppiHistogramRangeGetBufferSize_16s_C3R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_16s_C3R.

- NppStatus nppiHistogramRangeGetBufferSize_16s_C4R (NppiSize oSizeROI, int nLevels[4], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_16s_C4R.

- NppStatus nppiHistogramRangeGetBufferSize_16s_AC4R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_16s_AC4R.

- NppStatus nppiHistogramRangeGetBufferSize_32f_C1R (NppiSize oSizeROI, int nLevels, int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_32f_C1R.

- NppStatus nppiHistogramRangeGetBufferSize_32f_C3R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_32f_C3R.

- NppStatus nppiHistogramRangeGetBufferSize_32f_C4R (NppiSize oSizeROI, int nLevels[4], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_32f_C4R.

- NppStatus nppiHistogramRangeGetBufferSize_32f_AC4R (NppiSize oSizeROI, int nLevels[3], int ∗hpBufferSize)

  Scratch-buffer size for nppiHistogramRange_32f_AC4R.

7.115.1 Detailed Description

Primitives for computing the histogram of an image within specified ranges.

7.115.2 Function Documentation

7.115.2.1 NppStatus nppiHistogramRange_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3], Npp8u ∗ *pBuffer*)

Four-channel 16-bit signed HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_16s_AC4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.2 NppStatus nppiHistogramRange_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*, const Npp32s ∗ *pLevels*, int *nLevels*, Npp8u ∗ *pBuffer*)

One-channel 16-bit signed HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Pointer to array that receives the computed histogram. The array must be of size nLevels-1.

pLevels Pointer to array containing the level sizes of the bins. The array must be of size nLevels.

nLevels Number of levels in histogram.

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_16s_C1R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.3 NppStatus nppiHistogramRange_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3], Npp8u ∗ *pBuffer*)

Three-channel 16-bit signed HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_16s_C3R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.4 NppStatus nppiHistogramRange_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4], Npp8u ∗ *pBuffer*)

Four-channel 16-bit signed HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_16s_C4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.5 NppStatus nppiHistogramRange_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3], Npp8u ∗ *pBuffer*)

Four-channel 16-bit unsigned HistogramRange ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_16u_AC4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.6 NppStatus nppiHistogramRange_16u_C1R (const Npp16u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s $*$ *pHist*, const Npp32s $*$ *pLevels*, int *nLevels*, Npp8u $*$ *pBuffer*)

One-channel 16-bit unsigned HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Pointer to array that receives the computed histogram. The array must be of size nLevels-1.

pLevels Pointer to array containing the level sizes of the bins. The array must be of size nLevels.

nLevels Number of levels in histogram.

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_16u_C1R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.7 NppStatus nppiHistogramRange_16u_C3R (const Npp16u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s $*$ *pHist*[3], const Npp32s $*$ *pLevels*[3], int *nLevels*[3], Npp8u $*$ *pBuffer*)

Three-channel 16-bit unsigned HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_16u_C3R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.8 NppStatus nppiHistogramRange_16u_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4], Npp8u ∗ *pBuffer*)

Four-channel 16-bit unsigned HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_16u_C4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.9 NppStatus nppiHistogramRange_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], const Npp32f ∗ *pLevels*[3], int *nLevels*[3], Npp8u ∗ *pBuffer*)

Four-channel 32-bit floating point HistogramRange ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_32f_AC4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.10 NppStatus nppiHistogramRange_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*, const Npp32f ∗ *pLevels*, int *nLevels*, Npp8u ∗ *pBuffer*)

One-channel 32-bit floating point HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Pointer to array that receives the computed histogram. The array must be of size nLevels-1.

pLevels Pointer to array containing the level sizes of the bins. The array must be of size nLevels.

nLevels Number of levels in histogram.

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_32f_C1R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.11 NppStatus nppiHistogramRange_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], const Npp32f ∗ *pLevels*[3], int *nLevels*[3], Npp8u ∗ *pBuffer*)

Three-channel 32-bit floating point HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_32f_C3R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.12 NppStatus nppiHistogramRange_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[4], const Npp32f ∗ *pLevels*[4], int *nLevels*[4], Npp8u ∗ *pBuffer*)

Four-channel 32-bit floating point HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_32f_C4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.13 NppStatus nppiHistogramRange_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3], Npp8u ∗ *pBuffer*)

Four-channel 8-bit unsigned HistogramRange ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_8u_AC4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.14 NppStatus nppiHistogramRange_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*, const Npp32s ∗ *pLevels*, int *nLevels*, Npp8u ∗ *pBuffer*)

One-channel 8-bit unsigned HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Pointer to array that receives the computed histogram. The array must be of size nLevels-1.

pLevels Pointer to array containing the level sizes of the bins. The array must be of size nLevels.

nLevels Number of levels in histogram.

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_8u_C1R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.15 NppStatus nppiHistogramRange_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[3], const Npp32s ∗ *pLevels*[3], int *nLevels*[3], Npp8u ∗ *pBuffer*)

Three-channel 8-bit unsigned HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_8u_C3R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.16 NppStatus nppiHistogramRange_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSizeROI*, Npp32s ∗ *pHist*[4], const Npp32s ∗ *pLevels*[4], int *nLevels*[4], Npp8u ∗ *pBuffer*)

Four-channel 8-bit unsigned HistogramRange.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSizeROI Region-of-Interest (ROI).

pHist Array of pointers which are receiving the computed histograms per color channel. Array pointed by pHist[i] must be of size nLevels[i]-1.

nLevels Array containing number of levels per color channel.

pLevels Array containing pointers to level-arrays per color channel. Array pointed by pLevel[i] must be of size nLevels[i].

pBuffer Pointer to appropriately sized (nppiHistogramRangeGetBufferSize_8u_C4R) scratch buffer.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.115.2.17 NppStatus nppiHistogramRangeGetBufferSize_16s_AC4R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_16s_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.18 NppStatus nppiHistogramRangeGetBufferSize_16s_C1R (NppiSize *oSizeROI*, int *nLevels*, int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_16s_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Number of levels in the histogram.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.19 NppStatus nppiHistogramRangeGetBufferSize_16s_C3R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_16s_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.20 NppStatus nppiHistogramRangeGetBufferSize_16s_C4R (NppiSize *oSizeROI*, int *nLevels*[4], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_16s_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.21 NppStatus nppiHistogramRangeGetBufferSize_16u_AC4R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_16u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.22 NppStatus nppiHistogramRangeGetBufferSize_16u_C1R (NppiSize *oSizeROI*, int *nLevels*, int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_16u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Number of levels in the histogram.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.23 NppStatus nppiHistogramRangeGetBufferSize_16u_C3R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_16u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.24 NppStatus nppiHistogramRangeGetBufferSize_16u_C4R (NppiSize *oSizeROI*, int *nLevels*[4], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_16u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.25 NppStatus nppiHistogramRangeGetBufferSize_32f_AC4R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.26 NppStatus nppiHistogramRangeGetBufferSize_32f_C1R (NppiSize *oSizeROI*, int *nLevels*, int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Number of levels in the histogram.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.27 NppStatus nppiHistogramRangeGetBufferSize_32f_C3R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.28 NppStatus nppiHistogramRangeGetBufferSize_32f_C4R (NppiSize *oSizeROI*, int *nLevels*[4], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.29 NppStatus nppiHistogramRangeGetBufferSize_8u_AC4R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_8u_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.30 NppStatus nppiHistogramRangeGetBufferSize_8u_C1R (NppiSize *oSizeROI*, int *nLevels*, int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_8u_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Number of levels in the histogram.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.31 NppStatus nppiHistogramRangeGetBufferSize_8u_C3R (NppiSize *oSizeROI*, int *nLevels*[3], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_8u_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.115.2.32 NppStatus nppiHistogramRangeGetBufferSize_8u_C4R (NppiSize *oSizeROI*, int *nLevels*[4], int ∗ *hpBufferSize*)

Scratch-buffer size for nppiHistogramRange_8u_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

nLevels Array containing number of levels per color channel.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes..

7.116 Image Proximity

Primitives for computing the proximity measure between a source image and a template image.

Modules

- SqrDistanceFull_Norm

  Primitives for computing the normalized Euclidean distance between two images with full mode.

- SqrDistanceSame_Norm

  Primitives for computing the normalized Euclidean distance between two images with same mode.

- SqrDistanceValid_Norm

  Primitives for computing the normalized Euclidean distance between two images with valid mode.

- CrossCorrFull_Norm

  Primitives for computing the normalized cross correlation between two images with full mode.

- CrossCorrSame_Norm

  Primitives for computing the normalized cross correlation between two images with same mode.

- CrossCorrValid_Norm

  Primitives for computing the normalized cross correlation between two images with valid mode.

- CrossCorrValid

  Primitives for computing the cross correlation between two images with valid mode.

- CrossCorrFull_NormLevel

  Primitives for computing the normalized cross correlation coefficient between two images with full mode.

- CrossCorrSame_NormLevel

  Primitives for computing the normalized cross correlation coefficient between two images with same mode.

- CrossCorrValid_NormLevel

  Primitives for computing the normalized cross correlation coefficient between two images with valid mode.

7.116.1 Detailed Description

Primitives for computing the proximity measure between a source image and a template image.

7.116.2 General Introduction

There are basically two approaches to compute the proximity measure for template matching, Euclidean distance and the cross correlation.

1. Euclidean distance computes the sum of the squared distance (SSD) between the corresponding pixels of the source image and the template image. The smaller the distance is, the more similar the source image and the template image is around the pixel. The anchor of the template image is used during the computations, which always lies in the gemotric center of the image. Given a source image $pSrc$ ($W_s \times H_s$) and a template image $pTpl$ ($W_t \times H_t$), the Euclidean distance $D_{st}(c, r)$ between two images at pixel in row r and column c is computed as (s stands for source image and t for template image for short):

$$D_{st}(c,r) = \sum_{j=0}^{H_t-1} \sum_{i=0}^{W_t-1} [pTpl(j,i) - pSrc(j + c - \frac{H_t}{2}, i + r - \frac{W_t}{2})]^2$$

2. Cross correlation computes the sum of the product between the corresponding pixels of the source image and the template image. The cross correlation $R_{st}(c, r)$ is calculated as:

$$R_{st}(c,r) = \sum_{j=0}^{H_t-1} \sum_{i=0}^{W_t-1} [pTpl(j,i) \cdot pSrc(j + c - \frac{H_t}{2}, i + r - \frac{W_t}{2})]$$

   The larger the cross correlation value is, the more similar the source image and the template image is around the pixel.

3. The cross correlation $R_{st}(c, r)$ is affected by the brightness of the images which may vary due to the lighting and exposure conditions. Therefore, NPP computes the cross correlation coefficient to circumvent this dependence. This is typically done at every step by subtracting the mean from every pixel value, i.e.,

$$\tilde{R}_{st}(c,r) = \sum_{j=0}^{H_t-1} \sum_{i=0}^{W_t-1} [pTpl(j,i) - Mean_t] \cdot [pSrc(j + c - \frac{H_t}{2}, i + r - \frac{W_t}{2}) - Mean_s]$$

NPP computes the normalized values of Euclidean distance, cross correlation and the cross correlation coefficient.

1. The normalized Euclidean distance $\sigma_{st}(c, r)$ is defined as:

$$\sigma_{st}(c,r) = \frac{D_{st}(c,r)}{\sqrt{R_{ss}(c,r) \cdot R_{tt}(\frac{H_t}{2}, \frac{W_t}{2})}}$$

2. The normalized cross correlation $\rho_{st}(c, r)$ is defined as:

$$\rho_{st}(c,r) = \frac{R_{st}(c,r)}{\sqrt{R_{ss}(c,r) \cdot R_{tt}(\frac{H_t}{2}, \frac{W_t}{2})}}$$

   The $R_{ss}(c, r)$ and $R_{tt}(\frac{H_t}{2}, \frac{W_t}{2}$ denote the auto correlation of the source image and the template image individually. They are defined as:

$$R_{ss}(c,r) = \sum_{j=c-\frac{H_t}{2}}^{c+\frac{H_t}{2}} \sum_{i=r-\frac{W_t}{2}}^{r+\frac{W_t}{2}} pSrc(j,i)$$

$$R_{tt}(\frac{H_t}{2}, \frac{W_t}{2}) = \sum_{j=0}^{H_t-1} \sum_{i=0}^{W_t-1} pTpl(j,i)$$

3. Similarly, the normalized cross correlation coefficient $\gamma_{st}(c,r)$ is calculated as:

$$\gamma_{st}(c,r) = \frac{\tilde{R}_{st}(c,r)}{\sqrt{\tilde{R}_{ss}(c,r) \cdot \tilde{R}_{tt}(\frac{H_t}{2}, \frac{W_t}{2})}}$$

The $\tilde{R}_{ss}(c,r)$ and $\tilde{R}_{tt}(\frac{H_t}{2}, \frac{W_t}{2}$ are defined as:

$$\tilde{R}_{ss}(c,r) = \sum_{j=c-\frac{H_t}{2}}^{c+\frac{H_t}{2}} \sum_{i=r-\frac{W_t}{2}}^{r+\frac{W_t}{2}} [pSrc(j,i) - Mean_s]$$

$$\tilde{R}_{tt}(\frac{H_t}{2}, \frac{W_t}{2}) = \sum_{j=0}^{H_t-1} \sum_{i=0}^{W_t-1} [pTpl(j,i) - Mean_t]$$

7.116.3 Categorizations

The Euclidean distance and the cross correlation are categorized into three types, full, same, and valid.

1. Full mode indicates that the anchor of the template image starts from the outside of the source image, assuming the out-of-boundary pixels are zeor-padded. The size of the destination image is $(W_s + W_t - 1) \times (H_s + H_t - 1)$.

2. Same mode means that the anchor of the template image starts from the top left pixel of the source image. All the out-of-boundary pixels are also zero-padded. The size of the destination image is the same as the source one, i.e., $W_s \times H_s$.

3. Valid mode indicates that there are no out-of-boudnary readings from the source image. The anchor of the template image starts from the inside of the source image. The size of the destination image is $(W_s - W_t + 1) \times (H_s - H_t + 1)$.

7.117 SqrDistanceFull_Norm

Primitives for computing the normalized Euclidean distance between two images with full mode.

SqrDistanceFull_Norm

The functions compute the $\sigma_{st}(c,r)$ in General Introduction with full mode (see Categorizations).

- NppStatus nppiSqrDistanceFull_Norm_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  One-channel 8-bit unsigned image SqrDistanceFull_Norm, scaled by $2^(-nScaleFactor)$*.*

- NppStatus nppiSqrDistanceFull_Norm_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Three-channel 8-bit unsigned image SqrDistanceFull_Norm, scaled by $2^(-nScaleFactor)$*.*

- NppStatus nppiSqrDistanceFull_Norm_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image SqrDistanceFull_Norm, scaled by $2^(-nScaleFactor)$*.*

- NppStatus nppiSqrDistanceFull_Norm_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image SqrDistanceFull_Norm ignoring alpha channel, scaled by $2^(-nScaleFactor)$*.*

- NppStatus nppiSqrDistanceFull_Norm_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 32-bit floating point image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 32-bit floating point image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 32-bit floating point image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 32-bit floating point image SqrDistanceFull_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceFull_Norm_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit unsigned image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

Three-channel 8-bit unsigned image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image SqrDistanceFull_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceFull_Norm_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit signed image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 8-bit signed image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image SqrDistanceFull_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceFull_Norm_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 16-bit unsigned image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 16-bit unsigned image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image SqrDistanceFull_Norm.

- NppStatus nppiSqrDistanceFull_Norm_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image SqrDistanceFull_Norm ignoring alpha channel.

7.117.1 Detailed Description

Primitives for computing the normalized Euclidean distance between two images with full mode.

7.117.2 Function Documentation

7.117.2.1 NppStatus nppiSqrDistanceFull_Norm_16u32f_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image SqrDistanceFull_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.2 NppStatus nppiSqrDistanceFull_Norm_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 16-bit unsigned image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.3 NppStatus nppiSqrDistanceFull_Norm_16u32f_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 16-bit unsigned image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.4 NppStatus nppiSqrDistanceFull_Norm_16u32f_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.5 NppStatus nppiSqrDistanceFull_Norm_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image SqrDistanceFull_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.6 NppStatus nppiSqrDistanceFull_Norm_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 32-bit floating point image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.7 NppStatus nppiSqrDistanceFull_Norm_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 32-bit floating point image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.8 NppStatus nppiSqrDistanceFull_Norm_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.9 NppStatus nppiSqrDistanceFull_Norm_8s32f_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image SqrDistanceFull_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.10 NppStatus nppiSqrDistanceFull_Norm_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit signed image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.11 NppStatus nppiSqrDistanceFull_Norm_8s32f_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit signed image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.12 NppStatus nppiSqrDistanceFull_Norm_8s32f_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.13 NppStatus nppiSqrDistanceFull_Norm_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image SqrDistanceFull_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.14 NppStatus nppiSqrDistanceFull_Norm_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit unsigned image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.15 NppStatus nppiSqrDistanceFull_Norm_8u32f_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit unsigned image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.16 NppStatus nppiSqrDistanceFull_Norm_8u32f_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image SqrDistanceFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.17 NppStatus nppiSqrDistanceFull_Norm_8u_AC4RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image SqrDistanceFull_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.18 NppStatus nppiSqrDistanceFull_Norm_8u_C1RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

One-channel 8-bit unsigned image SqrDistanceFull_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.19 NppStatus nppiSqrDistanceFull_Norm_8u_C3RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Three-channel 8-bit unsigned image SqrDistanceFull_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.117.2.20 NppStatus nppiSqrDistanceFull_Norm_8u_C4RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image SqrDistanceFull_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118 SqrDistanceSame_Norm

Primitives for computing the normalized Euclidean distance between two images with same mode.

SqrDistanceSame_Norm

The functions compute the $\sigma_{st}(c,r)$ in General Introduction with same mode (see Categorizations).

- NppStatus nppiSqrDistanceSame_Norm_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

    One-channel 8-bit unsigned image SqrDistanceSame_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiSqrDistanceSame_Norm_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

    Three-channel 8-bit unsigned image SqrDistanceSame_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiSqrDistanceSame_Norm_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

    Four-channel 8-bit unsigned image SqrDistanceSame_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiSqrDistanceSame_Norm_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

    Four-channel 8-bit unsigned image SqrDistanceSame_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiSqrDistanceSame_Norm_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

    One-channel 32-bit floating point image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

    Three-channel 32-bit floating point image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

    Four-channel 32-bit floating point image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

    Four-channel 32-bit floating point image SqrDistanceSame_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceSame_Norm_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

    One-channel 8-bit unsigned image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 8-bit unsigned image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image SqrDistanceSame_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceSame_Norm_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit signed image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 8-bit signed image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image SqrDistanceSame_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceSame_Norm_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 16-bit unsigned image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 16-bit unsigned image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image SqrDistanceSame_Norm.

- NppStatus nppiSqrDistanceSame_Norm_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image SqrDistanceSame_Norm ignoring alpha channel.

7.118.1 Detailed Description

Primitives for computing the normalized Euclidean distance between two images with same mode.

7.118.2 Function Documentation

7.118.2.1 NppStatus nppiSqrDistanceSame_Norm_16u32f_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image SqrDistanceSame_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.2 NppStatus nppiSqrDistanceSame_Norm_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 16-bit unsigned image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.3 NppStatus nppiSqrDistanceSame_Norm_16u32f_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 16-bit unsigned image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.4 NppStatus nppiSqrDistanceSame_Norm_16u32f_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.5 NppStatus nppiSqrDistanceSame_Norm_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image SqrDistanceSame_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.6 NppStatus nppiSqrDistanceSame_Norm_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 32-bit floating point image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.7 NppStatus nppiSqrDistanceSame_Norm_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 32-bit floating point image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.8 NppStatus nppiSqrDistanceSame_Norm_32f_C4R (const Npp32f $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f $*$ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.9 NppStatus nppiSqrDistanceSame_Norm_8s32f_AC4R (const Npp8s $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f $*$ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image SqrDistanceSame_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.10 NppStatus nppiSqrDistanceSame_Norm_8s32f_C1R (const Npp8s * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

One-channel 8-bit signed image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.11 NppStatus nppiSqrDistanceSame_Norm_8s32f_C3R (const Npp8s * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Three-channel 8-bit signed image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.12 NppStatus nppiSqrDistanceSame_Norm_8s32f_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.13 NppStatus nppiSqrDistanceSame_Norm_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image SqrDistanceSame_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.14 NppStatus nppiSqrDistanceSame_Norm_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit unsigned image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.15 NppStatus nppiSqrDistanceSame_Norm_8u32f_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit unsigned image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.16 NppStatus nppiSqrDistanceSame_Norm_8u32f_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image SqrDistanceSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.17 NppStatus nppiSqrDistanceSame_Norm_8u_AC4RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image SqrDistanceSame_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.18 NppStatus nppiSqrDistanceSame_Norm_8u_C1RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

One-channel 8-bit unsigned image SqrDistanceSame_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.19 NppStatus nppiSqrDistanceSame_Norm_8u_C3RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Three-channel 8-bit unsigned image SqrDistanceSame_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.118.2.20 NppStatus nppiSqrDistanceSame_Norm_8u_C4RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image SqrDistanceSame_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119 SqrDistanceValid_Norm

Primitives for computing the normalized Euclidean distance between two images with valid mode.

SqrDistanceValid_Norm

The functions compute the $\sigma_{st}(c, r)$ in General Introduction with valid mode (see Categorizations).

- NppStatus nppiSqrDistanceValid_Norm_8u_C1RSfs (const Npp8u $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u $*$pDst, int nDstStep, int nScaleFactor)

  One-channel 8-bit unsigned image SqrDistanceValid_Norm, scaled by $2^(- nScaleFactor)$*.*

- NppStatus nppiSqrDistanceValid_Norm_8u_C3RSfs (const Npp8u $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u $*$pDst, int nDstStep, int nScaleFactor)

  Three-channel 8-bit unsigned image SqrDistanceValid_Norm, scaled by $2^(- nScaleFactor)$*.*

- NppStatus nppiSqrDistanceValid_Norm_8u_C4RSfs (const Npp8u $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u $*$pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image SqrDistanceValid_Norm, scaled by $2^(- nScaleFactor)$*.*

- NppStatus nppiSqrDistanceValid_Norm_8u_AC4RSfs (const Npp8u $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u $*$pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image SqrDistanceValid_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$*.*

- NppStatus nppiSqrDistanceValid_Norm_32f_C1R (const Npp32f $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f $*$pDst, int nDstStep)

  One-channel 32-bit floating point image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_32f_C3R (const Npp32f $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f $*$pDst, int nDstStep)

  Three-channel 32-bit floating point image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_32f_C4R (const Npp32f $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f $*$pDst, int nDstStep)

  Four-channel 32-bit floating point image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_32f_AC4R (const Npp32f $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f $*$pDst, int nDstStep)

  Four-channel 32-bit floating point image SqrDistanceValid_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceValid_Norm_8u32f_C1R (const Npp8u $*$pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u $*$pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f $*$pDst, int nDstStep)

  One-channel 8-bit unsigned image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 8-bit unsigned image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image SqrDistanceValid_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceValid_Norm_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit signed image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 8-bit signed image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image SqrDistanceValid_Norm ignoring alpha channel.

- NppStatus nppiSqrDistanceValid_Norm_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 16-bit unsigned image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 16-bit unsigned image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image SqrDistanceValid_Norm.

- NppStatus nppiSqrDistanceValid_Norm_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image SqrDistanceValid_Norm ignoring alpha channel.

7.119.1 Detailed Description

Primitives for computing the normalized Euclidean distance between two images with valid mode.

7.119.2 Function Documentation

7.119.2.1 NppStatus nppiSqrDistanceValid_Norm_16u32f_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image SqrDistanceValid_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.2 NppStatus nppiSqrDistanceValid_Norm_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 16-bit unsigned image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.3 NppStatus nppiSqrDistanceValid_Norm_16u32f_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 16-bit unsigned image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.4 NppStatus nppiSqrDistanceValid_Norm_16u32f_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.5 NppStatus nppiSqrDistanceValid_Norm_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image SqrDistanceValid_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.6 NppStatus nppiSqrDistanceValid_Norm_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

One-channel 32-bit floating point image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.7 NppStatus nppiSqrDistanceValid_Norm_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Three-channel 32-bit floating point image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.8 NppStatus nppiSqrDistanceValid_Norm_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.9 NppStatus nppiSqrDistanceValid_Norm_8s32f_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image SqrDistanceValid_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.10 NppStatus nppiSqrDistanceValid_Norm_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit signed image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.11 NppStatus nppiSqrDistanceValid_Norm_8s32f_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit signed image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.12 NppStatus nppiSqrDistanceValid_Norm_8s32f_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image SqrDistanceValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.13 NppStatus nppiSqrDistanceValid_Norm_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image SqrDistanceValid_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.14 NppStatus nppiSqrDistanceValid_Norm_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit unsigned image SqrDistanceValid_Norm.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSrcRoiSize*** Region-of-Interest (ROI).
- ***pTpl*** Pointer to the template image.
- ***nTplStep*** Number of bytes between successive rows in the template image.
- ***oTplRoiSize*** Region-of-Interest (ROI).
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.15 NppStatus nppiSqrDistanceValid_Norm_8u32f_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit unsigned image SqrDistanceValid_Norm.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSrcRoiSize*** Region-of-Interest (ROI).
- ***pTpl*** Pointer to the template image.
- ***nTplStep*** Number of bytes between successive rows in the template image.
- ***oTplRoiSize*** Region-of-Interest (ROI).
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.16 NppStatus nppiSqrDistanceValid_Norm_8u32f_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image SqrDistanceValid_Norm.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSrcRoiSize*** Region-of-Interest (ROI).
- ***pTpl*** Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.17 NppStatus nppiSqrDistanceValid_Norm_8u_AC4RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image SqrDistanceValid_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.18 NppStatus nppiSqrDistanceValid_Norm_8u_C1RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

One-channel 8-bit unsigned image SqrDistanceValid_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.19 NppStatus nppiSqrDistanceValid_Norm_8u_C3RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*)

Three-channel 8-bit unsigned image SqrDistanceValid_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.119.2.20 NppStatus nppiSqrDistanceValid_Norm_8u_C4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image SqrDistanceValid_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120 CrossCorrFull_Norm

Primitives for computing the normalized cross correlation between two images with full mode.

CrossCorrFull_Norm

The functions compute the $\rho_{st}(c, r)$ in General Introduction with full mode (see Categorizations).

- NppStatus nppiCrossCorrFull_Norm_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  One-channel 8-bit unsigned image CrossCorrFull_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrFull_Norm_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Three-channel 8-bit unsigned image CrossCorrFull_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrFull_Norm_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image CrossCorrFull_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrFull_Norm_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image CrossCorrFull_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrFull_Norm_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 32-bit floating point image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 32-bit floating point image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 32-bit floating point image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 32-bit floating point image CrossCorrFull_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrFull_Norm_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit unsigned image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

Three-channel 8-bit unsigned image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image CrossCorrFull_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrFull_Norm_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit signed image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 8-bit signed image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image CrossCorrFull_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrFull_Norm_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 16-bit unsigned image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 16-bit unsigned image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image CrossCorrFull_Norm.

- NppStatus nppiCrossCorrFull_Norm_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image CrossCorrFull_Norm ignoring alpha channel.

7.120.1 Detailed Description

Primitives for computing the normalized cross correlation between two images with full mode.

7.120.2 Function Documentation

7.120.2.1 NppStatus nppiCrossCorrFull_Norm_16u32f_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image CrossCorrFull_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.2 NppStatus nppiCrossCorrFull_Norm_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 16-bit unsigned image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.3 NppStatus nppiCrossCorrFull_Norm_16u32f_C3R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Three-channel 16-bit unsigned image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.4 NppStatus nppiCrossCorrFull_Norm_16u32f_C4R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.5 NppStatus nppiCrossCorrFull_Norm_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image CrossCorrFull_Norm ignoring alpha channel.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSrcRoiSize*** Region-of-Interest (ROI).
- ***pTpl*** Pointer to the template image.
- ***nTplStep*** Number of bytes between successive rows in the template image.
- ***oTplRoiSize*** Region-of-Interest (ROI).
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.6 NppStatus nppiCrossCorrFull_Norm_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 32-bit floating point image CrossCorrFull_Norm.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSrcRoiSize*** Region-of-Interest (ROI).
- ***pTpl*** Pointer to the template image.
- ***nTplStep*** Number of bytes between successive rows in the template image.
- ***oTplRoiSize*** Region-of-Interest (ROI).
- ***pDst*** Destination-Image Pointer.
- ***nDstStep*** Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.7 NppStatus nppiCrossCorrFull_Norm_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 32-bit floating point image CrossCorrFull_Norm.

Parameters:

- ***pSrc*** Source-Image Pointer.
- ***nSrcStep*** Source-Image Line Step.
- ***oSrcRoiSize*** Region-of-Interest (ROI).
- ***pTpl*** Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.8 NppStatus nppiCrossCorrFull_Norm_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.9 NppStatus nppiCrossCorrFull_Norm_8s32f_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image CrossCorrFull_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.10 NppStatus nppiCrossCorrFull_Norm_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit signed image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.11 NppStatus nppiCrossCorrFull_Norm_8s32f_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit signed image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.12 NppStatus nppiCrossCorrFull_Norm_8s32f_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.13 NppStatus nppiCrossCorrFull_Norm_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image CrossCorrFull_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.14 NppStatus nppiCrossCorrFull_Norm_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit unsigned image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.15 NppStatus nppiCrossCorrFull_Norm_8u32f_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit unsigned image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.16 NppStatus nppiCrossCorrFull_Norm_8u32f_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image CrossCorrFull_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.17 NppStatus nppiCrossCorrFull_Norm_8u_AC4RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image CrossCorrFull_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.18 NppStatus nppiCrossCorrFull_Norm_8u_C1RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

One-channel 8-bit unsigned image CrossCorrFull_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.19 NppStatus nppiCrossCorrFull_Norm_8u_C3RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Three-channel 8-bit unsigned image CrossCorrFull_Norm, scaled by $2^(-nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.120.2.20 NppStatus nppiCrossCorrFull_Norm_8u_C4RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image CrossCorrFull_Norm, scaled by $2^(-nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121 CrossCorrSame_Norm

Primitives for computing the normalized cross correlation between two images with same mode.

CrossCorrSame_Norm

The functions compute the $\rho_{st}(c, r)$ in General Introduction with same mode (see Categorizations).

- NppStatus nppiCrossCorrSame_Norm_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  One-channel 8-bit unsigned image CrossCorrSame_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrSame_Norm_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Three-channel 8-bit unsigned image CrossCorrSame_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrSame_Norm_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image CrossCorrSame_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrSame_Norm_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image CrossCorrSame_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrSame_Norm_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 32-bit floating point image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 32-bit floating point image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 32-bit floating point image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 32-bit floating point image CrossCorrSame_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrSame_Norm_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit unsigned image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

Three-channel 8-bit unsigned image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image CrossCorrSame_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrSame_Norm_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit signed image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 8-bit signed image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image CrossCorrSame_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrSame_Norm_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 16-bit unsigned image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 16-bit unsigned image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image CrossCorrSame_Norm.

- NppStatus nppiCrossCorrSame_Norm_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image CrossCorrSame_Norm ignoring alpha channel.

7.121.1 Detailed Description

Primitives for computing the normalized cross correlation between two images with same mode.

7.121.2 Function Documentation

7.121.2.1 NppStatus nppiCrossCorrSame_Norm_16u32f_AC4R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image CrossCorrSame_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.2 NppStatus nppiCrossCorrSame_Norm_16u32f_C1R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

One-channel 16-bit unsigned image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.3 NppStatus nppiCrossCorrSame_Norm_16u32f_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 16-bit unsigned image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.4 NppStatus nppiCrossCorrSame_Norm_16u32f_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.5 NppStatus nppiCrossCorrSame_Norm_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image CrossCorrSame_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.6 NppStatus nppiCrossCorrSame_Norm_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 32-bit floating point image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.7 NppStatus nppiCrossCorrSame_Norm_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 32-bit floating point image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.8 NppStatus nppiCrossCorrSame_Norm_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.9 NppStatus nppiCrossCorrSame_Norm_8s32f_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image CrossCorrSame_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.10 NppStatus nppiCrossCorrSame_Norm_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit signed image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.11 NppStatus nppiCrossCorrSame_Norm_8s32f_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit signed image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.12 NppStatus nppiCrossCorrSame_Norm_8s32f_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.13 NppStatus nppiCrossCorrSame_Norm_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image CrossCorrSame_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.14 NppStatus nppiCrossCorrSame_Norm_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit unsigned image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.15 NppStatus nppiCrossCorrSame_Norm_8u32f_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit unsigned image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.16 NppStatus nppiCrossCorrSame_Norm_8u32f_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image CrossCorrSame_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.17 NppStatus nppiCrossCorrSame_Norm_8u_AC4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image CrossCorrSame_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.18 NppStatus nppiCrossCorrSame_Norm_8u_C1RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*)

One-channel 8-bit unsigned image CrossCorrSame_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.19 NppStatus nppiCrossCorrSame_Norm_8u_C3RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Three-channel 8-bit unsigned image CrossCorrSame_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.121.2.20 NppStatus nppiCrossCorrSame_Norm_8u_C4RSfs (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u $*$ *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image CrossCorrSame_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122 CrossCorrValid_Norm

Primitives for computing the normalized cross correlation between two images with valid mode.

CrossCorrValid_Norm

The functions compute the $\rho_{st}(c,r)$ in General Introduction with valid mode (see Categorizations).

- NppStatus nppiCrossCorrValid_Norm_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  One-channel 8-bit unsigned image CrossCorrValid_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrValid_Norm_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Three-channel 8-bit unsigned image CrossCorrValid_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrValid_Norm_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image CrossCorrValid_Norm, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrValid_Norm_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor)

  Four-channel 8-bit unsigned image CrossCorrValid_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

- NppStatus nppiCrossCorrValid_Norm_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 32-bit floating point image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 32-bit floating point image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 32-bit floating point image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 32-bit floating point image CrossCorrValid_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrValid_Norm_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit unsigned image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

Three-channel 8-bit unsigned image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit unsigned image CrossCorrValid_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrValid_Norm_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit signed image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 8-bit signed image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 8-bit signed image CrossCorrValid_Norm ignoring alpha channel.

- NppStatus nppiCrossCorrValid_Norm_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 16-bit unsigned image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Three-channel 16-bit unsigned image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image CrossCorrValid_Norm.

- NppStatus nppiCrossCorrValid_Norm_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  Four-channel 16-bit unsigned image CrossCorrValid_Norm ignoring alpha channel.

7.122.1 Detailed Description

Primitives for computing the normalized cross correlation between two images with valid mode.

7.122.2 Function Documentation

7.122.2.1 NppStatus nppiCrossCorrValid_Norm_16u32f_AC4R (const Npp16u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f $*$ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image CrossCorrValid_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.2 NppStatus nppiCrossCorrValid_Norm_16u32f_C1R (const Npp16u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f $*$ *pDst*, int *nDstStep*)

One-channel 16-bit unsigned image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.3 NppStatus nppiCrossCorrValid_Norm_16u32f_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 16-bit unsigned image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.4 NppStatus nppiCrossCorrValid_Norm_16u32f_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 16-bit unsigned image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.5 NppStatus nppiCrossCorrValid_Norm_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image CrossCorrValid_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.6 NppStatus nppiCrossCorrValid_Norm_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 32-bit floating point image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.7 NppStatus nppiCrossCorrValid_Norm_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 32-bit floating point image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.8 NppStatus nppiCrossCorrValid_Norm_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 32-bit floating point image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.9 NppStatus nppiCrossCorrValid_Norm_8s32f_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image CrossCorrValid_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.10 NppStatus nppiCrossCorrValid_Norm_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit signed image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.11 NppStatus nppiCrossCorrValid_Norm_8s32f_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Three-channel 8-bit signed image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.12 NppStatus nppiCrossCorrValid_Norm_8s32f_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit signed image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.13 NppStatus nppiCrossCorrValid_Norm_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image CrossCorrValid_Norm ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.14 NppStatus nppiCrossCorrValid_Norm_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit unsigned image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.15 NppStatus nppiCrossCorrValid_Norm_8u32f_C3R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Three-channel 8-bit unsigned image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.16 NppStatus nppiCrossCorrValid_Norm_8u32f_C4R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*)

Four-channel 8-bit unsigned image CrossCorrValid_Norm.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.17 NppStatus nppiCrossCorrValid_Norm_8u_AC4RSfs (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u * *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image CrossCorrValid_Norm ignoring alpha channel, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.18 NppStatus nppiCrossCorrValid_Norm_8u_C1RSfs (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u * *pDst*, int *nDstStep*, int *nScaleFactor*)

One-channel 8-bit unsigned image CrossCorrValid_Norm, scaled by $2^(- nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.19 NppStatus nppiCrossCorrValid_Norm_8u_C3RSfs (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u * *pDst*, int *nDstStep*, int *nScaleFactor*)

Three-channel 8-bit unsigned image CrossCorrValid_Norm, scaled by $2^(-nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.122.2.20 NppStatus nppiCrossCorrValid_Norm_8u_C4RSfs (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u * *pDst*, int *nDstStep*, int *nScaleFactor*)

Four-channel 8-bit unsigned image CrossCorrValid_Norm, scaled by $2^(-nScaleFactor)$.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.123 CrossCorrValid

Primitives for computing the cross correlation between two images with valid mode.

CrossCorrValid

The functions compute the $R_{st}(c,r)$ in General Introduction with valid mode (see Categorizations).

- NppStatus nppiCrossCorrValid_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 32-bit floating point images CrossCorrValid.

- NppStatus nppiCrossCorrValid_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit unsigned images CrossCorrValid.

- NppStatus nppiCrossCorrValid_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 8-bit signed images CrossCorrValid.

- NppStatus nppiCrossCorrValid_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep)

  One-channel 16-bit unsigned images CrossCorrValid.

7.123.1 Detailed Description

Primitives for computing the cross correlation between two images with valid mode.

7.123.2 Function Documentation

7.123.2.1 NppStatus nppiCrossCorrValid_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 16-bit unsigned images CrossCorrValid.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.123.2.2 NppStatus nppiCrossCorrValid_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 32-bit floating point images CrossCorrValid.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.123.2.3 NppStatus nppiCrossCorrValid_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*)

One-channel 8-bit signed images CrossCorrValid.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.123.2.4 NppStatus nppiCrossCorrValid_8u32f_C1R (const Npp8u $*$ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u $*$ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f $*$ *pDst*, int *nDstStep*)

One-channel 8-bit unsigned images CrossCorrValid.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124 CrossCorrFull_NormLevel

Primitives for computing the normalized cross correlation coefficient between two images with full mode.

CrossCorrFull_NormLevel

The functions compute the $\gamma_{st}(c, r)$ in General Introduction with full mode (see Categorizations).

The functions require additional scratch buffer for computations.

- NppStatus nppiCrossCorrFull_NormLevel_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrFull_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrFull_NormLevel_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image CrossCorrFull_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrFull_NormLevel_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrFull_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrFull_NormLevel_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit signed image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit signed image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image CrossCorrFull_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrFull_NormLevel_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image CrossCorrFull_NormLevel.

- NppStatus nppiCrossCorrFull_NormLevel_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image CrossCorrFull_NormLevel ignoring alpha channel.

FullNormLevelGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the CrossCorrFull_NormLevel primitives.

- NppStatus nppiFullNormLevelGetBufferHostSize_8u_C1RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u_C1RSfs.

- NppStatus nppiFullNormLevelGetBufferHostSize_8u_C3RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u_C3RSfs.

- NppStatus nppiFullNormLevelGetBufferHostSize_8u_C4RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u_C4RSfs.

- NppStatus nppiFullNormLevelGetBufferHostSize_8u_AC4RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u_AC4RSfs.

- NppStatus nppiFullNormLevelGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_32f_C1R.

- NppStatus nppiFullNormLevelGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_32f_C3R.

- NppStatus nppiFullNormLevelGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_32f_C4R.

- NppStatus nppiFullNormLevelGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_32f_AC4R.

- NppStatus nppiFullNormLevelGetBufferHostSize_8u32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u32f_C1R.

- NppStatus nppiFullNormLevelGetBufferHostSize_8u32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u32f_C3R.

- NppStatus nppiFullNormLevelGetBufferHostSize_8u32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u32f_C4R.

- NppStatus nppiFullNormLevelGetBufferHostSize_8u32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u32f_AC4R.

- NppStatus nppiFullNormLevelGetBufferHostSize_8s32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8s32f_C1R.

- NppStatus nppiFullNormLevelGetBufferHostSize_8s32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8s32f_C3R.

- NppStatus nppiFullNormLevelGetBufferHostSize_8s32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8s32f_C4R.

- NppStatus nppiFullNormLevelGetBufferHostSize_8s32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8s32f_AC4R.

- NppStatus nppiFullNormLevelGetBufferHostSize_16u32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_16u32f_C1R.

- NppStatus nppiFullNormLevelGetBufferHostSize_16u32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_16u32f_C3R.

- NppStatus nppiFullNormLevelGetBufferHostSize_16u32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_16u32f_C4R.

- NppStatus nppiFullNormLevelGetBufferHostSize_16u32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_16u32f_AC4R.

7.124.1 Detailed Description

Primitives for computing the normalized cross correlation coefficient between two images with full mode.

7.124.2 Function Documentation

7.124.2.1 NppStatus nppiCrossCorrFull_NormLevel_16u32f_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image CrossCorrFull_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_16u32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.2 NppStatus nppiCrossCorrFull_NormLevel_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_16u32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.3 NppStatus nppiCrossCorrFull_NormLevel_16u32f_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_16u32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.4 NppStatus nppiCrossCorrFull_NormLevel_16u32f_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_16u32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.5 NppStatus nppiCrossCorrFull_NormLevel_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image CrossCorrFull_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.6 NppStatus nppiCrossCorrFull_NormLevel_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.7 NppStatus nppiCrossCorrFull_NormLevel_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.8 NppStatus nppiCrossCorrFull_NormLevel_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.9 NppStatus nppiCrossCorrFull_NormLevel_8s32f_AC4R (const Npp8s * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

Four-channel 8-bit signed image CrossCorrFull_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8s32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.10 NppStatus nppiCrossCorrFull_NormLevel_8s32f_C1R (const Npp8s * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

One-channel 8-bit signed image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8s32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.11 NppStatus nppiCrossCorrFull_NormLevel_8s32f_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit signed image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8s32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.12 NppStatus nppiCrossCorrFull_NormLevel_8s32f_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit signed image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8s32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.13 NppStatus nppiCrossCorrFull_NormLevel_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrFull_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8u32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.14 NppStatus nppiCrossCorrFull_NormLevel_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8u32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.15 NppStatus nppiCrossCorrFull_NormLevel_8u32f_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8u32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.16 NppStatus nppiCrossCorrFull_NormLevel_8u32f_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8u32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.17 NppStatus nppiCrossCorrFull_NormLevel_8u_AC4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrFull_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8u_AC4RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.18 NppStatus nppiCrossCorrFull_NormLevel_8u_C1RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8u_C1RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.19 NppStatus nppiCrossCorrFull_NormLevel_8u_C3RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8u_C3RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.20 NppStatus nppiCrossCorrFull_NormLevel_8u_C4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrFull_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiFullNormLevelGetBufferHostSize_8u_C4RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.124.2.21 NppStatus nppiFullNormLevelGetBufferHostSize_16u32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_16u32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.22 NppStatus nppiFullNormLevelGetBufferHostSize_16u32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_16u32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.23 NppStatus nppiFullNormLevelGetBufferHostSize_16u32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_16u32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.24 NppStatus nppiFullNormLevelGetBufferHostSize_16u32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_16u32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.25 NppStatus nppiFullNormLevelGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.26 NppStatus nppiFullNormLevelGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.27 NppStatus nppiFullNormLevelGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.28 NppStatus nppiFullNormLevelGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.29 NppStatus nppiFullNormLevelGetBufferHostSize_8s32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8s32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.30 NppStatus nppiFullNormLevelGetBufferHostSize_8s32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8s32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.31 NppStatus nppiFullNormLevelGetBufferHostSize_8s32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8s32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.32 NppStatus nppiFullNormLevelGetBufferHostSize_8s32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8s32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.33 NppStatus nppiFullNormLevelGetBufferHostSize_8u32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.34 NppStatus nppiFullNormLevelGetBufferHostSize_8u32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.35 NppStatus nppiFullNormLevelGetBufferHostSize_8u32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.36 NppStatus nppiFullNormLevelGetBufferHostSize_8u32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.37 NppStatus nppiFullNormLevelGetBufferHostSize_8u_AC4RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u_AC4RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.38 NppStatus nppiFullNormLevelGetBufferHostSize_8u_C1RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u_C1RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.39 NppStatus nppiFullNormLevelGetBufferHostSize_8u_C3RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u_C3RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.124.2.40 NppStatus nppiFullNormLevelGetBufferHostSize_8u_C4RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrFull_NormLevel_8u_C4RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125 CrossCorrSame_NormLevel

Primitives for computing the normalized cross correlation coefficient between two images with same mode.

CrossCorrSame_NormLevel

The functions compute the $\gamma_{st}(c, r)$ in General Introduction with same mode (see Categorizations).

The functions require additional scratch buffer for computations.

- NppStatus nppiCrossCorrSame_NormLevel_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrSame_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrSame_NormLevel_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image CrossCorrSame_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrSame_NormLevel_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrSame_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrSame_NormLevel_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit signed image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit signed image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image CrossCorrSame_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrSame_NormLevel_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image CrossCorrSame_NormLevel.

- NppStatus nppiCrossCorrSame_NormLevel_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image CrossCorrSame_NormLevel ignoring alpha channel.

SameNormLevelGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the CrossCorrSame_NormLevel primitives.

- NppStatus nppiSameNormLevelGetBufferHostSize_8u_C1RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u_C1RSfs.

- NppStatus nppiSameNormLevelGetBufferHostSize_8u_C3RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u_C3RSfs.

- NppStatus nppiSameNormLevelGetBufferHostSize_8u_C4RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u_C4RSfs.

- NppStatus nppiSameNormLevelGetBufferHostSize_8u_AC4RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u_AC4RSfs.

- NppStatus nppiSameNormLevelGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_32f_C1R.

- NppStatus nppiSameNormLevelGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_32f_C3R.

- NppStatus nppiSameNormLevelGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_32f_C4R.

- NppStatus nppiSameNormLevelGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_32f_AC4R.

- NppStatus nppiSameNormLevelGetBufferHostSize_8u32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u32f_C1R.

- NppStatus nppiSameNormLevelGetBufferHostSize_8u32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u32f_C3R.

- NppStatus nppiSameNormLevelGetBufferHostSize_8u32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u32f_C4R.

- NppStatus nppiSameNormLevelGetBufferHostSize_8u32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u32f_AC4R.

- NppStatus nppiSameNormLevelGetBufferHostSize_8s32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8s32f_C1R.

- NppStatus nppiSameNormLevelGetBufferHostSize_8s32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8s32f_C3R.

- NppStatus nppiSameNormLevelGetBufferHostSize_8s32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8s32f_C4R.

- NppStatus nppiSameNormLevelGetBufferHostSize_8s32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8s32f_AC4R.

- NppStatus nppiSameNormLevelGetBufferHostSize_16u32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_16u32f_C1R.

- NppStatus nppiSameNormLevelGetBufferHostSize_16u32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_16u32f_C3R.

- NppStatus nppiSameNormLevelGetBufferHostSize_16u32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_16u32f_C4R.

- NppStatus nppiSameNormLevelGetBufferHostSize_16u32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_16u32f_AC4R.

7.125.1 Detailed Description

Primitives for computing the normalized cross correlation coefficient between two images with same mode.

7.125.2 Function Documentation

7.125.2.1 NppStatus nppiCrossCorrSame_NormLevel_16u32f_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image CrossCorrSame_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_16u32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.2 NppStatus nppiCrossCorrSame_NormLevel_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_16u32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.3 NppStatus nppiCrossCorrSame_NormLevel_16u32f_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_16u32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.4 NppStatus nppiCrossCorrSame_NormLevel_16u32f_C4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_16u32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.5 NppStatus nppiCrossCorrSame_NormLevel_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image CrossCorrSame_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.6 NppStatus nppiCrossCorrSame_NormLevel_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 32-bit floating point image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.7 NppStatus nppiCrossCorrSame_NormLevel_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.8 NppStatus nppiCrossCorrSame_NormLevel_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.9 NppStatus nppiCrossCorrSame_NormLevel_8s32f_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit signed image CrossCorrSame_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8s32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.10 NppStatus nppiCrossCorrSame_NormLevel_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit signed image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8s32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.11 NppStatus nppiCrossCorrSame_NormLevel_8s32f_C3R (const Npp8s * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

Three-channel 8-bit signed image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8s32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.12 NppStatus nppiCrossCorrSame_NormLevel_8s32f_C4R (const Npp8s * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

Four-channel 8-bit signed image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8s32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.13 NppStatus nppiCrossCorrSame_NormLevel_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrSame_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8u32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.14 NppStatus nppiCrossCorrSame_NormLevel_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8u32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.15 NppStatus nppiCrossCorrSame_NormLevel_8u32f_C3R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

Three-channel 8-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8u32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.16 NppStatus nppiCrossCorrSame_NormLevel_8u32f_C4R (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8u32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.17 NppStatus nppiCrossCorrSame_NormLevel_8u_AC4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrSame_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8u_AC4RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.18 NppStatus nppiCrossCorrSame_NormLevel_8u_C1RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8u_C1RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.19 NppStatus nppiCrossCorrSame_NormLevel_8u_C3RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8u_C3RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.20 NppStatus nppiCrossCorrSame_NormLevel_8u_C4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrSame_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiSameNormLevelGetBufferHostSize_8u_C4RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.125.2.21 NppStatus nppiSameNormLevelGetBufferHostSize_16u32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_16u32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.22 NppStatus nppiSameNormLevelGetBufferHostSize_16u32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_16u32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.23 NppStatus nppiSameNormLevelGetBufferHostSize_16u32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_16u32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.24 NppStatus nppiSameNormLevelGetBufferHostSize_16u32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_16u32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.25 NppStatus nppiSameNormLevelGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.26 NppStatus nppiSameNormLevelGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.27 NppStatus nppiSameNormLevelGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.28 NppStatus nppiSameNormLevelGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.29 NppStatus nppiSameNormLevelGetBufferHostSize_8s32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8s32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.30 NppStatus nppiSameNormLevelGetBufferHostSize_8s32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8s32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.31 NppStatus nppiSameNormLevelGetBufferHostSize_8s32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8s32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.32 NppStatus nppiSameNormLevelGetBufferHostSize_8s32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8s32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.33 NppStatus nppiSameNormLevelGetBufferHostSize_8u32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.34 NppStatus nppiSameNormLevelGetBufferHostSize_8u32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.35 NppStatus nppiSameNormLevelGetBufferHostSize_8u32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.36 NppStatus nppiSameNormLevelGetBufferHostSize_8u32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.37 NppStatus nppiSameNormLevelGetBufferHostSize_8u_AC4RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u_AC4RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.38 NppStatus nppiSameNormLevelGetBufferHostSize_8u_C1RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u_C1RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.39 NppStatus nppiSameNormLevelGetBufferHostSize_8u_C3RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u_C3RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.125.2.40 NppStatus nppiSameNormLevelGetBufferHostSize_8u_C4RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrSame_NormLevel_8u_C4RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126 CrossCorrValid_NormLevel

Primitives for computing the normalized cross correlation coefficient between two images with valid mode.

CrossCorrValid_NormLevel

The functions compute the $\gamma_{st}(c,r)$ in General Introduction with valid mode (see Categorizations).

The functions require additional scratch buffer for computations.

- NppStatus nppiCrossCorrValid_NormLevel_8u_C1RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8u_C3RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8u_C4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8u_AC4RSfs (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp8u ∗pDst, int nDstStep, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrValid_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrValid_NormLevel_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp32f ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image CrossCorrValid_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrValid_NormLevel_8u32f_C1R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8u32f_C3R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8u32f_C4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8u32f_AC4R (const Npp8u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image CrossCorrValid_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrValid_NormLevel_8s32f_C1R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit signed image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8s32f_C3R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit signed image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8s32f_C4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_8s32f_AC4R (const Npp8s ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp8s ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit signed image CrossCorrValid_NormLevel ignoring alpha channel.

- NppStatus nppiCrossCorrValid_NormLevel_16u32f_C1R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_16u32f_C3R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_16u32f_C4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image CrossCorrValid_NormLevel.

- NppStatus nppiCrossCorrValid_NormLevel_16u32f_AC4R (const Npp16u ∗pSrc, int nSrcStep, NppiSize oSrcRoiSize, const Npp16u ∗pTpl, int nTplStep, NppiSize oTplRoiSize, Npp32f ∗pDst, int nDstStep, Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image CrossCorrValid_NormLevel ignoring alpha channel.

ValidNormLevelGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the CrossCorrValid_NormLevel primitives.

- NppStatus nppiValidNormLevelGetBufferHostSize_8u_C1RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u_C1RSfs.

- NppStatus nppiValidNormLevelGetBufferHostSize_8u_C3RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u_C3RSfs.

- NppStatus nppiValidNormLevelGetBufferHostSize_8u_C4RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u_C4RSfs.

- NppStatus nppiValidNormLevelGetBufferHostSize_8u_AC4RSfs (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u_AC4RSfs.

- NppStatus nppiValidNormLevelGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_32f_C1R.

- NppStatus nppiValidNormLevelGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_32f_C3R.

- NppStatus nppiValidNormLevelGetBufferHostSize_32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_32f_C4R.

- NppStatus nppiValidNormLevelGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_32f_AC4R.

- NppStatus nppiValidNormLevelGetBufferHostSize_8u32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u32f_C1R.

- NppStatus nppiValidNormLevelGetBufferHostSize_8u32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u32f_C3R.

- NppStatus nppiValidNormLevelGetBufferHostSize_8u32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u32f_C4R.

- NppStatus nppiValidNormLevelGetBufferHostSize_8u32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u32f_AC4R.

- NppStatus nppiValidNormLevelGetBufferHostSize_8s32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8s32f_C1R.

- NppStatus nppiValidNormLevelGetBufferHostSize_8s32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8s32f_C3R.

- NppStatus nppiValidNormLevelGetBufferHostSize_8s32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8s32f_C4R.

- NppStatus nppiValidNormLevelGetBufferHostSize_8s32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8s32f_AC4R.

- NppStatus nppiValidNormLevelGetBufferHostSize_16u32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_16u32f_C1R.

- NppStatus nppiValidNormLevelGetBufferHostSize_16u32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_16u32f_C3R.

- NppStatus nppiValidNormLevelGetBufferHostSize_16u32f_C4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_16u32f_C4R.

- NppStatus nppiValidNormLevelGetBufferHostSize_16u32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_16u32f_AC4R.

7.126.1 Detailed Description

Primitives for computing the normalized cross correlation coefficient between two images with valid mode.

7.126.2 Function Documentation

7.126.2.1 NppStatus nppiCrossCorrValid_NormLevel_16u32f_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image CrossCorrValid_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_16u32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.2 NppStatus nppiCrossCorrValid_NormLevel_16u32f_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_16u32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.3 NppStatus nppiCrossCorrValid_NormLevel_16u32f_C3R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

Three-channel 16-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_16u32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.4 NppStatus nppiCrossCorrValid_NormLevel_16u32f_C4R (const Npp16u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp16u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

Four-channel 16-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_16u32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.5 NppStatus nppiCrossCorrValid_NormLevel_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

Four-channel 32-bit floating point image CrossCorrValid_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.6 NppStatus nppiCrossCorrValid_NormLevel_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f * *pDst*, int *nDstStep*, Npp8u * *pDeviceBuffer*)

One-channel 32-bit floating point image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.7 NppStatus nppiCrossCorrValid_NormLevel_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 32-bit floating point image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.8 NppStatus nppiCrossCorrValid_NormLevel_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp32f ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.9 NppStatus nppiCrossCorrValid_NormLevel_8s32f_AC4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit signed image CrossCorrValid_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8s32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.10 NppStatus nppiCrossCorrValid_NormLevel_8s32f_C1R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit signed image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8s32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.11 NppStatus nppiCrossCorrValid_NormLevel_8s32f_C3R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit signed image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8s32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.12 NppStatus nppiCrossCorrValid_NormLevel_8s32f_C4R (const Npp8s ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8s ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit signed image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8s32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.13 NppStatus nppiCrossCorrValid_NormLevel_8u32f_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrValid_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8u32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.14 NppStatus nppiCrossCorrValid_NormLevel_8u32f_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8u32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.15 NppStatus nppiCrossCorrValid_NormLevel_8u32f_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8u32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.16 NppStatus nppiCrossCorrValid_NormLevel_8u32f_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp32f ∗ *pDst*, int *nDstStep*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8u32f_C4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.17 NppStatus nppiCrossCorrValid_NormLevel_8u_AC4RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrValid_NormLevel ignoring alpha channel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8u_AC4RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.18 NppStatus nppiCrossCorrValid_NormLevel_8u_C1RSfs (const Npp8u ∗ *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u ∗ *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u ∗ *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8u_C1RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.19 NppStatus nppiCrossCorrValid_NormLevel_8u_C3RSfs (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u * *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

Three-channel 8-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8u_C3RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.20 NppStatus nppiCrossCorrValid_NormLevel_8u_C4RSfs (const Npp8u * *pSrc*, int *nSrcStep*, NppiSize *oSrcRoiSize*, const Npp8u * *pTpl*, int *nTplStep*, NppiSize *oTplRoiSize*, Npp8u * *pDst*, int *nDstStep*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

Four-channel 8-bit unsigned image CrossCorrValid_NormLevel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

oSrcRoiSize Region-of-Interest (ROI).

pTpl Pointer to the template image.

nTplStep Number of bytes between successive rows in the template image.

oTplRoiSize Region-of-Interest (ROI).

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiValidNormLevelGetBufferHostSize_8u_C4RSfs to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.126.2.21 NppStatus nppiValidNormLevelGetBufferHostSize_16u32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_16u32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.22 NppStatus nppiValidNormLevelGetBufferHostSize_16u32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_16u32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.23 NppStatus nppiValidNormLevelGetBufferHostSize_16u32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_16u32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.24 NppStatus nppiValidNormLevelGetBufferHostSize_16u32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_16u32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.25 NppStatus nppiValidNormLevelGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.26 NppStatus nppiValidNormLevelGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.27 NppStatus nppiValidNormLevelGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.28 NppStatus nppiValidNormLevelGetBufferHostSize_32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.29 NppStatus nppiValidNormLevelGetBufferHostSize_8s32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8s32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.30 NppStatus nppiValidNormLevelGetBufferHostSize_8s32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8s32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.31 NppStatus nppiValidNormLevelGetBufferHostSize_8s32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8s32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.32 NppStatus nppiValidNormLevelGetBufferHostSize_8s32f_C4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8s32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.33 NppStatus nppiValidNormLevelGetBufferHostSize_8u32f_AC4R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.34 NppStatus nppiValidNormLevelGetBufferHostSize_8u32f_C1R (NppiSize *oSizeROI*, int * *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.35 NppStatus nppiValidNormLevelGetBufferHostSize_8u32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.36 NppStatus nppiValidNormLevelGetBufferHostSize_8u32f_C4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u32f_C4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.37 NppStatus nppiValidNormLevelGetBufferHostSize_8u_AC4RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u_AC4RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.38 NppStatus nppiValidNormLevelGetBufferHostSize_8u_C1RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u_C1RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.39 NppStatus nppiValidNormLevelGetBufferHostSize_8u_C3RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u_C3RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.126.2.40 NppStatus nppiValidNormLevelGetBufferHostSize_8u_C4RSfs (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiCrossCorrValid_NormLevel_8u_C4RSfs.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127 Image Quality Index

Primitives for computing the image quality index of two images.

QualityIndex

Given two images M and N (both $W \times H$), the mathematical formula to calculate the image quality index Q between them is expressed as:

$$Q = \frac{4\sigma_{MN}\tilde{M}\tilde{N}}{[(\tilde{M}^2) + (\tilde{N}^2)][(\sigma_M)^2 + (\sigma_N)^2]}$$

where

$$\tilde{M} = \frac{1}{W \cdot H} \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} M(j,i)$$

$$\tilde{N} = \frac{1}{W \cdot H} \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} N(j,i)$$

$$\sigma_M = \sqrt{\frac{1}{W \cdot H - 1} \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} [M(j,i) - \tilde{M}]^2}$$

$$\sigma_N = \sqrt{\frac{1}{W \cdot H - 1} \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} [N(j,i) - \tilde{N}]^2}$$

$$\sigma_{MN} = \frac{1}{W \cdot H - 1} \sum_{j=0}^{H-1} \sum_{i=0}^{W-1} [M(j,i) - \tilde{M}][N(j,i) - \tilde{N}]$$

The functions require additional scratch buffer for computations.

- NppStatus nppiQualityIndex_8u32f_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  One-channel 8-bit unsigned image QualityIndex.

- NppStatus nppiQualityIndex_16u32f_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  One-channel 16-bit unsigned image QualityIndex.

- NppStatus nppiQualityIndex_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  One-channel 32-bit floating point image QualityIndex.

- NppStatus nppiQualityIndex_8u32f_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  Three-channel 8-bit unsigned image QualityIndex.

- NppStatus nppiQualityIndex_16u32f_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  Three-channel 16-bit unsigned image QualityIndex.

- NppStatus nppiQualityIndex_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  Three-channel 32-bit floating point image QualityIndex.

- NppStatus nppiQualityIndex_8u32f_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  Four-channel 8-bit unsigned image QualityIndex.

- NppStatus nppiQualityIndex_16u32f_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  Four-channel 16-bit unsigned image QualityIndex.

- NppStatus nppiQualityIndex_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, NppiSize oRoiSize, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  Four-channel 32-bit floating point image QualityIndex.

QualityIndexGetBufferHostSize

Companion primitives for computing the device buffer size (in bytes) required by the QualityIndex primitives.

- NppStatus nppiQualityIndexGetBufferHostSize_8u32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_8u32f_C1R.

- NppStatus nppiQualityIndexGetBufferHostSize_16u32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_16u32f_C1R.

- NppStatus nppiQualityIndexGetBufferHostSize_32f_C1R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_32f_C1R.

- NppStatus nppiQualityIndexGetBufferHostSize_8u32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_8u32f_C3R.

- NppStatus nppiQualityIndexGetBufferHostSize_16u32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_16u32f_C3R.

- NppStatus nppiQualityIndexGetBufferHostSize_32f_C3R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_32f_C3R.

- NppStatus nppiQualityIndexGetBufferHostSize_8u32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_8u32f_AC4R.

- NppStatus nppiQualityIndexGetBufferHostSize_16u32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_16u32f_AC4R.

- NppStatus nppiQualityIndexGetBufferHostSize_32f_AC4R (NppiSize oSizeROI, int ∗hpBufferSize)

  Buffer size (in bytes) for nppiQualityIndex_32f_AC4R.

7.127.1 Detailed Description

Primitives for computing the image quality index of two images.

7.127.2 Function Documentation

7.127.2.1 NppStatus nppiQualityIndex_16u32f_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 16-bit unsigned image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_16u32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.2 NppStatus nppiQualityIndex_16u32f_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

One-channel 16-bit unsigned image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_16u32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.3 NppStatus nppiQualityIndex_16u32f_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 16-bit unsigned image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_16u32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.4 NppStatus nppiQualityIndex_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 32-bit floating point image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.5 NppStatus nppiQualityIndex_32f_C1R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f * *pDst*, Npp8u * *pDeviceBuffer*)

One-channel 32-bit floating point image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.6 NppStatus nppiQualityIndex_32f_C3R (const Npp32f * *pSrc1*, int *nSrc1Step*, const Npp32f * *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f * *pDst*, Npp8u * *pDeviceBuffer*)

Three-channel 32-bit floating point image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.7 NppStatus nppiQualityIndex_8u32f_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

Four-channel 8-bit unsigned image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_8u32f_AC4R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.8 NppStatus nppiQualityIndex_8u32f_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

One-channel 8-bit unsigned image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_8u32f_C1R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.9 NppStatus nppiQualityIndex_8u32f_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, NppiSize *oRoiSize*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

Three-channel 8-bit unsigned image QualityIndex.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

oRoiSize Region-of-Interest (ROI).

pDst Pointer to the quality index.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppiQualityIndexGetBufferHostSize_8u32f_C3R to compute the required size (in bytes).

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_QUALITY_INDEX_ERROR if pixels of either image are constant numberse.

7.127.2.10 NppStatus nppiQualityIndexGetBufferHostSize_16u32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_16u32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127.2.11 NppStatus nppiQualityIndexGetBufferHostSize_16u32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_16u32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127.2.12 NppStatus nppiQualityIndexGetBufferHostSize_16u32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_16u32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127.2.13 NppStatus nppiQualityIndexGetBufferHostSize_32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127.2.14 NppStatus nppiQualityIndexGetBufferHostSize_32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127.2.15 NppStatus nppiQualityIndexGetBufferHostSize_32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127.2.16 NppStatus nppiQualityIndexGetBufferHostSize_8u32f_AC4R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_8u32f_AC4R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127.2.17 NppStatus nppiQualityIndexGetBufferHostSize_8u32f_C1R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_8u32f_C1R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.127.2.18 NppStatus nppiQualityIndexGetBufferHostSize_8u32f_C3R (NppiSize *oSizeROI*, int ∗ *hpBufferSize*)

Buffer size (in bytes) for nppiQualityIndex_8u32f_C3R.

Parameters:

oSizeROI Region-of-Interest (ROI).

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_NULL_POINTER_ERROR if hpBufferSize is 0 (NULL), ROI Related Error Codes.

7.128 Memory Management

Routines for allocating and deallocating pitched image storage.

Functions

- void nppiFree (void ∗pData)

  Free method for any 2D allocated memory.

Image Memory Allocation

ImageAllocator methods for 2D arrays of data.

The allocators have width and height parameters to specify the size of the image data being allocated. They return a pointer to the newly created memory and return the numbers of bytes between successive lines.

If the memory allocation failed due to lack of free device memory or device memory fragmentation the routine returns 0.

All allocators return memory with line strides that are beneficial for performance. It is not mandatory to use these allocators. Any valid CUDA device-memory pointers can be used by the NPP primitives and there are no restrictions on line strides.

- Npp8u ∗ nppiMalloc_8u_C1 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  8-bit unsigned image memory allocator.
- Npp8u ∗ nppiMalloc_8u_C2 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  2 channel 8-bit unsigned image memory allocator.
- Npp8u ∗ nppiMalloc_8u_C3 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  3 channel 8-bit unsigned image memory allocator.
- Npp8u ∗ nppiMalloc_8u_C4 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  4 channel 8-bit unsigned image memory allocator.
- Npp16u ∗ nppiMalloc_16u_C1 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  16-bit unsigned image memory allocator.
- Npp16u ∗ nppiMalloc_16u_C2 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  2 channel 16-bit unsigned image memory allocator.
- Npp16u ∗ nppiMalloc_16u_C3 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  3 channel 16-bit unsigned image memory allocator.
- Npp16u ∗ nppiMalloc_16u_C4 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  4 channel 16-bit unsigned image memory allocator.
- Npp16s ∗ nppiMalloc_16s_C1 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  16-bit signed image memory allocator.

- Npp16s ∗ nppiMalloc_16s_C2 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  2 channel 16-bit signed image memory allocator.

- Npp16s ∗ nppiMalloc_16s_C4 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  4 channel 16-bit signed image memory allocator.

- Npp16sc ∗ nppiMalloc_16sc_C1 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  1 channel 16-bit signed complex image memory allocator.

- Npp16sc ∗ nppiMalloc_16sc_C2 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  2 channel 16-bit signed complex image memory allocator.

- Npp16sc ∗ nppiMalloc_16sc_C3 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  3 channel 16-bit signed complex image memory allocator.

- Npp16sc ∗ nppiMalloc_16sc_C4 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  4 channel 16-bit signed complex image memory allocator.

- Npp32s ∗ nppiMalloc_32s_C1 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  32-bit signed image memory allocator.

- Npp32s ∗ nppiMalloc_32s_C3 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  3 channel 32-bit signed image memory allocator.

- Npp32s ∗ nppiMalloc_32s_C4 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  4 channel 32-bit signed image memory allocator.

- Npp32sc ∗ nppiMalloc_32sc_C1 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  32-bit integer complex image memory allocator.

- Npp32sc ∗ nppiMalloc_32sc_C2 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  2 channel 32-bit integer complex image memory allocator.

- Npp32sc ∗ nppiMalloc_32sc_C3 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  3 channel 32-bit integer complex image memory allocator.

- Npp32sc ∗ nppiMalloc_32sc_C4 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  4 channel 32-bit integer complex image memory allocator.

- Npp32f ∗ nppiMalloc_32f_C1 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  32-bit floating point image memory allocator.

- Npp32f ∗ nppiMalloc_32f_C2 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  2 channel 32-bit floating point image memory allocator.

- Npp32f ∗ nppiMalloc_32f_C3 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  3 channel 32-bit floating point image memory allocator.

- Npp32f ∗ nppiMalloc_32f_C4 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  4 channel 32-bit floating point image memory allocator.

- Npp32fc ∗ nppiMalloc_32fc_C1 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  32-bit float complex image memory allocator.

- Npp32fc ∗ nppiMalloc_32fc_C2 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  2 channel 32-bit float complex image memory allocator.

- Npp32fc ∗ nppiMalloc_32fc_C3 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  3 channel 32-bit float complex image memory allocator.

- Npp32fc ∗ nppiMalloc_32fc_C4 (int nWidthPixels, int nHeightPixels, int ∗pStepBytes)

  4 channel 32-bit float complex image memory allocator.

7.128.1 Detailed Description

Routines for allocating and deallocating pitched image storage.

These methods are provided for convenience. They allocate memory that may contain additional padding bytes at the end of each line of pixels. Though padding is not necessary for any of the NPP image-processing primitives to work correctly, its absense may cause sever performance degradation compared to properly padded images.

7.128.2 Function Documentation

7.128.2.1 void nppiFree (void ∗ *pData*)

Free method for any 2D allocated memory.

This method should be used to free memory allocated with any of the nppiMalloc_<modifier> methods.

Parameters:

pData A pointer to memory allocated using nppiMalloc_<modifier>.

7.128.2.2 Npp16s∗ nppiMalloc_16s_C1 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

16-bit signed image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.3 Npp16s∗ nppiMalloc_16s_C2 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

2 channel 16-bit signed image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.4 Npp16s∗ nppiMalloc_16s_C4 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

4 channel 16-bit signed image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.5 Npp16sc∗ nppiMalloc_16sc_C1 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

1 channel 16-bit signed complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.6 Npp16sc∗ nppiMalloc_16sc_C2 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

2 channel 16-bit signed complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.7 Npp16sc∗ nppiMalloc_16sc_C3 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

3 channel 16-bit signed complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.8 Npp16sc∗ nppiMalloc_16sc_C4 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

4 channel 16-bit signed complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.9 Npp16u∗ nppiMalloc_16u_C1 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

16-bit unsigned image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.10 Npp16u∗ nppiMalloc_16u_C2 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

2 channel 16-bit unsigned image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.11 Npp16u∗ nppiMalloc_16u_C3 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

3 channel 16-bit unsigned image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.12 Npp16u∗ nppiMalloc_16u_C4 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

4 channel 16-bit unsigned image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.13 Npp32f∗ nppiMalloc_32f_C1 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

32-bit floating point image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.14 Npp32f∗ nppiMalloc_32f_C2 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

2 channel 32-bit floating point image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.15 Npp32f∗ nppiMalloc_32f_C3 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

3 channel 32-bit floating point image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.16 Npp32f∗ nppiMalloc_32f_C4 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

4 channel 32-bit floating point image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.17 Npp32fc∗ nppiMalloc_32fc_C1 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

32-bit float complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.18 Npp32fc∗ nppiMalloc_32fc_C2 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

2 channel 32-bit float complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.19 Npp32fc∗ nppiMalloc_32fc_C3 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

3 channel 32-bit float complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.20 Npp32fc∗ nppiMalloc_32fc_C4 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

4 channel 32-bit float complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.21 Npp32s∗ nppiMalloc_32s_C1 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

32-bit signed image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.22 Npp32s∗ nppiMalloc_32s_C3 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

3 channel 32-bit signed image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.23 Npp32s∗ nppiMalloc_32s_C4 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

4 channel 32-bit signed image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.24 Npp32sc∗ nppiMalloc_32sc_C1 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

32-bit integer complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.25 Npp32sc∗ nppiMalloc_32sc_C2 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

2 channel 32-bit integer complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.26 Npp32sc∗ nppiMalloc_32sc_C3 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

3 channel 32-bit integer complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.27 Npp32sc∗ nppiMalloc_32sc_C4 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

4 channel 32-bit integer complex image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.28 Npp8u∗ nppiMalloc_8u_C1 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

8-bit unsigned image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.29 Npp8u∗ nppiMalloc_8u_C2 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

2 channel 8-bit unsigned image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.30 Npp8u∗ nppiMalloc_8u_C3 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

3 channel 8-bit unsigned image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.128.2.31 Npp8u∗ nppiMalloc_8u_C4 (int *nWidthPixels*, int *nHeightPixels*, int ∗ *pStepBytes*)

4 channel 8-bit unsigned image memory allocator.

Parameters:

nWidthPixels Image width.

nHeightPixels Image height.

pStepBytes Line Step.

Returns:

Pointer to new image data.

7.129 Threshold and Compare Operations

Methods for pixel-wise threshold and compare operations.

Modules

- Threshold Operations

  Threshold image pixels.

- Compare Operations

  Compare the pixels of two images and create a binary result image.

7.129.1 Detailed Description

Methods for pixel-wise threshold and compare operations.

7.130 Threshold Operations

Threshold image pixels.

Functions

- NppStatus nppiThreshold_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u nThreshold, NppCmpOp eComparisonOperation)

  1 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u nThreshold, NppCmpOp eComparisonOperation)

  1 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u nThreshold, NppCmpOp eComparisonOperation)

  1 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u nThreshold, NppCmpOp eComparisonOperation)

  1 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s nThreshold, NppCmpOp eComparisonOperation)

  1 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s nThreshold, NppCmpOp eComparisonOperation)

  1 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f nThreshold, NppCmpOp eComparisonOperation)

  1 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f nThreshold, NppCmpOp eComparisonOperation)

  1 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], NppCmpOp eComparisonOperation)

  3 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], NppCmpOp eComparisonOperation)

  3 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], NppCmpOp eComparisonOperation)

  3 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], NppCmpOp eComparisonOperation)

  3 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], NppCmpOp eComparisonOperation)

  3 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], NppCmpOp eComparisonOperation)

  3 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], NppCmpOp eComparisonOperation)

  3 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], NppCmpOp eComparisonOperation)

  3 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], NppCmpOp eComparisonOperation)

  4 channel 8-bit unsigned char image threshold, not affecting Alpha.

- NppStatus nppiThreshold_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], NppCmpOp eComparisonOperation)

  4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], NppCmpOp eComparisonOperation)

  4 channel 16-bit unsigned short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], NppCmpOp eComparisonOperation)

  4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], NppCmpOp eComparisonOperation)

  4 channel 16-bit signed short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], NppCmpOp eComparisonOperation)

  4 channel 16-bit signed short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], NppCmpOp eComparisonOperation)

  4 channel 32-bit floating point image threshold, not affecting Alpha.

- NppStatus nppiThreshold_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], NppCmpOp eComparisonOperation)

  4 channel 32-bit floating point in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GT_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u nThreshold)

  1 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_GT_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u nThreshold)

  1 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_GT_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u nThreshold)

  1 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_GT_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u nThreshold)

  1 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_GT_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s nThreshold)

  1 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_GT_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s nThreshold)

  1 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_GT_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f nThreshold)

  1 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_GT_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f nThreshold)

  1 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_GT_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3])

  3 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_GT_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3])

  3 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_GT_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3])

  3 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_GT_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3])

  3 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_GT_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3])

3 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_GT_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3])

  3 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_GT_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3])

  3 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_GT_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3])

  3 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_GT_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3])

  4 channel 8-bit unsigned char image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GT_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3])

  4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GT_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3])

  4 channel 16-bit unsigned short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GT_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3])

  4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GT_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3])

  4 channel 16-bit signed short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GT_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3])

  4 channel 16-bit signed short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GT_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3])

  4 channel 32-bit floating point image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GT_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3])

  4 channel 32-bit floating point in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LT_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u nThreshold)

  1 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_LT_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u nThreshold)

  1 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_LT_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u nThreshold)

  1 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_LT_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u nThreshold)

  1 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_LT_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s nThreshold)

  1 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_LT_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s nThreshold)

  1 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_LT_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f nThreshold)

  1 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_LT_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f nThreshold)

  1 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_LT_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3])

  3 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_LT_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3])

  3 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_LT_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3])

  3 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_LT_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3])

  3 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_LT_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3])

  3 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_LT_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3])

  3 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_LT_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3])

  3 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_LT_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3])

  3 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_LT_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3])

  4 channel 8-bit unsigned char image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LT_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3])

  4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LT_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3])

  4 channel 16-bit unsigned short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LT_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3])

  4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LT_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3])

  4 channel 16-bit signed short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LT_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3])

  4 channel 16-bit signed short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LT_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3])

  4 channel 32-bit floating point image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LT_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3])

  4 channel 32-bit floating point in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_Val_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u nThreshold, const Npp8u nValue, NppCmpOp eComparisonOperation)

  1 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_Val_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u nThreshold, const Npp8u nValue, NppCmpOp eComparisonOperation)

  1 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_Val_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u nThreshold, const Npp16u nValue, NppCmpOp eComparisonOperation)

  1 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_Val_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u nThreshold, const Npp16u nValue, NppCmpOp eComparisonOperation)

  1 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_Val_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s nThreshold, const Npp16s nValue, NppCmpOp eComparisonOperation)

  1 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_Val_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s nThreshold, const Npp16s nValue, NppCmpOp eComparisonOperation)

  1 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_Val_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f nThreshold, const Npp32f nValue, NppCmpOp eComparisonOperation)

  1 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_Val_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f nThreshold, const Npp32f nValue, NppCmpOp eComparisonOperation)

  1 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_Val_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3], NppCmpOp eComparisonOperation)

  3 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_Val_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3], NppCmpOp eComparisonOperation)

  3 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_Val_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3], NppCmpOp eComparisonOperation)

  3 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_Val_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3], NppCmpOp eComparisonOperation)

  3 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_Val_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3], NppCmpOp eComparisonOperation)

  3 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_Val_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3], NppCmpOp eComparisonOperation)

  3 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_Val_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3], NppCmpOp eComparisonOperation)

  3 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_Val_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3], NppCmpOp eComparisonOperation)

  3 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_Val_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3], NppCmpOp eComparisonOperation)

  4 channel 8-bit unsigned char image threshold, not affecting Alpha.

- NppStatus nppiThreshold_Val_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3], NppCmpOp eComparisonOperation)

  4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_Val_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3], NppCmpOp eComparisonOperation)

  4 channel 16-bit unsigned short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_Val_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3], NppCmpOp eComparisonOperation)

  4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_Val_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3], NppCmpOp eComparisonOperation)

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- NppStatus nppiThreshold_Val_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3], NppCmpOp eComparisonOperation)

  4 channel 16-bit signed short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_Val_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3], NppCmpOp eComparisonOperation)

  4 channel 32-bit floating point image threshold, not affecting Alpha.

- NppStatus nppiThreshold_Val_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3], NppCmpOp eComparisonOperation)

  4 channel 32-bit floating point in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GTVal_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u nThreshold, const Npp8u nValue)

  1 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_GTVal_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u nThreshold, const Npp8u nValue)

  1 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_GTVal_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u nThreshold, const Npp16u nValue)

  1 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_GTVal_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u nThreshold, const Npp16u nValue)

  1 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_GTVal_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s nThreshold, const Npp16s nValue)

  1 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_GTVal_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s nThreshold, const Npp16s nValue)

  1 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_GTVal_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f nThreshold, const Npp32f nValue)

  1 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_GTVal_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f nThreshold, const Npp32f nValue)

  1 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_GTVal_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3])

  3 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_GTVal_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3])

  3 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_GTVal_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3])

  3 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_GTVal_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3])

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  3 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_GTVal_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3])

  3 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_GTVal_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3])

  3 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_GTVal_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3])

  4 channel 8-bit unsigned char image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GTVal_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3])

  4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GTVal_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3])

  4 channel 16-bit unsigned short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GTVal_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3])

  4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GTVal_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3])

  4 channel 16-bit signed short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GTVal_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3])

  4 channel 16-bit signed short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GTVal_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3])

  4 channel 32-bit floating point image threshold, not affecting Alpha.

- NppStatus nppiThreshold_GTVal_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3])

  4 channel 32-bit floating point in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTVal_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u nThreshold, const Npp8u nValue)

  1 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_LTVal_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u nThreshold, const Npp8u nValue)

1 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_LTVal_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u nThreshold, const Npp16u nValue)

  1 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_LTVal_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u nThreshold, const Npp16u nValue)

  1 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_LTVal_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s nThreshold, const Npp16s nValue)

  1 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_LTVal_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s nThreshold, const Npp16s nValue)

  1 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_LTVal_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f nThreshold, const Npp32f nValue)

  1 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_LTVal_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f nThreshold, const Npp32f nValue)

  1 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_LTVal_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3])

  3 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_LTVal_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3])

  3 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_LTVal_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3])

  3 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_LTVal_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3])

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- NppStatus nppiThreshold_LTVal_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3])

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- NppStatus nppiThreshold_LTVal_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3])

  3 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_LTVal_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3])

  3 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_LTVal_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3])

  4 channel 8-bit unsigned char image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTVal_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholds[3], const Npp8u rValues[3])

  4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTVal_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3])

  4 channel 16-bit unsigned short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTVal_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholds[3], const Npp16u rValues[3])

  4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTVal_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3])

  4 channel 16-bit signed short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTVal_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholds[3], const Npp16s rValues[3])

  4 channel 16-bit signed short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTVal_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3])

  4 channel 32-bit floating point image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTVal_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholds[3], const Npp32f rValues[3])

  4 channel 32-bit floating point in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTValGTVal_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u nThresholdLT, const Npp8u nValueLT, const Npp8u nThresholdGT, const Npp8u nValueGT)

  1 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_LTValGTVal_8u_C1IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u nThresholdLT, const Npp8u nValueLT, const Npp8u nThresholdGT, const Npp8u nValueGT)

  1 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_LTValGTVal_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u nThresholdLT, const Npp16u nValueLT, const Npp16u nThresholdGT, const Npp16u nValueGT)

  1 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_LTValGTVal_16u_C1IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u nThresholdLT, const Npp16u nValueLT, const Npp16u nThresholdGT, const Npp16u nValueGT)

  1 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_LTValGTVal_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s nThresholdLT, const Npp16s nValueLT, const Npp16s nThresholdGT, const Npp16s nValueGT)

  1 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_LTValGTVal_16s_C1IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s nThresholdLT, const Npp16s nValueLT, const Npp16s nThresholdGT, const Npp16s nValueGT)

  1 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_LTValGTVal_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f nThresholdLT, const Npp32f nValueLT, const Npp32f nThresholdGT, const Npp32f nValueGT)

  1 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_LTValGTVal_32f_C1IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f nThresholdLT, const Npp32f nValueLT, const Npp32f nThresholdGT, const Npp32f nValueGT)

  1 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_LTValGTVal_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholdsLT[3], const Npp8u rValuesLT[3], const Npp8u rThresholdsGT[3], const Npp8u rValuesGT[3])

  3 channel 8-bit unsigned char threshold.

- NppStatus nppiThreshold_LTValGTVal_8u_C3IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholdsLT[3], const Npp8u rValuesLT[3], const Npp8u rThresholdsGT[3], const Npp8u rValuesGT[3])

  3 channel 8-bit unsigned char in place threshold.

- NppStatus nppiThreshold_LTValGTVal_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholdsLT[3], const Npp16u rValuesLT[3], const Npp16u rThresholdsGT[3], const Npp16u rValuesGT[3])

  3 channel 16-bit unsigned short threshold.

- NppStatus nppiThreshold_LTValGTVal_16u_C3IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholdsLT[3], const Npp16u rValuesLT[3], const Npp16u rThresholdsGT[3], const Npp16u rValuesGT[3])

  3 channel 16-bit unsigned short in place threshold.

- NppStatus nppiThreshold_LTValGTVal_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholdsLT[3], const Npp16s rValuesLT[3], const Npp16s rThresholdsGT[3], const Npp16s rValuesGT[3])

  3 channel 16-bit signed short threshold.

- NppStatus nppiThreshold_LTValGTVal_16s_C3IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholdsLT[3], const Npp16s rValuesLT[3], const Npp16s rThresholdsGT[3], const Npp16s rValuesGT[3])

  3 channel 16-bit signed short in place threshold.

- NppStatus nppiThreshold_LTValGTVal_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholdsLT[3], const Npp32f rValuesLT[3], const Npp32f rThresholdsGT[3], const Npp32f rValuesGT[3])

  3 channel 32-bit floating point threshold.

- NppStatus nppiThreshold_LTValGTVal_32f_C3IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholdsLT[3], const Npp32f rValuesLT[3], const Npp32f rThresholdsGT[3], const Npp32f rValuesGT[3])

  3 channel 32-bit floating point in place threshold.

- NppStatus nppiThreshold_LTValGTVal_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp8u rThresholdsLT[3], const Npp8u rValuesLT[3], const Npp8u rThresholdsGT[3], const Npp8u rValuesGT[3])

  4 channel 8-bit unsigned char image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTValGTVal_8u_AC4IR (Npp8u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp8u rThresholdsLT[3], const Npp8u rValuesLT[3], const Npp8u rThresholdsGT[3], const Npp8u rValuesGT[3])

  4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTValGTVal_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, Npp16u ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16u rThresholdsLT[3], const Npp16u rValuesLT[3], const Npp16u rThresholdsGT[3], const Npp16u rValuesGT[3])

  4 channel 16-bit unsigned short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTValGTVal_16u_AC4IR (Npp16u ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16u rThresholdsLT[3], const Npp16u rValuesLT[3], const Npp16u rThresholdsGT[3], const Npp16u rValuesGT[3])

  4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTValGTVal_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, Npp16s ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp16s rThresholdsLT[3], const Npp16s rValuesLT[3], const Npp16s rThresholdsGT[3], const Npp16s rValuesGT[3])

  4 channel 16-bit signed short image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTValGTVal_16s_AC4IR (Npp16s ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp16s rThresholdsLT[3], const Npp16s rValuesLT[3], const Npp16s rThresholdsGT[3], const Npp16s rValuesGT[3])

  4 channel 16-bit signed short in place image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTValGTVal_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, Npp32f ∗pDst, int nDstStep, NppiSize oSizeROI, const Npp32f rThresholdsLT[3], const Npp32f rValuesLT[3], const Npp32f rThresholdsGT[3], const Npp32f rValuesGT[3])

  4 channel 32-bit floating point image threshold, not affecting Alpha.

- NppStatus nppiThreshold_LTValGTVal_32f_AC4IR (Npp32f ∗pSrcDst, int nSrcDstStep, NppiSize oSizeROI, const Npp32f rThresholdsLT[3], const Npp32f rValuesLT[3], const Npp32f rThresholdsGT[3], const Npp32f rValuesGT[3])

  4 channel 32-bit floating point in place image threshold, not affecting Alpha.

7.130.1 Detailed Description

Threshold image pixels.

7.130.2 Function Documentation

7.130.2.1 NppStatus nppiThreshold_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], NppCmpOp *eComparisonOperation*)

4 channel 16-bit signed short in place image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.2 NppStatus nppiThreshold_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], NppCmpOp *eComparisonOperation*)

4 channel 16-bit signed short image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.3 NppStatus nppiThreshold_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit signed short in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.4 NppStatus nppiThreshold_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit signed short threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.5 NppStatus nppiThreshold_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], NppCmpOp *eComparisonOperation*)

3 channel 16-bit signed short in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.6 NppStatus nppiThreshold_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], NppCmpOp *eComparisonOperation*)

3 channel 16-bit signed short threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.7 NppStatus nppiThreshold_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], NppCmpOp *eComparisonOperation*)

4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.8 NppStatus nppiThreshold_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], NppCmpOp *eComparisonOperation*)

4 channel 16-bit unsigned short image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.9 NppStatus nppiThreshold_16u_C1IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit unsigned short in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.10 NppStatus nppiThreshold_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit unsigned short threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.11 NppStatus nppiThreshold_16u_C3IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], NppCmpOp *eComparisonOperation*)

3 channel 16-bit unsigned short in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.12 NppStatus nppiThreshold_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], NppCmpOp *eComparisonOperation*)

3 channel 16-bit unsigned short threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.13 NppStatus nppiThreshold_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], NppCmpOp *eComparisonOperation*)

4 channel 32-bit floating point in place image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.14 NppStatus nppiThreshold_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], NppCmpOp *eComparisonOperation*)

4 channel 32-bit floating point image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.15 NppStatus nppiThreshold_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*, NppCmpOp *eComparisonOperation*)

1 channel 32-bit floating point in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.16 NppStatus nppiThreshold_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*, NppCmpOp *eComparisonOperation*)

1 channel 32-bit floating point threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.17 NppStatus nppiThreshold_32f_C3IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], NppCmpOp *eComparisonOperation*)

3 channel 32-bit floating point in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.18 NppStatus nppiThreshold_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], NppCmpOp *eComparisonOperation*)

3 channel 32-bit floating point threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.19 NppStatus nppiThreshold_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], NppCmpOp *eComparisonOperation*)

4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.20 NppStatus nppiThreshold_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], NppCmpOp *eComparisonOperation*)

4 channel 8-bit unsigned char image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.21 NppStatus nppiThreshold_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*, NppCmpOp *eComparisonOperation*)

1 channel 8-bit unsigned char in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.22 NppStatus nppiThreshold_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*, NppCmpOp *eComparisonOperation*)

1 channel 8-bit unsigned char threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.23 NppStatus nppiThreshold_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], NppCmpOp *eComparisonOperation*)

3 channel 8-bit unsigned char in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.24 NppStatus nppiThreshold_8u_C3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], NppCmpOp *eComparisonOperation*)

3 channel 8-bit unsigned char threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.25 NppStatus nppiThreshold_GT_16s_AC4IR (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3])

4 channel 16-bit signed short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.26 NppStatus nppiThreshold_GT_16s_AC4R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3])

4 channel 16-bit signed short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.27 NppStatus nppiThreshold_GT_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*)

1 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.28 NppStatus nppiThreshold_GT_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*)

1 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.29 NppStatus nppiThreshold_GT_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3])

3 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.30 NppStatus nppiThreshold_GT_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3])

3 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.31 NppStatus nppiThreshold_GT_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3])

4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.32 NppStatus nppiThreshold_GT_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3])

4 channel 16-bit unsigned short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.33 NppStatus nppiThreshold_GT_16u_C1IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*)

1 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.34 NppStatus nppiThreshold_GT_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*)

1 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.35 NppStatus nppiThreshold_GT_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3])

3 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.36 NppStatus nppiThreshold_GT_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3])

3 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.37 NppStatus nppiThreshold_GT_32f_AC4IR (Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3])

4 channel 32-bit floating point in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.38 NppStatus nppiThreshold_GT_32f_AC4R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3])

4 channel 32-bit floating point image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.39 NppStatus nppiThreshold_GT_32f_C1IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*)

1 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.40 NppStatus nppiThreshold_GT_32f_C1R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*)

1 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.41 NppStatus nppiThreshold_GT_32f_C3IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3])

3 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.42 NppStatus nppiThreshold_GT_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3])

3 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.43 NppStatus nppiThreshold_GT_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3])

4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.44 NppStatus nppiThreshold_GT_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3])

4 channel 8-bit unsigned char image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.45 NppStatus nppiThreshold_GT_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*)

1 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.46 NppStatus nppiThreshold_GT_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*)

1 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.47 NppStatus nppiThreshold_GT_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3])

3 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.48 NppStatus nppiThreshold_GT_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3])

3 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.49 NppStatus nppiThreshold_GTVal_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3])

4 channel 16-bit signed short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.50 NppStatus nppiThreshold_GTVal_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3])

4 channel 16-bit signed short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.51 NppStatus nppiThreshold_GTVal_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*, const Npp16s *nValue*)

1 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.52 NppStatus nppiThreshold_GTVal_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*, const Npp16s *nValue*)

1 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.53 NppStatus nppiThreshold_GTVal_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3])

3 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.54 NppStatus nppiThreshold_GTVal_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3])

3 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.55 NppStatus nppiThreshold_GTVal_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3])

4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.56 NppStatus nppiThreshold_GTVal_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3])

4 channel 16-bit unsigned short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.57 NppStatus nppiThreshold_GTVal_16u_C1IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*, const Npp16u *nValue*)

1 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.58 NppStatus nppiThreshold_GTVal_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*, const Npp16u *nValue*)

1 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.59 NppStatus nppiThreshold_GTVal_16u_C3IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3])

3 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.60 NppStatus nppiThreshold_GTVal_16u_C3R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3])

3 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.61 NppStatus nppiThreshold_GTVal_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3])

4 channel 32-bit floating point in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.62 NppStatus nppiThreshold_GTVal_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3])

4 channel 32-bit floating point image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.63 NppStatus nppiThreshold_GTVal_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*, const Npp32f *nValue*)

1 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement values.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.64 NppStatus nppiThreshold_GTVal_32f_C1R (const Npp32f $*$ *pSrc*, int *nSrcStep*, Npp32f $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*, const Npp32f *nValue*)

1 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.65 NppStatus nppiThreshold_GTVal_32f_C3IR (Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3])

3 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.66 NppStatus nppiThreshold_GTVal_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3])

3 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.67 NppStatus nppiThreshold_GTVal_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3])

4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.68 NppStatus nppiThreshold_GTVal_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3])

4 channel 8-bit unsigned char image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.69 NppStatus nppiThreshold_GTVal_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*, const Npp8u *nValue*)

1 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.70 NppStatus nppiThreshold_GTVal_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*, const Npp8u *nValue*)

1 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is greater than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.71 NppStatus nppiThreshold_GTVal_8u_C3IR (Npp8u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3])

3 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.72 NppStatus nppiThreshold_GTVal_8u_C3R (const Npp8u $*$ *pSrc*, int *nSrcStep*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3])

3 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is greater than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.73 NppStatus nppiThreshold_LT_16s_AC4IR (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3])

4 channel 16-bit signed short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.74 NppStatus nppiThreshold_LT_16s_AC4R (const Npp16s * *pSrc*, int *nSrcStep*, Npp16s * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3])

4 channel 16-bit signed short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.75 NppStatus nppiThreshold_LT_16s_C1IR (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*)

1 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.76 NppStatus nppiThreshold_LT_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*)

1 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.77 NppStatus nppiThreshold_LT_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3])

3 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.78 NppStatus nppiThreshold_LT_16s_C3R (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp16s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3])

3 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.79 NppStatus nppiThreshold_LT_16u_AC4IR (Npp16u $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3])

4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.80 NppStatus nppiThreshold_LT_16u_AC4R (const Npp16u $*$ *pSrc*, int *nSrcStep*, Npp16u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3])

4 channel 16-bit unsigned short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.81 NppStatus nppiThreshold_LT_16u_C1IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*)

1 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.82 NppStatus nppiThreshold_LT_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*)

1 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.83 NppStatus nppiThreshold_LT_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3])

3 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.84 NppStatus nppiThreshold_LT_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3])

3 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.85 NppStatus nppiThreshold_LT_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3])

4 channel 32-bit floating point in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.86 NppStatus nppiThreshold_LT_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3])

4 channel 32-bit floating point image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.87 NppStatus nppiThreshold_LT_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*)

1 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.88 NppStatus nppiThreshold_LT_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*)

1 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.89 NppStatus nppiThreshold_LT_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3])

3 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.90 NppStatus nppiThreshold_LT_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3])

3 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.91 NppStatus nppiThreshold_LT_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3])

4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.92 NppStatus nppiThreshold_LT_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3])

4 channel 8-bit unsigned char image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set value is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.93 NppStatus nppiThreshold_LT_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*)

1 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.94 NppStatus nppiThreshold_LT_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*)

1 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.95 NppStatus nppiThreshold_LT_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3])

3 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.96 NppStatus nppiThreshold_LT_8u_C3R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3])

3 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nThreshold, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.97 NppStatus nppiThreshold_LTVal_16s_AC4IR (Npp16s * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3])

4 channel 16-bit signed short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.98 NppStatus nppiThreshold_LTVal_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3])

4 channel 16-bit signed short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.99 NppStatus nppiThreshold_LTVal_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*, const Npp16s *nValue*)

1 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.100 NppStatus nppiThreshold_LTVal_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*, const Npp16s *nValue*)

1 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.101 NppStatus nppiThreshold_LTVal_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3])

3 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.102 NppStatus nppiThreshold_LTVal_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3])

3 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.103 NppStatus nppiThreshold_LTVal_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3])

4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.104 NppStatus nppiThreshold_LTVal_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3])

4 channel 16-bit unsigned short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.105 NppStatus nppiThreshold_LTVal_16u_C1IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*, const Npp16u *nValue*)

1 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.106 NppStatus nppiThreshold_LTVal_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*, const Npp16u *nValue*)

1 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.107 NppStatus nppiThreshold_LTVal_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3])

3 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.108 NppStatus nppiThreshold_LTVal_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3])

3 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.109 NppStatus nppiThreshold_LTVal_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3])

4 channel 32-bit floating point in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.110 NppStatus nppiThreshold_LTVal_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3])

4 channel 32-bit floating point image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.111 NppStatus nppiThreshold_LTVal_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*, const Npp32f *nValue*)

1 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.112 NppStatus nppiThreshold_LTVal_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*, const Npp32f *nValue*)

1 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.113 NppStatus nppiThreshold_LTVal_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3])

3 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.114 NppStatus nppiThreshold_LTVal_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3])

3 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.115 NppStatus nppiThreshold_LTVal_8u_AC4IR (Npp8u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3])

4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.116 NppStatus nppiThreshold_LTVal_8u_AC4R (const Npp8u * *pSrc*, int *nSrcStep*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3])

4 channel 8-bit unsigned char image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set value is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.117 NppStatus nppiThreshold_LTVal_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*, const Npp8u *nValue*)

1 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.118 NppStatus nppiThreshold_LTVal_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*, const Npp8u *nValue*)

1 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is less than nThreshold is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.119 NppStatus nppiThreshold_LTVal_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3])

3 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.120 NppStatus nppiThreshold_LTVal_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3])

3 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is less than rThreshold is true, the pixel is set to rValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.121 NppStatus nppiThreshold_LTValGTVal_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholdsLT*[3], const Npp16s *rValuesLT*[3], const Npp16s *rThresholdsGT*[3], const Npp16s *rValuesGT*[3])

4 channel 16-bit signed short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set value is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.122 NppStatus nppiThreshold_LTValGTVal_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholdsLT*[3], const Npp16s *rValuesLT*[3], const Npp16s *rThresholdsGT*[3], const Npp16s *rValuesGT*[3])

4 channel 16-bit signed short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set value is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.123 NppStatus nppiThreshold_LTValGTVal_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *nThresholdLT*, const Npp16s *nValueLT*, const Npp16s *nThresholdGT*, const Npp16s *nValueGT*)

1 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is less than nThresholdLT is true, the pixel is set to nValueLT, else if sourcePixel is greater than nThresholdGT the pixel is set to nValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThresholdLT The thresholdLT value.

nValueLT The thresholdLT replacement value.

nThresholdGT The thresholdGT value.

nValueGT The thresholdGT replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.124 NppStatus nppiThreshold_LTValGTVal_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *nThresholdLT*, const Npp16s *nValueLT*, const Npp16s *nThresholdGT*, const Npp16s *nValueGT*)

1 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is less than nThresholdLT is true, the pixel is set to nValueLT, else if sourcePixel is greater than nThresholdGT the pixel is set to nValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThresholdLT The thresholdLT value.

nValueLT The thresholdLT replacement value.

nThresholdGT The thresholdGT value.

nValueGT The thresholdGT replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.125 NppStatus nppiThreshold_LTValGTVal_16s_C3IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholdsLT*[3], const Npp16s *rValuesLT*[3], const Npp16s *rThresholdsGT*[3], const Npp16s *rValuesGT*[3])

3 channel 16-bit signed short in place threshold.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.126 NppStatus nppiThreshold_LTValGTVal_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholdsLT*[3], const Npp16s *rValuesLT*[3], const Npp16s *rThresholdsGT*[3], const Npp16s *rValuesGT*[3])

3 channel 16-bit signed short threshold.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.127 NppStatus nppiThreshold_LTValGTVal_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholdsLT*[3], const Npp16u *rValuesLT*[3], const Npp16u *rThresholdsGT*[3], const Npp16u *rValuesGT*[3])

4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set value is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.128 NppStatus nppiThreshold_LTValGTVal_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholdsLT*[3], const Npp16u *rValuesLT*[3], const Npp16u *rThresholdsGT*[3], const Npp16u *rValuesGT*[3])

4 channel 16-bit unsigned short image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set value is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.129 NppStatus nppiThreshold_LTValGTVal_16u_C1IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *nThresholdLT*, const Npp16u *nValueLT*, const Npp16u *nThresholdGT*, const Npp16u *nValueGT*)

1 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is less than nThresholdLT is true, the pixel is set to nValueLT, else if sourcePixel is greater than nThresholdGT the pixel is set to nValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThresholdLT The thresholdLT value.

nValueLT The thresholdLT replacement value.

nThresholdGT The thresholdGT value.

nValueGT The thresholdGT replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.130 NppStatus nppiThreshold_LTValGTVal_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, Npp16u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *nThresholdLT*, const Npp16u *nValueLT*, const Npp16u *nThresholdGT*, const Npp16u *nValueGT*)

1 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is less than nThresholdLT is true, the pixel is set to nValueLT, else if sourcePixel is greater than nThresholdGT the pixel is set to nValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThresholdLT The thresholdLT value.

nValueLT The thresholdLT replacement value.

nThresholdGT The thresholdGT value.

nValueGT The thresholdGT replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.131 NppStatus nppiThreshold_LTValGTVal_16u_C3IR (Npp16u * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholdsLT*[3], const Npp16u *rValuesLT*[3], const Npp16u *rThresholdsGT*[3], const Npp16u *rValuesGT*[3])

3 channel 16-bit unsigned short in place threshold.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.132 NppStatus nppiThreshold_LTValGTVal_16u_C3R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholdsLT*[3], const Npp16u *rValuesLT*[3], const Npp16u *rThresholdsGT*[3], const Npp16u *rValuesGT*[3])

3 channel 16-bit unsigned short threshold.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.133 NppStatus nppiThreshold_LTValGTVal_32f_AC4IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholdsLT*[3], const Npp32f *rValuesLT*[3], const Npp32f *rThresholdsGT*[3], const Npp32f *rValuesGT*[3])

4 channel 32-bit floating point in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set value is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.134 NppStatus nppiThreshold_LTValGTVal_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, Npp32f * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholdsLT*[3], const Npp32f *rValuesLT*[3], const Npp32f *rThresholdsGT*[3], const Npp32f *rValuesGT*[3])

4 channel 32-bit floating point image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set value is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.135 NppStatus nppiThreshold_LTValGTVal_32f_C1IR (Npp32f * *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *nThresholdLT*, const Npp32f *nValueLT*, const Npp32f *nThresholdGT*, const Npp32f *nValueGT*)

1 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is less than nThresholdLT is true, the pixel is set to nValueLT, else if sourcePixel is greater than nThresholdGT the pixel is set to nValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThresholdLT The thresholdLT value.

nValueLT The thresholdLT replacement value.

nThresholdGT The thresholdGT value.

nValueGT The thresholdGT replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.136 NppStatus nppiThreshold_LTValGTVal_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *nThresholdLT*, const Npp32f *nValueLT*, const Npp32f *nThresholdGT*, const Npp32f *nValueGT*)

1 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is less than nThresholdLT is true, the pixel is set to nValueLT, else if sourcePixel is greater than nThresholdGT the pixel is set to nValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThresholdLT The thresholdLT value.

nValueLT The thresholdLT replacement value.

nThresholdGT The thresholdGT value.

nValueGT The thresholdGT replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.137 NppStatus nppiThreshold_LTValGTVal_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholdsLT*[3], const Npp32f *rValuesLT*[3], const Npp32f *rThresholdsGT*[3], const Npp32f *rValuesGT*[3])

3 channel 32-bit floating point in place threshold.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.138 NppStatus nppiThreshold_LTValGTVal_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholdsLT*[3], const Npp32f *rValuesLT*[3], const Npp32f *rThresholdsGT*[3], const Npp32f *rValuesGT*[3])

3 channel 32-bit floating point threshold.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.139 NppStatus nppiThreshold_LTValGTVal_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholdsLT*[3], const Npp8u *rValuesLT*[3], const Npp8u *rThresholdsGT*[3], const Npp8u *rValuesGT*[3])

4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set value is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.140 NppStatus nppiThreshold_LTValGTVal_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholdsLT*[3], const Npp8u *rValuesLT*[3], const Npp8u *rThresholdsGT*[3], const Npp8u *rValuesGT*[3])

4 channel 8-bit unsigned char image threshold, not affecting Alpha.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set value is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.141 NppStatus nppiThreshold_LTValGTVal_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *nThresholdLT*, const Npp8u *nValueLT*, const Npp8u *nThresholdGT*, const Npp8u *nValueGT*)

1 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is less than nThresholdLT is true, the pixel is set to nValueLT, else if sourcePixel is greater than nThresholdGT the pixel is set to nValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThresholdLT The thresholdLT value.

nValueLT The thresholdLT replacement value.

nThresholdGT The thresholdGT value.

nValueGT The thresholdGT replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.142 NppStatus nppiThreshold_LTValGTVal_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *nThresholdLT*, const Npp8u *nValueLT*, const Npp8u *nThresholdGT*, const Npp8u *nValueGT*)

1 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is less than nThresholdLT is true, the pixel is set to nValueLT, else if sourcePixel is greater than nThresholdGT the pixel is set to nValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThresholdLT The thresholdLT value.

nValueLT The thresholdLT replacement value.

nThresholdGT The thresholdGT value.

nValueGT The thresholdGT replacement value.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.143 NppStatus nppiThreshold_LTValGTVal_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholdsLT*[3], const Npp8u *rValuesLT*[3], const Npp8u *rThresholdsGT*[3], const Npp8u *rValuesGT*[3])

3 channel 8-bit unsigned char in place threshold.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrcDst Destination-Image Pointer.

nSrcDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.144 NppStatus nppiThreshold_LTValGTVal_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholdsLT*[3], const Npp8u *rValuesLT*[3], const Npp8u *rThresholdsGT*[3], const Npp8u *rValuesGT*[3])

3 channel 8-bit unsigned char threshold.

If for a comparison operations sourcePixel is less than rThresholdLT is true, the pixel is set to rValueLT, else if sourcePixel is greater than rThresholdGT the pixel is set to rValueGT, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholdsLT The thresholdLT values, one per color channel.

rValuesLT The thresholdLT replacement values, one per color channel.

rThresholdsGT The thresholdGT values, one per channel.

rValuesGT The thresholdGT replacement values, one per color channel.

Returns:

Image Data Related Error Codes, ROI Related Error Codes.

7.130.2.145 NppStatus nppiThreshold_Val_16s_AC4IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3], NppCmpOp *eComparisonOperation*)

4 channel 16-bit signed short in place image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.146 NppStatus nppiThreshold_Val_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3], NppCmpOp *eComparisonOperation*)

4 channel 16-bit signed short image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.147 NppStatus nppiThreshold_Val_16s_C1IR (Npp16s ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*, const Npp16s *nValue*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit signed short in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.148 NppStatus nppiThreshold_Val_16s_C1R (const Npp16s $*$ *pSrc*, int *nSrcStep*, Npp16s $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *nThreshold*, const Npp16s *nValue*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit signed short threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.149 NppStatus nppiThreshold_Val_16s_C3IR (Npp16s $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3], NppCmpOp *eComparisonOperation*)

3 channel 16-bit signed short in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.150 NppStatus nppiThreshold_Val_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, Npp16s ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16s *rThresholds*[3], const Npp16s *rValues*[3], NppCmpOp *eComparisonOperation*)

3 channel 16-bit signed short threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.151 NppStatus nppiThreshold_Val_16u_AC4IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3], NppCmpOp *eComparisonOperation*)

4 channel 16-bit unsigned short in place image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.152 NppStatus nppiThreshold_Val_16u_AC4R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3], NppCmpOp *eComparisonOperation*)

4 channel 16-bit unsigned short image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.153 NppStatus nppiThreshold_Val_16u_C1IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*, const Npp16u *nValue*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit unsigned short in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.154 NppStatus nppiThreshold_Val_16u_C1R (const Npp16u ∗ *pSrc*, int *nSrcStep*, Npp16u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *nThreshold*, const Npp16u *nValue*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit unsigned short threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.155 NppStatus nppiThreshold_Val_16u_C3IR (Npp16u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3], NppCmpOp *eComparisonOperation*)

3 channel 16-bit unsigned short in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.156 NppStatus nppiThreshold_Val_16u_C3R (const Npp16u $*$ *pSrc*, int *nSrcStep*, Npp16u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp16u *rThresholds*[3], const Npp16u *rValues*[3], NppCmpOp *eComparisonOperation*)

3 channel 16-bit unsigned short threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.157 NppStatus nppiThreshold_Val_32f_AC4IR (Npp32f $*$ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3], NppCmpOp *eComparisonOperation*)

4 channel 32-bit floating point in place image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.158 NppStatus nppiThreshold_Val_32f_AC4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3], NppCmpOp *eComparisonOperation*)

4 channel 32-bit floating point image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.159 NppStatus nppiThreshold_Val_32f_C1IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*, const Npp32f *nValue*, NppCmpOp *eComparisonOperation*)

1 channel 32-bit floating point in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.160 NppStatus nppiThreshold_Val_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *nThreshold*, const Npp32f *nValue*, NppCmpOp *eComparisonOperation*)

1 channel 32-bit floating point threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_-ERROR if an invalid comparison operation type is specified.

7.130.2.161 NppStatus nppiThreshold_Val_32f_C3IR (Npp32f ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3], NppCmpOp *eComparisonOperation*)

3 channel 32-bit floating point in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.162 NppStatus nppiThreshold_Val_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, Npp32f ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp32f *rThresholds*[3], const Npp32f *rValues*[3], NppCmpOp *eComparisonOperation*)

3 channel 32-bit floating point threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.163 NppStatus nppiThreshold_Val_8u_AC4IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3], NppCmpOp *eComparisonOperation*)

4 channel 8-bit unsigned char in place image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.164 NppStatus nppiThreshold_Val_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3], NppCmpOp *eComparisonOperation*)

4 channel 8-bit unsigned char image threshold, not affecting Alpha.

If for a comparison operations OP the predicate (sourcePixel.channel OP nThreshold) is true, the channel value is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.165 NppStatus nppiThreshold_Val_8u_C1IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*, const Npp8u *nValue*, NppCmpOp *eComparisonOperation*)

1 channel 8-bit unsigned char in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.166 NppStatus nppiThreshold_Val_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *nThreshold*, const Npp8u *nValue*, NppCmpOp *eComparisonOperation*)

1 channel 8-bit unsigned char threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nThreshold The threshold value.

nValue The threshold replacement value.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.167 NppStatus nppiThreshold_Val_8u_C3IR (Npp8u ∗ *pSrcDst*, int *nSrcDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3], NppCmpOp *eComparisonOperation*)

3 channel 8-bit unsigned char in place threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrcDst In-Place Image Pointer.

nSrcDstStep In-Place-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.130.2.168 NppStatus nppiThreshold_Val_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, const Npp8u *rThresholds*[3], const Npp8u *rValues*[3], NppCmpOp *eComparisonOperation*)

3 channel 8-bit unsigned char threshold.

If for a comparison operations OP the predicate (sourcePixel OP nThreshold) is true, the pixel is set to nValue, otherwise it is set to sourcePixel.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

rThresholds The threshold values, one per color channel.

rValues The threshold replacement values, one per color channel.

eComparisonOperation The type of comparison operation to be used. The only valid values are: NPP_CMP_LESS and NPP_CMP_GREATER.

Returns:

Image Data Related Error Codes, ROI Related Error Codes, or NPP_NOT_SUPPORTED_MODE_ERROR if an invalid comparison operation type is specified.

7.131 Compare Operations

Compare the pixels of two images and create a binary result image.

Functions

- NppStatus nppiCompare_8u_C1R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  1 channel 8-bit unsigned char image compare.

- NppStatus nppiCompare_8u_C3R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  3 channel 8-bit unsigned char image compare.

- NppStatus nppiCompare_8u_C4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 8-bit unsigned char image compare.

- NppStatus nppiCompare_8u_AC4R (const Npp8u ∗pSrc1, int nSrc1Step, const Npp8u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 8-bit unsigned char image compare, not affecting Alpha.

- NppStatus nppiCompare_16u_C1R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  1 channel 16-bit unsigned short image compare.

- NppStatus nppiCompare_16u_C3R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  3 channel 16-bit unsigned short image compare.

- NppStatus nppiCompare_16u_C4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 16-bit unsigned short image compare.

- NppStatus nppiCompare_16u_AC4R (const Npp16u ∗pSrc1, int nSrc1Step, const Npp16u ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 16-bit unsigned short image compare, not affecting Alpha.

- NppStatus nppiCompare_16s_C1R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  1 channel 16-bit signed short image compare.

- NppStatus nppiCompare_16s_C3R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  3 channel 16-bit signed short image compare.

- NppStatus nppiCompare_16s_C4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 16-bit signed short image compare.

- NppStatus nppiCompare_16s_AC4R (const Npp16s ∗pSrc1, int nSrc1Step, const Npp16s ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 16-bit signed short image compare, not affecting Alpha.

- NppStatus nppiCompare_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  1 channel 32-bit floating point image compare.

- NppStatus nppiCompare_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  3 channel 32-bit floating point image compare.

- NppStatus nppiCompare_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 32-bit floating point image compare.

- NppStatus nppiCompare_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 32-bit signed floating point compare, not affecting Alpha.

- NppStatus nppiCompareC_8u_C1R (const Npp8u ∗pSrc, int nSrcStep, const Npp8u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  1 channel 8-bit unsigned char image compare with constant value.

- NppStatus nppiCompareC_8u_C3R (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  3 channel 8-bit unsigned char image compare with constant value.

- NppStatus nppiCompareC_8u_C4R (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 8-bit unsigned char image compare with constant value.

- NppStatus nppiCompareC_8u_AC4R (const Npp8u ∗pSrc, int nSrcStep, const Npp8u ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 8-bit unsigned char image compare, not affecting Alpha.

- NppStatus nppiCompareC_16u_C1R (const Npp16u ∗pSrc, int nSrcStep, const Npp16u nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  1 channel 16-bit unsigned short image compare with constant value.

- NppStatus nppiCompareC_16u_C3R (const Npp16u ∗pSrc, int nSrcStep, const Npp16u ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  3 channel 16-bit unsigned short image compare with constant value.

- NppStatus nppiCompareC_16u_C4R (const Npp16u ∗pSrc, int nSrcStep, const Npp16u ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 16-bit unsigned short image compare with constant value.

- NppStatus nppiCompareC_16u_AC4R (const Npp16u ∗pSrc, int nSrcStep, const Npp16u ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 16-bit unsigned short image compare, not affecting Alpha.

- NppStatus nppiCompareC_16s_C1R (const Npp16s ∗pSrc, int nSrcStep, const Npp16s nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  1 channel 16-bit signed short image compare with constant value.

- NppStatus nppiCompareC_16s_C3R (const Npp16s ∗pSrc, int nSrcStep, const Npp16s ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  3 channel 16-bit signed short image compare with constant value.

- NppStatus nppiCompareC_16s_C4R (const Npp16s ∗pSrc, int nSrcStep, const Npp16s ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 16-bit signed short image compare with constant value.

- NppStatus nppiCompareC_16s_AC4R (const Npp16s ∗pSrc, int nSrcStep, const Npp16s ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 16-bit signed short image compare, not affecting Alpha.

- NppStatus nppiCompareC_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, const Npp32f nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  1 channel 32-bit floating point image compare with constant value.

- NppStatus nppiCompareC_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, const Npp32f ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  3 channel 32-bit floating point image compare with constant value.

- NppStatus nppiCompareC_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, const Npp32f ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 32-bit floating point image compare with constant value.

- NppStatus nppiCompareC_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, const Npp32f ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, NppCmpOp eComparisonOperation)

  4 channel 32-bit signed floating point compare, not affecting Alpha.

- NppStatus nppiCompareEqualEps_32f_C1R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nEpsilon)

  1 channel 32-bit floating point image compare whether two images are equal within epsilon.

- NppStatus nppiCompareEqualEps_32f_C3R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nEpsilon)

  3 channel 32-bit floating point image compare whether two images are equal within epsilon.

- NppStatus nppiCompareEqualEps_32f_C4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nEpsilon)

  4 channel 32-bit floating point image compare whether two images are equal within epsilon.

- NppStatus nppiCompareEqualEps_32f_AC4R (const Npp32f ∗pSrc1, int nSrc1Step, const Npp32f ∗pSrc2, int nSrc2Step, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nEpsilon)

  4 channel 32-bit signed floating point compare whether two images are equal within epsilon, not affecting Alpha.

- NppStatus nppiCompareEqualEpsC_32f_C1R (const Npp32f ∗pSrc, int nSrcStep, const Npp32f nConstant, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nEpsilon)

  1 channel 32-bit floating point image compare whether image and constant are equal within epsilon.

- NppStatus nppiCompareEqualEpsC_32f_C3R (const Npp32f ∗pSrc, int nSrcStep, const Npp32f ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nEpsilon)

  3 channel 32-bit floating point image compare whether image and constant are equal within epsilon.

- NppStatus nppiCompareEqualEpsC_32f_C4R (const Npp32f ∗pSrc, int nSrcStep, const Npp32f ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nEpsilon)

  4 channel 32-bit floating point image compare whether image and constant are equal within epsilon.

- NppStatus nppiCompareEqualEpsC_32f_AC4R (const Npp32f ∗pSrc, int nSrcStep, const Npp32f ∗pConstants, Npp8u ∗pDst, int nDstStep, NppiSize oSizeROI, Npp32f nEpsilon)

  4 channel 32-bit signed floating point compare whether image and constant are equal within epsilon, not affecting Alpha.

7.131.1 Detailed Description

Compare the pixels of two images and create a binary result image.

In case of multi-channel image types, the condition must be fulfilled for all channels, otherwise the comparison is considered false. The "binary" result image is of type 8u_C1. False is represented by 0, true by NPP_MAX_8U.

7.131.2 Function Documentation

7.131.2.1 NppStatus nppiCompare_16s_AC4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 16-bit signed short image compare, not affecting Alpha.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.2 NppStatus nppiCompare_16s_C1R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit signed short image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.3 NppStatus nppiCompare_16s_C3R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

3 channel 16-bit signed short image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.4 NppStatus nppiCompare_16s_C4R (const Npp16s ∗ *pSrc1*, int *nSrc1Step*, const Npp16s ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 16-bit signed short image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.5 NppStatus nppiCompare_16u_AC4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 16-bit unsigned short image compare, not affecting Alpha.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.6 NppStatus nppiCompare_16u_C1R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit unsigned short image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.7 NppStatus nppiCompare_16u_C3R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

3 channel 16-bit unsigned short image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.8 NppStatus nppiCompare_16u_C4R (const Npp16u ∗ *pSrc1*, int *nSrc1Step*, const Npp16u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 16-bit unsigned short image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.9 NppStatus nppiCompare_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 32-bit signed floating point compare, not affecting Alpha.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.10 NppStatus nppiCompare_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

1 channel 32-bit floating point image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.11 NppStatus nppiCompare_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

3 channel 32-bit floating point image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.12 NppStatus nppiCompare_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 32-bit floating point image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.13 NppStatus nppiCompare_8u_AC4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 8-bit unsigned char image compare, not affecting Alpha.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.14 NppStatus nppiCompare_8u_C1R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

1 channel 8-bit unsigned char image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.15 NppStatus nppiCompare_8u_C3R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

3 channel 8-bit unsigned char image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.16 NppStatus nppiCompare_8u_C4R (const Npp8u ∗ *pSrc1*, int *nSrc1Step*, const Npp8u ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 8-bit unsigned char image compare.

Compare pSrc1's pixels with corresponding pixels in pSrc2.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.17 NppStatus nppiCompareC_16s_AC4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, const Npp16s ∗ *pConstants*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 16-bit signed short image compare, not affecting Alpha.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.18 NppStatus nppiCompareC_16s_C1R (const Npp16s ∗ *pSrc*, int *nSrcStep*, const Npp16s *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit signed short image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

nConstant constant value.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.19 NppStatus nppiCompareC_16s_C3R (const Npp16s ∗ *pSrc*, int *nSrcStep*, const Npp16s ∗ *pConstants*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

3 channel 16-bit signed short image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.20 NppStatus nppiCompareC_16s_C4R (const Npp16s ∗ *pSrc*, int *nSrcStep*, const Npp16s ∗ *pConstants*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 16-bit signed short image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.21 NppStatus nppiCompareC_16u_AC4R (const Npp16u * *pSrc*, int *nSrcStep*, const Npp16u * *pConstants*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 16-bit unsigned short image compare, not affecting Alpha.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.22 NppStatus nppiCompareC_16u_C1R (const Npp16u * *pSrc*, int *nSrcStep*, const Npp16u *nConstant*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

1 channel 16-bit unsigned short image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

nConstant constant value

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.23 NppStatus nppiCompareC_16u_C3R (const Npp16u * *pSrc*, int *nSrcStep*, const Npp16u * *pConstants*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

3 channel 16-bit unsigned short image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.24 NppStatus nppiCompareC_16u_C4R (const Npp16u * *pSrc*, int *nSrcStep*, const Npp16u * *pConstants*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 16-bit unsigned short image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.25 NppStatus nppiCompareC_32f_AC4R (const Npp32f * *pSrc*, int *nSrcStep*, const Npp32f * *pConstants*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 32-bit signed floating point compare, not affecting Alpha.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.26 NppStatus nppiCompareC_32f_C1R (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp32f *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

1 channel 32-bit floating point image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

nConstant constant value

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.27 NppStatus nppiCompareC_32f_C3R (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp32f ∗ *pConstants*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

3 channel 32-bit floating point image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.28 NppStatus nppiCompareC_32f_C4R (const Npp32f ∗ *pSrc*, int *nSrcStep*, const Npp32f ∗ *pConstants*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 32-bit floating point image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.29 NppStatus nppiCompareC_8u_AC4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pConstants*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 8-bit unsigned char image compare, not affecting Alpha.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.30 NppStatus nppiCompareC_8u_C1R (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u *nConstant*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

1 channel 8-bit unsigned char image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

nConstant constant value.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.31 NppStatus nppiCompareC_8u_C3R (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pConstants*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

3 channel 8-bit unsigned char image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constant values, one per color channel..

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.32 NppStatus nppiCompareC_8u_C4R (const Npp8u ∗ *pSrc*, int *nSrcStep*, const Npp8u ∗ *pConstants*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, NppCmpOp *eComparisonOperation*)

4 channel 8-bit unsigned char image compare with constant value.

Compare pSrc's pixels with constant value.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

eComparisonOperation Specifies the comparison operation to be used in the pixel comparison.

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.33 NppStatus nppiCompareEqualEps_32f_AC4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nEpsilon*)

4 channel 32-bit signed floating point compare whether two images are equal within epsilon, not affecting Alpha.

Compare pSrc1's pixels with corresponding pixels in pSrc2 to determine whether they are equal with a difference of epsilon.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nEpsilon epsilon tolerance value to compare to per color channel pixel absolute differences

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.34 NppStatus nppiCompareEqualEps_32f_C1R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nEpsilon*)

1 channel 32-bit floating point image compare whether two images are equal within epsilon.

Compare pSrc1's pixels with corresponding pixels in pSrc2 to determine whether they are equal with a difference of epsilon.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nEpsilon epsilon tolerance value to compare to pixel absolute differences

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.35 NppStatus nppiCompareEqualEps_32f_C3R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nEpsilon*)

3 channel 32-bit floating point image compare whether two images are equal within epsilon.

Compare pSrc1's pixels with corresponding pixels in pSrc2 to determine whether they are equal with a difference of epsilon.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nEpsilon epsilon tolerance value to compare to per color channel pixel absolute differences

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.36 NppStatus nppiCompareEqualEps_32f_C4R (const Npp32f ∗ *pSrc1*, int *nSrc1Step*, const Npp32f ∗ *pSrc2*, int *nSrc2Step*, Npp8u ∗ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nEpsilon*)

4 channel 32-bit floating point image compare whether two images are equal within epsilon.

Compare pSrc1's pixels with corresponding pixels in pSrc2 to determine whether they are equal with a difference of epsilon.

Parameters:

pSrc1 Source-Image Pointer.

nSrc1Step Source-Image Line Step.

pSrc2 Source-Image Pointer.

nSrc2Step Source-Image Line Step.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nEpsilon epsilon tolerance value to compare to per color channel pixel absolute differences

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.37 NppStatus nppiCompareEqualEpsC_32f_AC4R (const Npp32f $*$ *pSrc*, int *nSrcStep*, const Npp32f $*$ *pConstants*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nEpsilon*)

4 channel 32-bit signed floating point compare whether image and constant are equal within epsilon, not affecting Alpha.

Compare pSrc's pixels with constant value to determine whether they are equal within a difference of epsilon.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nEpsilon epsilon tolerance value to compare to per color channel pixel absolute differences

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.38 NppStatus nppiCompareEqualEpsC_32f_C1R (const Npp32f $*$ *pSrc*, int *nSrcStep*, const Npp32f *nConstant*, Npp8u $*$ *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nEpsilon*)

1 channel 32-bit floating point image compare whether image and constant are equal within epsilon.

Compare pSrc's pixels with constant value to determine whether they are equal within a difference of epsilon.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

nConstant constant value

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nEpsilon epsilon tolerance value to compare to pixel absolute differences

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.39 NppStatus nppiCompareEqualEpsC_32f_C3R (const Npp32f * *pSrc*, int *nSrcStep*, const Npp32f * *pConstants*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nEpsilon*)

3 channel 32-bit floating point image compare whether image and constant are equal within epsilon.

Compare pSrc's pixels with constant value to determine whether they are equal within a difference of epsilon.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nEpsilon epsilon tolerance value to compare to per color channel pixel absolute differences

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.131.2.40 NppStatus nppiCompareEqualEpsC_32f_C4R (const Npp32f * *pSrc*, int *nSrcStep*, const Npp32f * *pConstants*, Npp8u * *pDst*, int *nDstStep*, NppiSize *oSizeROI*, Npp32f *nEpsilon*)

4 channel 32-bit floating point image compare whether image and constant are equal within epsilon.

Compare pSrc's pixels with constant value to determine whether they are equal within a difference of epsilon.

Parameters:

pSrc Source-Image Pointer.

nSrcStep Source-Image Line Step.

pConstants pointer to a list of constants, one per color channel.

pDst Destination-Image Pointer.

nDstStep Destination-Image Line Step.

oSizeROI Region-of-Interest (ROI).

nEpsilon epsilon tolerance value to compare to per color channel pixel absolute differences

Returns:

Image Data Related Error Codes, ROI Related Error Codes

7.132 NPP Signal Processing

Modules

- Arithmetic and Logical Operations
- Conversion Functions
- Filtering Functions

  Functions that provide functionality of generating output signal based on the input signal like signal integral, etc.

- Initialization
- Statistical Functions

  Functions that provide global signal statistics like: sum, mean, standard deviation, min, max, etc.

- Memory Management

7.133 Arithmetic and Logical Operations

Modules

- Arithmetic Operations
- Logical And Shift Operations

7.134 Arithmetic Operations

Modules

- AddC

  Adds a constant value to each sample of a signal.

- AddProductC

  Adds product of a constant and each sample of a source signal to the each sample of destination signal.

- MulC

  Multiplies each sample of a signal by a constant value.

- SubC

  Subtracts a constant from each sample of a signal.

- SubCRev

  Subtracts each sample of a signal from a constant.

- DivC

  Divides each sample of a signal by a constant.

- DivCRev

  Divides a constant by each sample of a signal.

- Add

  Sample by sample addition of two signals.

- AddProduct

  Adds sample by sample product of two signals to the destination signal.

- Mul

  Sample by sample multiplication the samples of two signals.

- Sub

  Sample by sample subtraction of the samples of two signals.

- Div

  Sample by sample division of the samples of two signals.

- Div_Round

  Sample by sample division of the samples of two signals with rounding.

- Abs

  Absolute value of each sample of a signal.

- Sqr

  Squares each sample of a signal.

- Sqrt

Square root of each sample of a signal.

- Cubrt

  Cube root of each sample of a signal.

- Exp

  E raised to the power of each sample of a signal.

- Ln

  Natural logarithm of each sample of a signal.

- 10Log10

  Ten times the decimal logarithm of each sample of a signal.

- SumLn

  Sums up the natural logarithm of each sample of a signal.

- Arctan

  Inverse tangent of each sample of a signal.

- Normalize

  Normalize each sample of a real or complex signal using offset and division operations.

- Cauchy, CauchyD, and CauchyDD2

  Determine Cauchy robust error function and its first and second derivatives for each sample of a signal.

7.135 AddC

Adds a constant value to each sample of a signal.

Functions

- NppStatus nppsAddC_8u_ISfs (Npp8u nValue, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal add constant, scale, then clamp to saturated value

- NppStatus nppsAddC_8u_Sfs (const Npp8u ∗pSrc, Npp8u nValue, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned charvector add constant, scale, then clamp to saturated value.

- NppStatus nppsAddC_16u_ISfs (Npp16u nValue, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short in place signal add constant, scale, then clamp to saturated value.

- NppStatus nppsAddC_16u_Sfs (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short vector add constant, scale, then clamp to saturated value.

- NppStatus nppsAddC_16s_ISfs (Npp16s nValue, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal add constant, scale, then clamp to saturated value.

- NppStatus nppsAddC_16s_Sfs (const Npp16s ∗pSrc, Npp16s nValue, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal add constant, scale, then clamp to saturated value.

- NppStatus nppsAddC_16sc_ISfs (Npp16sc nValue, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary)signal add constant, scale, then clamp to saturated value.

- NppStatus nppsAddC_16sc_Sfs (const Npp16sc ∗pSrc, Npp16sc nValue, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary) signal add constant, scale, then clamp to saturated value.

- NppStatus nppsAddC_32s_ISfs (Npp32s nValue, Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer in place signal add constant and scale.

- NppStatus nppsAddC_32s_Sfs (const Npp32s ∗pSrc, Npp32s nValue, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integersignal add constant and scale.

- NppStatus nppsAddC_32sc_ISfs (Npp32sc nValue, Npp32sc ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit integer complex number (32 bit real, 32 bit imaginary) in place signal add constant and scale.

- NppStatus nppsAddC_32sc_Sfs (const Npp32sc ∗pSrc, Npp32sc nValue, Npp32sc ∗pDst, int nLength, int nScaleFactor)

32-bit integer complex number (32 bit real, 32 bit imaginary) signal add constant and scale.

- NppStatus nppsAddC_32f_I (Npp32f nValue, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal add constant.

- NppStatus nppsAddC_32f (const Npp32f ∗pSrc, Npp32f nValue, Npp32f ∗pDst, int nLength)

  32-bit floating point signal add constant.

- NppStatus nppsAddC_32fc_I (Npp32fc nValue, Npp32fc ∗pSrcDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal add constant.

- NppStatus nppsAddC_32fc (const Npp32fc ∗pSrc, Npp32fc nValue, Npp32fc ∗pDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) signal add constant.

- NppStatus nppsAddC_64f_I (Npp64f nValue, Npp64f ∗pSrcDst, int nLength)

  64-bit floating point, in place signal add constant.

- NppStatus nppsAddC_64f (const Npp64f ∗pSrc, Npp64f nValue, Npp64f ∗pDst, int nLength)

  64-bit floating pointsignal add constant.

- NppStatus nppsAddC_64fc_I (Npp64fc nValue, Npp64fc ∗pSrcDst, int nLength)

  64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal add constant.

- NppStatus nppsAddC_64fc (const Npp64fc ∗pSrc, Npp64fc nValue, Npp64fc ∗pDst, int nLength)

  64-bit floating point complex number (64 bit real, 64 bit imaginary) signal add constant.

7.135.1 Detailed Description

Adds a constant value to each sample of a signal.

7.135.2 Function Documentation

7.135.2.1 NppStatus nppsAddC_16s_ISfs (Npp16s *nValue*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal add constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.2 NppStatus nppsAddC_16s_Sfs (const Npp16s * *pSrc*, Npp16s *nValue*, Npp16s * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal add constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.3 NppStatus nppsAddC_16sc_ISfs (Npp16sc *nValue*, Npp16sc * *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary)signal add constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.4 NppStatus nppsAddC_16sc_Sfs (const Npp16sc * *pSrc*, Npp16sc *nValue*, Npp16sc * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary) signal add constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.5 NppStatus nppsAddC_16u_ISfs (Npp16u *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal add constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.6 NppStatus nppsAddC_16u_Sfs (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short vector add constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.7 NppStatus nppsAddC_32f (const Npp32f ∗ *pSrc*, Npp32f *nValue*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal add constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.8 NppStatus nppsAddC_32f_I (Npp32f *nValue*, Npp32f * *pSrcDst*, int *nLength*)

32-bit floating point in place signal add constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.9 NppStatus nppsAddC_32fc (const Npp32fc * *pSrc*, Npp32fc *nValue*, Npp32fc * *pDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) signal add constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.10 NppStatus nppsAddC_32fc_I (Npp32fc *nValue*, Npp32fc * *pSrcDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal add constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.11 NppStatus nppsAddC_32s_ISfs (Npp32s *nValue*, Npp32s * *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer in place signal add constant and scale.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.12 NppStatus nppsAddC_32s_Sfs (const Npp32s ∗ *pSrc*, Npp32s *nValue*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integersignal add constant and scale.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.13 NppStatus nppsAddC_32sc_ISfs (Npp32sc *nValue*, Npp32sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit integer complex number (32 bit real, 32 bit imaginary) in place signal add constant and scale.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.14 NppStatus nppsAddC_32sc_Sfs (const Npp32sc ∗ *pSrc*, Npp32sc *nValue*, Npp32sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit integer complex number (32 bit real, 32 bit imaginary) signal add constant and scale.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.15 NppStatus nppsAddC_64f (const Npp64f ∗ *pSrc*, Npp64f *nValue*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating pointsignal add constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.16 NppStatus nppsAddC_64f_I (Npp64f *nValue*, Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point, in place signal add constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Length of the vectors, number of items.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.17 NppStatus nppsAddC_64fc (const Npp64fc ∗ *pSrc*, Npp64fc *nValue*, Npp64fc ∗ *pDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) signal add constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.18 NppStatus nppsAddC_64fc_I (Npp64fc *nValue*, Npp64fc ∗ *pSrcDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal add constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.19 NppStatus nppsAddC_8u_ISfs (Npp8u *nValue*, Npp8u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal add constant, scale, then clamp to saturated value

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be added to each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.135.2.20 NppStatus nppsAddC_8u_Sfs (const Npp8u ∗ *pSrc*, Npp8u *nValue*, Npp8u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned charvector add constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be added to each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.136 AddProductC

Adds product of a constant and each sample of a source signal to the each sample of destination signal.

Functions

- NppStatus nppsAddProductC_32f (const Npp32f ∗pSrc, Npp32f nValue, Npp32f ∗pDst, int nLength)

  32-bit floating point signal add product of signal times constant to destination signal.

7.136.1 Detailed Description

Adds product of a constant and each sample of a source signal to the each sample of destination signal.

7.136.2 Function Documentation

7.136.2.1 NppStatus nppsAddProductC_32f (const Npp32f ∗ *pSrc*, Npp32f *nValue*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal add product of signal times constant to destination signal.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137 MulC

Multiplies each sample of a signal by a constant value.

Functions

- NppStatus nppsMulC_8u_ISfs (Npp8u nValue, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal times constant, scale, then clamp to saturated value

- NppStatus nppsMulC_8u_Sfs (const Npp8u ∗pSrc, Npp8u nValue, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal times constant, scale, then clamp to saturated value.

- NppStatus nppsMulC_16u_ISfs (Npp16u nValue, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short in place signal times constant, scale, then clamp to saturated value.

- NppStatus nppsMulC_16u_Sfs (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal times constant, scale, then clamp to saturated value.

- NppStatus nppsMulC_16s_ISfs (Npp16s nValue, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal times constant, scale, then clamp to saturated value.

- NppStatus nppsMulC_16s_Sfs (const Npp16s ∗pSrc, Npp16s nValue, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal times constant, scale, then clamp to saturated value.

- NppStatus nppsMulC_16sc_ISfs (Npp16sc nValue, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary)signal times constant, scale, then clamp to saturated value.

- NppStatus nppsMulC_16sc_Sfs (const Npp16sc ∗pSrc, Npp16sc nValue, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary)signal times constant, scale, then clamp to saturated value.

- NppStatus nppsMulC_32s_ISfs (Npp32s nValue, Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer in place signal times constant and scale.

- NppStatus nppsMulC_32s_Sfs (const Npp32s ∗pSrc, Npp32s nValue, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal times constant and scale.

- NppStatus nppsMulC_32sc_ISfs (Npp32sc nValue, Npp32sc ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit integer complex number (32 bit real, 32 bit imaginary) in place signal times constant and scale.

- NppStatus nppsMulC_32sc_Sfs (const Npp32sc ∗pSrc, Npp32sc nValue, Npp32sc ∗pDst, int nLength, int nScaleFactor)

32-bit integer complex number (32 bit real, 32 bit imaginary) signal times constant and scale.

- NppStatus nppsMulC_32f_I (Npp32f nValue, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal times constant.

- NppStatus nppsMulC_32f (const Npp32f ∗pSrc, Npp32f nValue, Npp32f ∗pDst, int nLength)

  32-bit floating point signal times constant.

- NppStatus nppsMulC_Low_32f16s (const Npp32f ∗pSrc, Npp32f nValue, Npp16s ∗pDst, int nLength)

  32-bit floating point signal times constant with output converted to 16-bit signed integer.

- NppStatus nppsMulC_32f16s_Sfs (const Npp32f ∗pSrc, Npp32f nValue, Npp16s ∗pDst, int nLength, int nScaleFactor)

  32-bit floating point signal times constant with output converted to 16-bit signed integer with scaling and saturation of output result.

- NppStatus nppsMulC_32fc_I (Npp32fc nValue, Npp32fc ∗pSrcDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal times constant.

- NppStatus nppsMulC_32fc (const Npp32fc ∗pSrc, Npp32fc nValue, Npp32fc ∗pDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) signal times constant.

- NppStatus nppsMulC_64f_I (Npp64f nValue, Npp64f ∗pSrcDst, int nLength)

  64-bit floating point, in place signal times constant.

- NppStatus nppsMulC_64f (const Npp64f ∗pSrc, Npp64f nValue, Npp64f ∗pDst, int nLength)

  64-bit floating point signal times constant.

- NppStatus nppsMulC_64f64s_ISfs (Npp64f nValue, Npp64s ∗pDst, int nLength, int nScaleFactor)

  64-bit floating point signal times constant with in place conversion to 64-bit signed integer and with scaling and saturation of output result.

- NppStatus nppsMulC_64fc_I (Npp64fc nValue, Npp64fc ∗pSrcDst, int nLength)

  64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal times constant.

- NppStatus nppsMulC_64fc (const Npp64fc ∗pSrc, Npp64fc nValue, Npp64fc ∗pDst, int nLength)

  64-bit floating point complex number (64 bit real, 64 bit imaginary) signal times constant.

7.137.1 Detailed Description

Multiplies each sample of a signal by a constant value.

7.137.2 Function Documentation

7.137.2.1 NppStatus nppsMulC_16s_ISfs (Npp16s *nValue*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal times constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.2 NppStatus nppsMulC_16s_Sfs (const Npp16s ∗ *pSrc*, Npp16s *nValue*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal times constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.3 NppStatus nppsMulC_16sc_ISfs (Npp16sc *nValue*, Npp16sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary)signal times constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.4 NppStatus nppsMulC_16sc_Sfs (const Npp16sc ∗ *pSrc*, Npp16sc *nValue*, Npp16sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary)signal times constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.5 NppStatus nppsMulC_16u_ISfs (Npp16u *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal times constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.6 NppStatus nppsMulC_16u_Sfs (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal times constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.7 NppStatus nppsMulC_32f (const Npp32f ∗ *pSrc*, Npp32f *nValue*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal times constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.8 NppStatus nppsMulC_32f16s_Sfs (const Npp32f ∗ *pSrc*, Npp32f *nValue*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit floating point signal times constant with output converted to 16-bit signed integer with scaling and saturation of output result.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nScaleFactor Integer Result Scaling.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.9 NppStatus nppsMulC_32f_I (Npp32f *nValue*, Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point in place signal times constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.10 NppStatus nppsMulC_32fc (const Npp32fc * *pSrc*, Npp32fc *nValue*, Npp32fc * *pDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) signal times constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.11 NppStatus nppsMulC_32fc_I (Npp32fc *nValue*, Npp32fc * *pSrcDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal times constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.12 NppStatus nppsMulC_32s_ISfs (Npp32s *nValue*, Npp32s * *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer in place signal times constant and scale.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.13 NppStatus nppsMulC_32s_Sfs (const Npp32s ∗ *pSrc*, Npp32s *nValue*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal times constant and scale.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.14 NppStatus nppsMulC_32sc_ISfs (Npp32sc *nValue*, Npp32sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit integer complex number (32 bit real, 32 bit imaginary) in place signal times constant and scale.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.15 NppStatus nppsMulC_32sc_Sfs (const Npp32sc ∗ *pSrc*, Npp32sc *nValue*, Npp32sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit integer complex number (32 bit real, 32 bit imaginary) signal times constant and scale.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.16 NppStatus nppsMulC_64f (const Npp64f * *pSrc*, Npp64f *nValue*, Npp64f * *pDst*, int *nLength*)

64-bit floating point signal times constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.17 NppStatus nppsMulC_64f64s_ISfs (Npp64f *nValue*, Npp64s * *pDst*, int *nLength*, int *nScaleFactor*)

64-bit floating point signal times constant with in place conversion to 64-bit signed integer and with scaling and saturation of output result.

Parameters:

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.18 NppStatus nppsMulC_64f_I (Npp64f *nValue*, Npp64f * *pSrcDst*, int *nLength*)

64-bit floating point, in place signal times constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Length of the vectors, number of items.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.19 NppStatus nppsMulC_64fc (const Npp64fc * *pSrc*, Npp64fc *nValue*, Npp64fc * *pDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) signal times constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.20 NppStatus nppsMulC_64fc_I (Npp64fc *nValue*, Npp64fc * *pSrcDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal times constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.21 NppStatus nppsMulC_8u_ISfs (Npp8u *nValue*, Npp8u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal times constant, scale, then clamp to saturated value

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be multiplied by each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.22 NppStatus nppsMulC_8u_Sfs (const Npp8u * *pSrc*, Npp8u *nValue*, Npp8u * *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal times constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.137.2.23 NppStatus nppsMulC_Low_32f16s (const Npp32f * *pSrc*, Npp32f *nValue*, Npp16s * *pDst*, int *nLength*)

32-bit floating point signal times constant with output converted to 16-bit signed integer.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be multiplied by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138 SubC

Subtracts a constant from each sample of a signal.

Functions

- NppStatus nppsSubC_8u_ISfs (Npp8u nValue, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal subtract constant, scale, then clamp to saturated value

- NppStatus nppsSubC_8u_Sfs (const Npp8u ∗pSrc, Npp8u nValue, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal subtract constant, scale, then clamp to saturated value.

- NppStatus nppsSubC_16u_ISfs (Npp16u nValue, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short in place signal subtract constant, scale, then clamp to saturated value.

- NppStatus nppsSubC_16u_Sfs (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal subtract constant, scale, then clamp to saturated value.

- NppStatus nppsSubC_16s_ISfs (Npp16s nValue, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal subtract constant, scale, then clamp to saturated value.

- NppStatus nppsSubC_16s_Sfs (const Npp16s ∗pSrc, Npp16s nValue, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal subtract constant, scale, then clamp to saturated value.

- NppStatus nppsSubC_16sc_ISfs (Npp16sc nValue, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary) signal subtract constant, scale, then clamp to saturated value.

- NppStatus nppsSubC_16sc_Sfs (const Npp16sc ∗pSrc, Npp16sc nValue, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary) signal subtract constant, scale, then clamp to saturated value.

- NppStatus nppsSubC_32s_ISfs (Npp32s nValue, Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer in place signal subtract constant and scale.

- NppStatus nppsSubC_32s_Sfs (const Npp32s ∗pSrc, Npp32s nValue, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal subtract constant and scale.

- NppStatus nppsSubC_32sc_ISfs (Npp32sc nValue, Npp32sc ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit integer complex number (32 bit real, 32 bit imaginary) in place signal subtract constant and scale.

- NppStatus nppsSubC_32sc_Sfs (const Npp32sc ∗pSrc, Npp32sc nValue, Npp32sc ∗pDst, int nLength, int nScaleFactor)

32-bit integer complex number (32 bit real, 32 bit imaginary)signal subtract constant and scale.

- NppStatus nppsSubC_32f_I (Npp32f nValue, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal subtract constant.

- NppStatus nppsSubC_32f (const Npp32f ∗pSrc, Npp32f nValue, Npp32f ∗pDst, int nLength)

  32-bit floating point signal subtract constant.

- NppStatus nppsSubC_32fc_I (Npp32fc nValue, Npp32fc ∗pSrcDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal subtract constant.

- NppStatus nppsSubC_32fc (const Npp32fc ∗pSrc, Npp32fc nValue, Npp32fc ∗pDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) signal subtract constant.

- NppStatus nppsSubC_64f_I (Npp64f nValue, Npp64f ∗pSrcDst, int nLength)

  64-bit floating point, in place signal subtract constant.

- NppStatus nppsSubC_64f (const Npp64f ∗pSrc, Npp64f nValue, Npp64f ∗pDst, int nLength)

  64-bit floating point signal subtract constant.

- NppStatus nppsSubC_64fc_I (Npp64fc nValue, Npp64fc ∗pSrcDst, int nLength)

  64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal subtract constant.

- NppStatus nppsSubC_64fc (const Npp64fc ∗pSrc, Npp64fc nValue, Npp64fc ∗pDst, int nLength)

  64-bit floating point complex number (64 bit real, 64 bit imaginary) signal subtract constant.

7.138.1 Detailed Description

Subtracts a constant from each sample of a signal.

7.138.2 Function Documentation

7.138.2.1 NppStatus nppsSubC_16s_ISfs (Npp16s *nValue*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal subtract constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.2 NppStatus nppsSubC_16s_Sfs (const Npp16s * *pSrc*, Npp16s *nValue*, Npp16s * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.3 NppStatus nppsSubC_16sc_ISfs (Npp16sc *nValue*, Npp16sc * *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary) signal subtract constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.4 NppStatus nppsSubC_16sc_Sfs (const Npp16sc * *pSrc*, Npp16sc *nValue*, Npp16sc * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary) signal subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.5 NppStatus nppsSubC_16u_ISfs (Npp16u *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal subtract constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.6 NppStatus nppsSubC_16u_Sfs (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.7 NppStatus nppsSubC_32f (const Npp32f ∗ *pSrc*, Npp32f *nValue*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal subtract constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.8 NppStatus nppsSubC_32f_I (Npp32f *nValue*, Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point in place signal subtract constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.9 NppStatus nppsSubC_32fc (const Npp32fc ∗ *pSrc*, Npp32fc *nValue*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) signal subtract constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.10 NppStatus nppsSubC_32fc_I (Npp32fc *nValue*, Npp32fc ∗ *pSrcDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal subtract constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.11 NppStatus nppsSubC_32s_ISfs (Npp32s *nValue*, Npp32s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer in place signal subtract constant and scale.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.12 NppStatus nppsSubC_32s_Sfs (const Npp32s ∗ *pSrc*, Npp32s *nValue*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal subtract constant and scale.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.13 NppStatus nppsSubC_32sc_ISfs (Npp32sc *nValue*, Npp32sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit integer complex number (32 bit real, 32 bit imaginary) in place signal subtract constant and scale.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.14 NppStatus nppsSubC_32sc_Sfs (const Npp32sc * *pSrc*, Npp32sc *nValue*, Npp32sc * *pDst*, int *nLength*, int *nScaleFactor*)

32-bit integer complex number (32 bit real, 32 bit imaginary)signal subtract constant and scale.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.15 NppStatus nppsSubC_64f (const Npp64f * *pSrc*, Npp64f *nValue*, Npp64f * *pDst*, int *nLength*)

64-bit floating point signal subtract constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.16 NppStatus nppsSubC_64f_I (Npp64f *nValue*, Npp64f * *pSrcDst*, int *nLength*)

64-bit floating point, in place signal subtract constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Length of the vectors, number of items.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.17 NppStatus nppsSubC_64fc (const Npp64fc * *pSrc*, Npp64fc *nValue*, Npp64fc * *pDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) signal subtract constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.18 NppStatus nppsSubC_64fc_I (Npp64fc *nValue*, Npp64fc * *pSrcDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal subtract constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.19 NppStatus nppsSubC_8u_ISfs (Npp8u *nValue*, Npp8u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal subtract constant, scale, then clamp to saturated value

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be subtracted from each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.138.2.20 NppStatus nppsSubC_8u_Sfs (const Npp8u ∗ *pSrc*, Npp8u *nValue*, Npp8u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal subtract constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be subtracted from each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139 SubCRev

Subtracts each sample of a signal from a constant.

Functions

- NppStatus nppsSubCRev_8u_ISfs (Npp8u nValue, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal subtract from constant, scale, then clamp to saturated value

- NppStatus nppsSubCRev_8u_Sfs (const Npp8u ∗pSrc, Npp8u nValue, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal subtract from constant, scale, then clamp to saturated value.

- NppStatus nppsSubCRev_16u_ISfs (Npp16u nValue, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short in place signal subtract from constant, scale, then clamp to saturated value.

- NppStatus nppsSubCRev_16u_Sfs (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal subtract from constant, scale, then clamp to saturated value.

- NppStatus nppsSubCRev_16s_ISfs (Npp16s nValue, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal subtract from constant, scale, then clamp to saturated value.

- NppStatus nppsSubCRev_16s_Sfs (const Npp16s ∗pSrc, Npp16s nValue, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal subtract from constant, scale, then clamp to saturated value.

- NppStatus nppsSubCRev_16sc_ISfs (Npp16sc nValue, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary) signal subtract from constant, scale, then clamp to saturated value.

- NppStatus nppsSubCRev_16sc_Sfs (const Npp16sc ∗pSrc, Npp16sc nValue, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary) signal subtract from constant, scale, then clamp to saturated value.

- NppStatus nppsSubCRev_32s_ISfs (Npp32s nValue, Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer in place signal subtract from constant and scale.

- NppStatus nppsSubCRev_32s_Sfs (const Npp32s ∗pSrc, Npp32s nValue, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integersignal subtract from constant and scale.

- NppStatus nppsSubCRev_32sc_ISfs (Npp32sc nValue, Npp32sc ∗pSrcDst, int nLength, int nScaleFactor)

32-bit integer complex number (32 bit real, 32 bit imaginary) in place signal subtract from constant and scale.

- NppStatus nppsSubCRev_32sc_Sfs (const Npp32sc ∗pSrc, Npp32sc nValue, Npp32sc ∗pDst, int nLength, int nScaleFactor)

  32-bit integer complex number (32 bit real, 32 bit imaginary) signal subtract from constant and scale.

- NppStatus nppsSubCRev_32f_I (Npp32f nValue, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal subtract from constant.

- NppStatus nppsSubCRev_32f (const Npp32f ∗pSrc, Npp32f nValue, Npp32f ∗pDst, int nLength)

  32-bit floating point signal subtract from constant.

- NppStatus nppsSubCRev_32fc_I (Npp32fc nValue, Npp32fc ∗pSrcDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal subtract from constant.

- NppStatus nppsSubCRev_32fc (const Npp32fc ∗pSrc, Npp32fc nValue, Npp32fc ∗pDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) signal subtract from constant.

- NppStatus nppsSubCRev_64f_I (Npp64f nValue, Npp64f ∗pSrcDst, int nLength)

  64-bit floating point, in place signal subtract from constant.

- NppStatus nppsSubCRev_64f (const Npp64f ∗pSrc, Npp64f nValue, Npp64f ∗pDst, int nLength)

  64-bit floating point signal subtract from constant.

- NppStatus nppsSubCRev_64fc_I (Npp64fc nValue, Npp64fc ∗pSrcDst, int nLength)

  64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal subtract from constant.

- NppStatus nppsSubCRev_64fc (const Npp64fc ∗pSrc, Npp64fc nValue, Npp64fc ∗pDst, int nLength)

  64-bit floating point complex number (64 bit real, 64 bit imaginary) signal subtract from constant.

7.139.1 Detailed Description

Subtracts each sample of a signal from a constant.

7.139.2 Function Documentation

7.139.2.1 NppStatus nppsSubCRev_16s_ISfs (Npp16s *nValue*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal subtract from constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.2 NppStatus nppsSubCRev_16s_Sfs (const Npp16s ∗ *pSrc*, Npp16s *nValue*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal subtract from constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.3 NppStatus nppsSubCRev_16sc_ISfs (Npp16sc *nValue*, Npp16sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary) signal subtract from constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.4 NppStatus nppsSubCRev_16sc_Sfs (const Npp16sc ∗ *pSrc*, Npp16sc *nValue*, Npp16sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary) signal subtract from constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.5 NppStatus nppsSubCRev_16u_ISfs (Npp16u *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal subtract from constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.6 NppStatus nppsSubCRev_16u_Sfs (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal subtract from constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.7 NppStatus nppsSubCRev_32f (const Npp32f ∗ *pSrc*, Npp32f *nValue*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal subtract from constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.8 NppStatus nppsSubCRev_32f_I (Npp32f *nValue*, Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point in place signal subtract from constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.9 NppStatus nppsSubCRev_32fc (const Npp32fc ∗ *pSrc*, Npp32fc *nValue*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) signal subtract from constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.10 NppStatus nppsSubCRev_32fc_I (Npp32fc *nValue*, Npp32fc ∗ *pSrcDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal subtract from constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.11 NppStatus nppsSubCRev_32s_ISfs (Npp32s *nValue*, Npp32s * *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer in place signal subtract from constant and scale.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.12 NppStatus nppsSubCRev_32s_Sfs (const Npp32s * *pSrc*, Npp32s *nValue*, Npp32s * *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integersignal subtract from constant and scale.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.13 NppStatus nppsSubCRev_32sc_ISfs (Npp32sc *nValue*, Npp32sc * *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit integer complex number (32 bit real, 32 bit imaginary) in place signal subtract from constant and scale.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.14 NppStatus nppsSubCRev_32sc_Sfs (const Npp32sc * *pSrc*, Npp32sc *nValue*, Npp32sc * *pDst*, int *nLength*, int *nScaleFactor*)

32-bit integer complex number (32 bit real, 32 bit imaginary) signal subtract from constant and scale.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.15 NppStatus nppsSubCRev_64f (const Npp64f * *pSrc*, Npp64f *nValue*, Npp64f * *pDst*, int *nLength*)

64-bit floating point signal subtract from constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.16 NppStatus nppsSubCRev_64f_I (Npp64f *nValue*, Npp64f * *pSrcDst*, int *nLength*)

64-bit floating point, in place signal subtract from constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Length of the vectors, number of items.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.17 NppStatus nppsSubCRev_64fc (const Npp64fc ∗ *pSrc*, Npp64fc *nValue*, Npp64fc ∗ *pDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) signal subtract from constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.18 NppStatus nppsSubCRev_64fc_I (Npp64fc *nValue*, Npp64fc ∗ *pSrcDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal subtract from constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.19 NppStatus nppsSubCRev_8u_ISfs (Npp8u *nValue*, Npp8u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal subtract from constant, scale, then clamp to saturated value

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value each vector element is to be subtracted from

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.139.2.20 NppStatus nppsSubCRev_8u_Sfs (const Npp8u * *pSrc*, Npp8u *nValue*, Npp8u * *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal subtract from constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value each vector element is to be subtracted from

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140 DivC

Divides each sample of a signal by a constant.

Functions

- NppStatus nppsDivC_8u_ISfs (Npp8u nValue, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal divided by constant, scale, then clamp to saturated value

- NppStatus nppsDivC_8u_Sfs (const Npp8u ∗pSrc, Npp8u nValue, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal divided by constant, scale, then clamp to saturated value.

- NppStatus nppsDivC_16u_ISfs (Npp16u nValue, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short in place signal divided by constant, scale, then clamp to saturated value.

- NppStatus nppsDivC_16u_Sfs (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal divided by constant, scale, then clamp to saturated value.

- NppStatus nppsDivC_16s_ISfs (Npp16s nValue, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal divided by constant, scale, then clamp to saturated value.

- NppStatus nppsDivC_16s_Sfs (const Npp16s ∗pSrc, Npp16s nValue, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal divided by constant, scale, then clamp to saturated value.

- NppStatus nppsDivC_16sc_ISfs (Npp16sc nValue, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary)signal divided by constant, scale, then clamp to saturated value.

- NppStatus nppsDivC_16sc_Sfs (const Npp16sc ∗pSrc, Npp16sc nValue, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit integer complex number (16 bit real, 16 bit imaginary) signal divided by constant, scale, then clamp to saturated value.

- NppStatus nppsDivC_32f_I (Npp32f nValue, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal divided by constant.

- NppStatus nppsDivC_32f (const Npp32f ∗pSrc, Npp32f nValue, Npp32f ∗pDst, int nLength)

  32-bit floating point signal divided by constant.

- NppStatus nppsDivC_32fc_I (Npp32fc nValue, Npp32fc ∗pSrcDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal divided by constant.

- NppStatus nppsDivC_32fc (const Npp32fc ∗pSrc, Npp32fc nValue, Npp32fc ∗pDst, int nLength)

  32-bit floating point complex number (32 bit real, 32 bit imaginary) signal divided by constant.

- NppStatus nppsDivC_64f_I (Npp64f nValue, Npp64f ∗pSrcDst, int nLength)

64-bit floating point in place signal divided by constant.

- NppStatus nppsDivC_64f (const Npp64f ∗pSrc, Npp64f nValue, Npp64f ∗pDst, int nLength)
  64-bit floating point signal divided by constant.
- NppStatus nppsDivC_64fc_I (Npp64fc nValue, Npp64fc ∗pSrcDst, int nLength)
  64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal divided by constant.
- NppStatus nppsDivC_64fc (const Npp64fc ∗pSrc, Npp64fc nValue, Npp64fc ∗pDst, int nLength)
  64-bit floating point complex number (64 bit real, 64 bit imaginary) signal divided by constant.

7.140.1 Detailed Description

Divides each sample of a signal by a constant.

7.140.2 Function Documentation

7.140.2.1 NppStatus nppsDivC_16s_ISfs (Npp16s *nValue*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal divided by constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.
nValue Constant value to be divided into each vector element
nLength Signal Length.
nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.2 NppStatus nppsDivC_16s_Sfs (const Npp16s ∗ *pSrc*, Npp16s *nValue*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.
nValue Constant value to be divided into each vector element
pDst Destination Signal Pointer.
nLength Signal Length.
nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.3 NppStatus nppsDivC_16sc_ISfs (Npp16sc *nValue*, Npp16sc * *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary)signal divided by constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided into each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.4 NppStatus nppsDivC_16sc_Sfs (const Npp16sc * *pSrc*, Npp16sc *nValue*, Npp16sc * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit integer complex number (16 bit real, 16 bit imaginary) signal divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided into each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.5 NppStatus nppsDivC_16u_ISfs (Npp16u *nValue*, Npp16u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal divided by constant, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided into each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.6 NppStatus nppsDivC_16u_Sfs (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided into each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.7 NppStatus nppsDivC_32f (const Npp32f ∗ *pSrc*, Npp32f *nValue*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal divided by constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided into each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.8 NppStatus nppsDivC_32f_I (Npp32f *nValue*, Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point in place signal divided by constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided into each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.9 NppStatus nppsDivC_32fc (const Npp32fc * *pSrc*, Npp32fc *nValue*, Npp32fc * *pDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) signal divided by constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided into each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.10 NppStatus nppsDivC_32fc_I (Npp32fc *nValue*, Npp32fc * *pSrcDst*, int *nLength*)

32-bit floating point complex number (32 bit real, 32 bit imaginary) in place signal divided by constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided into each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.11 NppStatus nppsDivC_64f (const Npp64f * *pSrc*, Npp64f *nValue*, Npp64f * *pDst*, int *nLength*)

64-bit floating point signal divided by constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided into each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.12 NppStatus nppsDivC_64f_I (Npp64f *nValue*, Npp64f * *pSrcDst*, int *nLength*)

64-bit floating point in place signal divided by constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided into each vector element

nLength Length of the vectors, number of items.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.13 NppStatus nppsDivC_64fc (const Npp64fc * *pSrc*, Npp64fc *nValue*, Npp64fc * *pDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) signal divided by constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided into each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.14 NppStatus nppsDivC_64fc_I (Npp64fc *nValue*, Npp64fc * *pSrcDst*, int *nLength*)

64-bit floating point complex number (64 bit real, 64 bit imaginary) in place signal divided by constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided into each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.15 NppStatus nppsDivC_8u_ISfs (Npp8u *nValue*, Npp8u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal divided by constant, scale, then clamp to saturated value

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided into each vector element

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.140.2.16 NppStatus nppsDivC_8u_Sfs (const Npp8u ∗ *pSrc*, Npp8u *nValue*, Npp8u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal divided by constant, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided into each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.141 DivCRev

Divides a constant by each sample of a signal.

Functions

- NppStatus nppsDivCRev_16u_I (Npp16u nValue, Npp16u ∗pSrcDst, int nLength)

  16-bit unsigned short in place constant divided by signal, then clamp to saturated value.

- NppStatus nppsDivCRev_16u (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength)

  16-bit unsigned short signal divided by constant, then clamp to saturated value.

- NppStatus nppsDivCRev_32f_I (Npp32f nValue, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place constant divided by signal.

- NppStatus nppsDivCRev_32f (const Npp32f ∗pSrc, Npp32f nValue, Npp32f ∗pDst, int nLength)

  32-bit floating point constant divided by signal.

7.141.1 Detailed Description

Divides a constant by each sample of a signal.

7.141.2 Function Documentation

7.141.2.1 NppStatus nppsDivCRev_16u (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal divided by constant, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.141.2.2 NppStatus nppsDivCRev_16u_I (Npp16u *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short in place constant divided by signal, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided by each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.141.2.3 NppStatus nppsDivCRev_32f (const Npp32f * *pSrc*, Npp32f *nValue*, Npp32f * *pDst*, int *nLength*)

32-bit floating point constant divided by signal.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be divided by each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.141.2.4 NppStatus nppsDivCRev_32f_I (Npp32f *nValue*, Npp32f * *pSrcDst*, int *nLength*)

32-bit floating point in place constant divided by signal.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be divided by each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142 Add

Sample by sample addition of two signals.

Functions

- NppStatus nppsAdd_16s (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength)

  16-bit signed short signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_16u (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength)

  16-bit unsigned short signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_32u (const Npp32u ∗pSrc1, const Npp32u ∗pSrc2, Npp32u ∗pDst, int nLength)

  32-bit unsigned int signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, Npp32f ∗pDst, int nLength)

  32-bit floating point signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, Npp64f ∗pDst, int nLength)

  64-bit floating point signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_32fc (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, Npp32fc ∗pDst, int nLength)

  32-bit complex floating point signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_64fc (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, Npp64fc ∗pDst, int nLength)

  64-bit complex floating point signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_8u16u (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp16u ∗pDst, int nLength)

  8-bit unsigned char signal add signal with 16-bit unsigned result, then clamp to saturated value.

- NppStatus nppsAdd_16s32f (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp32f ∗pDst, int nLength)

  16-bit signed short signal add signal with 32-bit floating point result, then clamp to saturated value.

- NppStatus nppsAdd_8u_Sfs (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char add signal, scale, then clamp to saturated value.

- NppStatus nppsAdd_16u_Sfs (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short add signal, scale, then clamp to saturated value.

- NppStatus nppsAdd_16s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength, int nScaleFactor)

16-bit signed short add signal, scale, then clamp to saturated value.

- NppStatus nppsAdd_32s_Sfs (const Npp32s ∗pSrc1, const Npp32s ∗pSrc2, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer add signal, scale, then clamp to saturated value.

- NppStatus nppsAdd_64s_Sfs (const Npp64s ∗pSrc1, const Npp64s ∗pSrc2, Npp64s ∗pDst, int nLength, int nScaleFactor)

  64-bit signed integer add signal, scale, then clamp to saturated value.

- NppStatus nppsAdd_16sc_Sfs (const Npp16sc ∗pSrc1, const Npp16sc ∗pSrc2, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit signed complex short add signal, scale, then clamp to saturated value.

- NppStatus nppsAdd_32sc_Sfs (const Npp32sc ∗pSrc1, const Npp32sc ∗pSrc2, Npp32sc ∗pDst, int nLength, int nScaleFactor)

  32-bit signed complex integer add signal, scale, then clamp to saturated value.

- NppStatus nppsAdd_16s_I (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength)

  16-bit signed short in place signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_32f_I (const Npp32f ∗pSrc, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_64f_I (const Npp64f ∗pSrc, Npp64f ∗pSrcDst, int nLength)

  64-bit floating point in place signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_32fc_I (const Npp32fc ∗pSrc, Npp32fc ∗pSrcDst, int nLength)

  32-bit complex floating point in place signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_64fc_I (const Npp64fc ∗pSrc, Npp64fc ∗pSrcDst, int nLength)

  64-bit complex floating point in place signal add signal, then clamp to saturated value.

- NppStatus nppsAdd_16s32s_I (const Npp16s ∗pSrc, Npp32s ∗pSrcDst, int nLength)

  16/32-bit signed short in place signal add signal with 32-bit signed integer results, then clamp to saturated value.

- NppStatus nppsAdd_8u_ISfs (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal add signal, with scaling, then clamp to saturated value.

- NppStatus nppsAdd_16u_ISfs (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short in place signal add signal, with scaling, then clamp to saturated value.

- NppStatus nppsAdd_16s_ISfs (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal add signal, with scaling, then clamp to saturated value.

- NppStatus nppsAdd_32s_ISfs (const Npp32s ∗pSrc, Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer in place signal add signal, with scaling, then clamp to saturated value.

- NppStatus nppsAdd_16sc_ISfs (const Npp16sc ∗pSrc, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit complex signed short in place signal add signal, with scaling, then clamp to saturated value.

- NppStatus nppsAdd_32sc_ISfs (const Npp32sc ∗pSrc, Npp32sc ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit complex signed integer in place signal add signal, with scaling, then clamp to saturated value.

7.142.1 Detailed Description

Sample by sample addition of two signals.

7.142.2 Function Documentation

7.142.2.1 NppStatus nppsAdd_16s (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp16s ∗ *pDst*, int *nLength*)

16-bit signed short signal add signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.2 NppStatus nppsAdd_16s32f (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp32f ∗ *pDst*, int *nLength*)

16-bit signed short signal add signal with 32-bit floating point result, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.3 NppStatus nppsAdd_16s32s_I (const Npp16s ∗ *pSrc*, Npp32s ∗ *pSrcDst*, int *nLength*)

16/32-bit signed short in place signal add signal with 32-bit signed integer results, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.4 NppStatus nppsAdd_16s_I (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*)

16-bit signed short in place signal add signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.5 NppStatus nppsAdd_16s_ISfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal add signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.6 NppStatus nppsAdd_16s_Sfs (const Npp16s * *pSrc1*, const Npp16s * *pSrc2*, Npp16s * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short add signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be added to signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.7 NppStatus nppsAdd_16sc_ISfs (const Npp16sc * *pSrc*, Npp16sc * *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit complex signed short in place signal add signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.8 NppStatus nppsAdd_16sc_Sfs (const Npp16sc * *pSrc1*, const Npp16sc * *pSrc2*, Npp16sc * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed complex short add signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be added to signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.9 NppStatus nppsAdd_16u (const Npp16u ∗ *pSrc1*, const Npp16u ∗ *pSrc2*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal add signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.10 NppStatus nppsAdd_16u_ISfs (const Npp16u ∗ *pSrc*, Npp16u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal add signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.11 NppStatus nppsAdd_16u_Sfs (const Npp16u ∗ *pSrc1*, const Npp16u ∗ *pSrc2*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short add signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be added to signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.12 NppStatus nppsAdd_32f (const Npp32f ∗ *pSrc1*, const Npp32f ∗ *pSrc2*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal add signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.13 NppStatus nppsAdd_32f_I (const Npp32f ∗ *pSrc*, Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point in place signal add signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.14 NppStatus nppsAdd_32fc (const Npp32fc ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit complex floating point signal add signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.15 NppStatus nppsAdd_32fc_I (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pSrcDst*, int *nLength*)

32-bit complex floating point in place signal add signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.16 NppStatus nppsAdd_32s_ISfs (const Npp32s ∗ *pSrc*, Npp32s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer in place signal add signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.17 NppStatus nppsAdd_32s_Sfs (const Npp32s ∗ *pSrc1*, const Npp32s ∗ *pSrc2*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer add signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be added to signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.18 NppStatus nppsAdd_32sc_ISfs (const Npp32sc ∗ *pSrc*, Npp32sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit complex signed integer in place signal add signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.19 NppStatus nppsAdd_32sc_Sfs (const Npp32sc ∗ *pSrc1*, const Npp32sc ∗ *pSrc2*, Npp32sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed complex integer add signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be added to signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.20 NppStatus nppsAdd_32u (const Npp32u ∗ *pSrc1*, const Npp32u ∗ *pSrc2*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned int signal add signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.21 NppStatus nppsAdd_64f (const Npp64f * *pSrc1*, const Npp64f * *pSrc2*, Npp64f * *pDst*, int *nLength*)

64-bit floating point signal add signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.22 NppStatus nppsAdd_64f_I (const Npp64f * *pSrc*, Npp64f * *pSrcDst*, int *nLength*)

64-bit floating point in place signal add signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.23 NppStatus nppsAdd_64fc (const Npp64fc * *pSrc1*, const Npp64fc * *pSrc2*, Npp64fc * *pDst*, int *nLength*)

64-bit complex floating point signal add signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.24 NppStatus nppsAdd_64fc_I (const Npp64fc * *pSrc*, Npp64fc * *pSrcDst*, int *nLength*)

64-bit complex floating point in place signal add signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.25 NppStatus nppsAdd_64s_Sfs (const Npp64s * *pSrc1*, const Npp64s * *pSrc2*, Npp64s * *pDst*, int *nLength*, int *nScaleFactor*)

64-bit signed integer add signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be added to signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.26 NppStatus nppsAdd_8u16u (const Npp8u * *pSrc1*, const Npp8u * *pSrc2*, Npp16u * *pDst*, int *nLength*)

8-bit unsigned char signal add signal with 16-bit unsigned result, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be added to signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.27 NppStatus nppsAdd_8u_ISfs (const Npp8u * *pSrc*, Npp8u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal add signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be added to signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.142.2.28 NppStatus nppsAdd_8u_Sfs (const Npp8u * *pSrc1*, const Npp8u * *pSrc2*, Npp8u * *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char add signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be added to signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.143 AddProduct

Adds sample by sample product of two signals to the destination signal.

Functions

- NppStatus nppsAddProduct_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, Npp32f ∗pDst, int nLength)

  32-bit floating point signal add product of source signal times destination signal to destination signal, then clamp to saturated value.

- NppStatus nppsAddProduct_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, Npp64f ∗pDst, int nLength)

  64-bit floating point signal add product of source signal times destination signal to destination signal, then clamp to saturated value.

- NppStatus nppsAddProduct_32fc (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, Npp32fc ∗pDst, int nLength)

  32-bit complex floating point signal add product of source signal times destination signal to destination signal, then clamp to saturated value.

- NppStatus nppsAddProduct_64fc (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, Npp64fc ∗pDst, int nLength)

  64-bit complex floating point signal add product of source signal times destination signal to destination signal, then clamp to saturated value.

- NppStatus nppsAddProduct_16s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal add product of source signal1 times source signal2 to destination signal, with scaling, then clamp to saturated value.

- NppStatus nppsAddProduct_32s_Sfs (const Npp32s ∗pSrc1, const Npp32s ∗pSrc2, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed short signal add product of source signal1 times source signal2 to destination signal, with scaling, then clamp to saturated value.

- NppStatus nppsAddProduct_16s32s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp32s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal add product of source signal1 times source signal2 to 32-bit signed integer destination signal, with scaling, then clamp to saturated value.

7.143.1 Detailed Description

Adds sample by sample product of two signals to the destination signal.

7.143.2 Function Documentation

7.143.2.1 NppStatus nppsAddProduct_16s32s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal add product of source signal1 times source signal2 to 32-bit signed integer destination signal, with scaling, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

pDst Destination Signal Pointer. product of source1 and source2 signal elements to be added to destination elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.143.2.2 NppStatus nppsAddProduct_16s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal add product of source signal1 times source signal2 to destination signal, with scaling, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

pDst Destination Signal Pointer. product of source1 and source2 signal elements to be added to destination elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.143.2.3 NppStatus nppsAddProduct_32f (const Npp32f ∗ *pSrc1*, const Npp32f ∗ *pSrc2*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal add product of source signal times destination signal to destination signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

pDst Destination Signal Pointer. product of source1 and source2 signal elements to be added to destination elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.143.2.4 NppStatus nppsAddProduct_32fc (const Npp32fc ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit complex floating point signal add product of source signal times destination signal to destination signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

pDst Destination Signal Pointer. product of source1 and source2 signal elements to be added to destination elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.143.2.5 NppStatus nppsAddProduct_32s_Sfs (const Npp32s ∗ *pSrc1*, const Npp32s ∗ *pSrc2*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed short signal add product of source signal1 times source signal2 to destination signal, with scaling, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

pDst Destination Signal Pointer. product of source1 and source2 signal elements to be added to destination elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.143.2.6 NppStatus nppsAddProduct_64f (const Npp64f ∗ *pSrc1*, const Npp64f ∗ *pSrc2*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal add product of source signal times destination signal to destination signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

pDst Destination Signal Pointer. product of source1 and source2 signal elements to be added to destination elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.143.2.7 NppStatus nppsAddProduct_64fc (const Npp64fc ∗ *pSrc1*, const Npp64fc ∗ *pSrc2*, Npp64fc ∗ *pDst*, int *nLength*)

64-bit complex floating point signal add product of source signal times destination signal to destination signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

pDst Destination Signal Pointer. product of source1 and source2 signal elements to be added to destination elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144 Mul

Sample by sample multiplication the samples of two signals.

Functions

- NppStatus nppsMul_16s (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength)

  16-bit signed short signal times signal, then clamp to saturated value.

- NppStatus nppsMul_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, Npp32f ∗pDst, int nLength)

  32-bit floating point signal times signal, then clamp to saturated value.

- NppStatus nppsMul_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, Npp64f ∗pDst, int nLength)

  64-bit floating point signal times signal, then clamp to saturated value.

- NppStatus nppsMul_32fc (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, Npp32fc ∗pDst, int nLength)

  32-bit complex floating point signal times signal, then clamp to saturated value.

- NppStatus nppsMul_64fc (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, Npp64fc ∗pDst, int nLength)

  64-bit complex floating point signal times signal, then clamp to saturated value.

- NppStatus nppsMul_8u16u (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp16u ∗pDst, int nLength)

  8-bit unsigned char signal times signal with 16-bit unsigned result, then clamp to saturated value.

- NppStatus nppsMul_16s32f (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp32f ∗pDst, int nLength)

  16-bit signed short signal times signal with 32-bit floating point result, then clamp to saturated value.

- NppStatus nppsMul_32f32fc (const Npp32f ∗pSrc1, const Npp32fc ∗pSrc2, Npp32fc ∗pDst, int nLength)

  32-bit floating point signal times 32-bit complex floating point signal with complex 32-bit floating point result, then clamp to saturated value.

- NppStatus nppsMul_8u_Sfs (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal times signal, scale, then clamp to saturated value.

- NppStatus nppsMul_16u_Sfs (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal time signal, scale, then clamp to saturated value.

- NppStatus nppsMul_16s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal times signal, scale, then clamp to saturated value.

- NppStatus nppsMul_32s_Sfs (const Npp32s ∗pSrc1, const Npp32s ∗pSrc2, Npp32s ∗pDst, int nLength, int nScaleFactor)

32-bit signed integer signal times signal, scale, then clamp to saturated value.

- NppStatus nppsMul_16sc_Sfs (const Npp16sc ∗pSrc1, const Npp16sc ∗pSrc2, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit signed complex short signal times signal, scale, then clamp to saturated value.

- NppStatus nppsMul_32sc_Sfs (const Npp32sc ∗pSrc1, const Npp32sc ∗pSrc2, Npp32sc ∗pDst, int nLength, int nScaleFactor)

  32-bit signed complex integer signal times signal, scale, then clamp to saturated value.

- NppStatus nppsMul_16u16s_Sfs (const Npp16u ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal times 16-bit signed short signal, scale, then clamp to 16-bit signed saturated value.

- NppStatus nppsMul_16s32s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp32s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal times signal, scale, then clamp to 32-bit signed saturated value.

- NppStatus nppsMul_32s32sc_Sfs (const Npp32s ∗pSrc1, const Npp32sc ∗pSrc2, Npp32sc ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal times 32-bit complex signed integer signal, scale, then clamp to 32-bit complex integer saturated value.

- NppStatus nppsMul_Low_32s_Sfs (const Npp32s ∗pSrc1, const Npp32s ∗pSrc2, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal times signal, scale, then clamp to saturated value.

- NppStatus nppsMul_16s_I (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength)

  16-bit signed short in place signal times signal, then clamp to saturated value.

- NppStatus nppsMul_32f_I (const Npp32f ∗pSrc, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal times signal, then clamp to saturated value.

- NppStatus nppsMul_64f_I (const Npp64f ∗pSrc, Npp64f ∗pSrcDst, int nLength)

  64-bit floating point in place signal times signal, then clamp to saturated value.

- NppStatus nppsMul_32fc_I (const Npp32fc ∗pSrc, Npp32fc ∗pSrcDst, int nLength)

  32-bit complex floating point in place signal times signal, then clamp to saturated value.

- NppStatus nppsMul_64fc_I (const Npp64fc ∗pSrc, Npp64fc ∗pSrcDst, int nLength)

  64-bit complex floating point in place signal times signal, then clamp to saturated value.

- NppStatus nppsMul_32f32fc_I (const Npp32f ∗pSrc, Npp32fc ∗pSrcDst, int nLength)

  32-bit complex floating point in place signal times 32-bit floating point signal, then clamp to 32-bit complex floating point saturated value.

- NppStatus nppsMul_8u_ISfs (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal times signal, with scaling, then clamp to saturated value.

- NppStatus nppsMul_16u_ISfs (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short in place signal times signal, with scaling, then clamp to saturated value.

- NppStatus nppsMul_16s_ISfs (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal times signal, with scaling, then clamp to saturated value.

- NppStatus nppsMul_32s_ISfs (const Npp32s ∗pSrc, Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer in place signal times signal, with scaling, then clamp to saturated value.

- NppStatus nppsMul_16sc_ISfs (const Npp16sc ∗pSrc, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit complex signed short in place signal times signal, with scaling, then clamp to saturated value.

- NppStatus nppsMul_32sc_ISfs (const Npp32sc ∗pSrc, Npp32sc ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit complex signed integer in place signal times signal, with scaling, then clamp to saturated value.

- NppStatus nppsMul_32s32sc_ISfs (const Npp32s ∗pSrc, Npp32sc ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit complex signed integer in place signal times 32-bit signed integer signal, with scaling, then clamp to saturated value.

7.144.1 Detailed Description

Sample by sample multiplication the samples of two signals.

7.144.2 Function Documentation

7.144.2.1 NppStatus nppsMul_16s (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp16s ∗ *pDst*, int *nLength*)

16-bit signed short signal times signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be multiplied by signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.2 NppStatus nppsMul_16s32f (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp32f ∗ *pDst*, int *nLength*)

16-bit signed short signal times signal with 32-bit floating point result, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be multiplied by signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.3 NppStatus nppsMul_16s32s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal times signal, scale, then clamp to 32-bit signed saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.4 NppStatus nppsMul_16s_I (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*)

16-bit signed short in place signal times signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.5 NppStatus nppsMul_16s_ISfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal times signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.6 NppStatus nppsMul_16s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal times signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.7 NppStatus nppsMul_16sc_ISfs (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit complex signed short in place signal times signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.8 NppStatus nppsMul_16sc_Sfs (const Npp16sc ∗ *pSrc1*, const Npp16sc ∗ *pSrc2*, Npp16sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed complex short signal times signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.9 NppStatus nppsMul_16u16s_Sfs (const Npp16u ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal times 16-bit signed short signal, scale, then clamp to 16-bit signed saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.10 NppStatus nppsMul_16u_ISfs (const Npp16u ∗ *pSrc*, Npp16u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal times signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.11 NppStatus nppsMul_16u_Sfs (const Npp16u ∗ *pSrc1*, const Npp16u ∗ *pSrc2*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal time signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.12 NppStatus nppsMul_32f (const Npp32f ∗ *pSrc1*, const Npp32f ∗ *pSrc2*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal times signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be multiplied by signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.13 NppStatus nppsMul_32f32fc (const Npp32f ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit floating point signal times 32-bit complex floating point signal with complex 32-bit floating point result, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be multiplied by signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.14 NppStatus nppsMul_32f32fc_I (const Npp32f * *pSrc*, Npp32fc * *pSrcDst*, int *nLength*)

32-bit complex floating point in place signal times 32-bit floating point signal, then clamp to 32-bit complex floating point saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.15 NppStatus nppsMul_32f_I (const Npp32f * *pSrc*, Npp32f * *pSrcDst*, int *nLength*)

32-bit floating point in place signal times signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.16 NppStatus nppsMul_32fc (const Npp32fc * *pSrc1*, const Npp32fc * *pSrc2*, Npp32fc * *pDst*, int *nLength*)

32-bit complex floating point signal times signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be multiplied by signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.17 NppStatus nppsMul_32fc_I (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pSrcDst*, int *nLength*)

32-bit complex floating point in place signal times signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.18 NppStatus nppsMul_32s32sc_ISfs (const Npp32s ∗ *pSrc*, Npp32sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit complex signed integer in place signal times 32-bit signed integer signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.19 NppStatus nppsMul_32s32sc_Sfs (const Npp32s ∗ *pSrc1*, const Npp32sc ∗ *pSrc2*, Npp32sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal times 32-bit complex signed integer signal, scale, then clamp to 32-bit complex integer saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.20 NppStatus nppsMul_32s_ISfs (const Npp32s ∗ *pSrc*, Npp32s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer in place signal times signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.21 NppStatus nppsMul_32s_Sfs (const Npp32s ∗ *pSrc1*, const Npp32s ∗ *pSrc2*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal times signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.22 NppStatus nppsMul_32sc_ISfs (const Npp32sc ∗ *pSrc*, Npp32sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit complex signed integer in place signal times signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.23 NppStatus nppsMul_32sc_Sfs (const Npp32sc ∗ *pSrc1*, const Npp32sc ∗ *pSrc2*, Npp32sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed complex integer signal times signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.24 NppStatus nppsMul_64f (const Npp64f ∗ *pSrc1*, const Npp64f ∗ *pSrc2*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal times signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be multiplied by signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.25 NppStatus nppsMul_64f_I (const Npp64f ∗ *pSrc*, Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point in place signal times signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.26 NppStatus nppsMul_64fc (const Npp64fc ∗ *pSrc1*, const Npp64fc ∗ *pSrc2*, Npp64fc ∗ *pDst*, int *nLength*)

64-bit complex floating point signal times signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be multiplied by signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.27 NppStatus nppsMul_64fc_I (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pSrcDst*, int *nLength*)

64-bit complex floating point in place signal times signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.28 NppStatus nppsMul_8u16u (const Npp8u ∗ *pSrc1*, const Npp8u ∗ *pSrc2*, Npp16u ∗ *pDst*, int *nLength*)

8-bit unsigned char signal times signal with 16-bit unsigned result, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be multiplied by signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.29 NppStatus nppsMul_8u_ISfs (const Npp8u * *pSrc*, Npp8u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal times signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be multiplied by signal1 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.30 NppStatus nppsMul_8u_Sfs (const Npp8u * *pSrc1*, const Npp8u * *pSrc2*, Npp8u * *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal times signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.144.2.31 NppStatus nppsMul_Low_32s_Sfs (const Npp32s * *pSrc1*, const Npp32s * *pSrc2*, Npp32s * *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal times signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal2 elements to be multiplied by signal1 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145 Sub

Sample by sample subtraction of the samples of two signals.

Functions

- NppStatus nppsSub_16s (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength)

  16-bit signed short signal subtract signal, then clamp to saturated value.

- NppStatus nppsSub_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, Npp32f ∗pDst, int nLength)

  32-bit floating point signal subtract signal, then clamp to saturated value.

- NppStatus nppsSub_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, Npp64f ∗pDst, int nLength)

  64-bit floating point signal subtract signal, then clamp to saturated value.

- NppStatus nppsSub_32fc (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, Npp32fc ∗pDst, int nLength)

  32-bit complex floating point signal subtract signal, then clamp to saturated value.

- NppStatus nppsSub_64fc (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, Npp64fc ∗pDst, int nLength)

  64-bit complex floating point signal subtract signal, then clamp to saturated value.

- NppStatus nppsSub_16s32f (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp32f ∗pDst, int nLength)

  16-bit signed short signal subtract 16-bit signed short signal, then clamp and convert to 32-bit floating point saturated value.

- NppStatus nppsSub_8u_Sfs (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal subtract signal, scale, then clamp to saturated value.

- NppStatus nppsSub_16u_Sfs (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal subtract signal, scale, then clamp to saturated value.

- NppStatus nppsSub_16s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal subtract signal, scale, then clamp to saturated value.

- NppStatus nppsSub_32s_Sfs (const Npp32s ∗pSrc1, const Npp32s ∗pSrc2, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal subtract signal, scale, then clamp to saturated value.

- NppStatus nppsSub_16sc_Sfs (const Npp16sc ∗pSrc1, const Npp16sc ∗pSrc2, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit signed complex short signal subtract signal, scale, then clamp to saturated value.

- NppStatus nppsSub_32sc_Sfs (const Npp32sc ∗pSrc1, const Npp32sc ∗pSrc2, Npp32sc ∗pDst, int nLength, int nScaleFactor)

32-bit signed complex integer signal subtract signal, scale, then clamp to saturated value.

- NppStatus nppsSub_16s_I (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength)

  16-bit signed short in place signal subtract signal, then clamp to saturated value.
- NppStatus nppsSub_32f_I (const Npp32f ∗pSrc, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal subtract signal, then clamp to saturated value.
- NppStatus nppsSub_64f_I (const Npp64f ∗pSrc, Npp64f ∗pSrcDst, int nLength)

  64-bit floating point in place signal subtract signal, then clamp to saturated value.
- NppStatus nppsSub_32fc_I (const Npp32fc ∗pSrc, Npp32fc ∗pSrcDst, int nLength)

  32-bit complex floating point in place signal subtract signal, then clamp to saturated value.
- NppStatus nppsSub_64fc_I (const Npp64fc ∗pSrc, Npp64fc ∗pSrcDst, int nLength)

  64-bit complex floating point in place signal subtract signal, then clamp to saturated value.
- NppStatus nppsSub_8u_ISfs (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal subtract signal, with scaling, then clamp to saturated value.
- NppStatus nppsSub_16u_ISfs (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short in place signal subtract signal, with scaling, then clamp to saturated value.
- NppStatus nppsSub_16s_ISfs (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal subtract signal, with scaling, then clamp to saturated value.
- NppStatus nppsSub_32s_ISfs (const Npp32s ∗pSrc, Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer in place signal subtract signal, with scaling, then clamp to saturated value.
- NppStatus nppsSub_16sc_ISfs (const Npp16sc ∗pSrc, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit complex signed short in place signal subtract signal, with scaling, then clamp to saturated value.
- NppStatus nppsSub_32sc_ISfs (const Npp32sc ∗pSrc, Npp32sc ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit complex signed integer in place signal subtract signal, with scaling, then clamp to saturated value.

7.145.1 Detailed Description

Sample by sample subtraction of the samples of two signals.

7.145.2 Function Documentation

7.145.2.1 NppStatus nppsSub_16s (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp16s ∗ *pDst*, int *nLength*)

16-bit signed short signal subtract signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal1 elements to be subtracted from signal2 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.2 NppStatus nppsSub_16s32f (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp32f ∗ *pDst*, int *nLength*)

16-bit signed short signal subtract 16-bit signed short signal, then clamp and convert to 32-bit floating point saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal1 elements to be subtracted from signal2 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.3 NppStatus nppsSub_16s_I (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*)

16-bit signed short in place signal subtract signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.4 NppStatus nppsSub_16s_ISfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal subtract signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.5 NppStatus nppsSub_16s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal subtract signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 elements to be subtracted from signal2 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.6 NppStatus nppsSub_16sc_ISfs (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit complex signed short in place signal subtract signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.7 NppStatus nppsSub_16sc_Sfs (const Npp16sc ∗ *pSrc1*, const Npp16sc ∗ *pSrc2*, Npp16sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed complex short signal subtract signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 elements to be subtracted from signal2 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.8 NppStatus nppsSub_16u_ISfs (const Npp16u * *pSrc*, Npp16u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal subtract signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.9 NppStatus nppsSub_16u_Sfs (const Npp16u * *pSrc1*, const Npp16u * *pSrc2*, Npp16u * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal subtract signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 elements to be subtracted from signal2 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.10 NppStatus nppsSub_32f (const Npp32f * *pSrc1*, const Npp32f * *pSrc2*, Npp32f * *pDst*, int *nLength*)

32-bit floating point signal subtract signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal1 elements to be subtracted from signal2 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.11 NppStatus nppsSub_32f_I (const Npp32f ∗ *pSrc*, Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point in place signal subtract signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.12 NppStatus nppsSub_32fc (const Npp32fc ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit complex floating point signal subtract signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal1 elements to be subtracted from signal2 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.13 NppStatus nppsSub_32fc_I (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pSrcDst*, int *nLength*)

32-bit complex floating point in place signal subtract signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.14 NppStatus nppsSub_32s_ISfs (const Npp32s ∗ *pSrc*, Npp32s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer in place signal subtract signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.15 NppStatus nppsSub_32s_Sfs (const Npp32s ∗ *pSrc1*, const Npp32s ∗ *pSrc2*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal subtract signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 elements to be subtracted from signal2 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.16 NppStatus nppsSub_32sc_ISfs (const Npp32sc ∗ *pSrc*, Npp32sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit complex signed integer in place signal subtract signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.17 NppStatus nppsSub_32sc_Sfs (const Npp32sc ∗ *pSrc1*, const Npp32sc ∗ *pSrc2*, Npp32sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed complex integer signal subtract signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 elements to be subtracted from signal2 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.18 NppStatus nppsSub_64f (const Npp64f ∗ *pSrc1*, const Npp64f ∗ *pSrc2*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal subtract signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal1 elements to be subtracted from signal2 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.19 NppStatus nppsSub_64f_I (const Npp64f ∗ *pSrc*, Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point in place signal subtract signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.20 NppStatus nppsSub_64fc (const Npp64fc * *pSrc1*, const Npp64fc * *pSrc2*, Npp64fc * *pDst*, int *nLength*)

64-bit complex floating point signal subtract signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal1 elements to be subtracted from signal2 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.21 NppStatus nppsSub_64fc_I (const Npp64fc * *pSrc*, Npp64fc * *pSrcDst*, int *nLength*)

64-bit complex floating point in place signal subtract signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.22 NppStatus nppsSub_8u_ISfs (const Npp8u * *pSrc*, Npp8u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal subtract signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 elements to be subtracted from signal2 elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.145.2.23 NppStatus nppsSub_8u_Sfs (const Npp8u ∗ *pSrc1*, const Npp8u ∗ *pSrc2*, Npp8u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal subtract signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 elements to be subtracted from signal2 elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146 Div

Sample by sample division of the samples of two signals.

Functions

- NppStatus nppsDiv_8u_Sfs (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal divide signal, scale, then clamp to saturated value.

- NppStatus nppsDiv_16u_Sfs (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal divide signal, scale, then clamp to saturated value.

- NppStatus nppsDiv_16s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal divide signal, scale, then clamp to saturated value.

- NppStatus nppsDiv_32s_Sfs (const Npp32s ∗pSrc1, const Npp32s ∗pSrc2, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal divide signal, scale, then clamp to saturated value.

- NppStatus nppsDiv_16sc_Sfs (const Npp16sc ∗pSrc1, const Npp16sc ∗pSrc2, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit signed complex short signal divide signal, scale, then clamp to saturated value.

- NppStatus nppsDiv_32s16s_Sfs (const Npp16s ∗pSrc1, const Npp32s ∗pSrc2, Npp16s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal divided by 16-bit signed short signal, scale, then clamp to 16-bit signed short saturated value.

- NppStatus nppsDiv_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, Npp32f ∗pDst, int nLength)

  32-bit floating point signal divide signal, then clamp to saturated value.

- NppStatus nppsDiv_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, Npp64f ∗pDst, int nLength)

  64-bit floating point signal divide signal, then clamp to saturated value.

- NppStatus nppsDiv_32fc (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, Npp32fc ∗pDst, int nLength)

  32-bit complex floating point signal divide signal, then clamp to saturated value.

- NppStatus nppsDiv_64fc (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, Npp64fc ∗pDst, int nLength)

  64-bit complex floating point signal divide signal, then clamp to saturated value.

- NppStatus nppsDiv_8u_ISfs (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char in place signal divide signal, with scaling, then clamp to saturated value.

- NppStatus nppsDiv_16u_ISfs (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

16-bit unsigned short in place signal divide signal, with scaling, then clamp to saturated value.

- NppStatus nppsDiv_16s_ISfs (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short in place signal divide signal, with scaling, then clamp to saturated value.

- NppStatus nppsDiv_16sc_ISfs (const Npp16sc ∗pSrc, Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit complex signed short in place signal divide signal, with scaling, then clamp to saturated value.

- NppStatus nppsDiv_32s_ISfs (const Npp32s ∗pSrc, Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer in place signal divide signal, with scaling, then clamp to saturated value.

- NppStatus nppsDiv_32f_I (const Npp32f ∗pSrc, Npp32f ∗pSrcDst, int nLength)

  32-bit floating point in place signal divide signal, then clamp to saturated value.

- NppStatus nppsDiv_64f_I (const Npp64f ∗pSrc, Npp64f ∗pSrcDst, int nLength)

  64-bit floating point in place signal divide signal, then clamp to saturated value.

- NppStatus nppsDiv_32fc_I (const Npp32fc ∗pSrc, Npp32fc ∗pSrcDst, int nLength)

  32-bit complex floating point in place signal divide signal, then clamp to saturated value.

- NppStatus nppsDiv_64fc_I (const Npp64fc ∗pSrc, Npp64fc ∗pSrcDst, int nLength)

  64-bit complex floating point in place signal divide signal, then clamp to saturated value.

7.146.1 Detailed Description

Sample by sample division of the samples of two signals.

7.146.2 Function Documentation

7.146.2.1 NppStatus nppsDiv_16s_ISfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short in place signal divide signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.2 NppStatus nppsDiv_16s_Sfs (const Npp16s * *pSrc1*, const Npp16s * *pSrc2*, Npp16s * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal divide signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.3 NppStatus nppsDiv_16sc_ISfs (const Npp16sc * *pSrc*, Npp16sc * *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit complex signed short in place signal divide signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.4 NppStatus nppsDiv_16sc_Sfs (const Npp16sc * *pSrc1*, const Npp16sc * *pSrc2*, Npp16sc * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed complex short signal divide signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.5 NppStatus nppsDiv_16u_ISfs (const Npp16u * *pSrc*, Npp16u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short in place signal divide signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.6 NppStatus nppsDiv_16u_Sfs (const Npp16u * *pSrc1*, const Npp16u * *pSrc2*, Npp16u * *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal divide signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.7 NppStatus nppsDiv_32f (const Npp32f * *pSrc1*, const Npp32f * *pSrc2*, Npp32f * *pDst*, int *nLength*)

32-bit floating point signal divide signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.8 NppStatus nppsDiv_32f_I (const Npp32f * *pSrc*, Npp32f * *pSrcDst*, int *nLength*)

32-bit floating point in place signal divide signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.9 NppStatus nppsDiv_32fc (const Npp32fc * *pSrc1*, const Npp32fc * *pSrc2*, Npp32fc * *pDst*, int *nLength*)

32-bit complex floating point signal divide signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.10 NppStatus nppsDiv_32fc_I (const Npp32fc * *pSrc*, Npp32fc * *pSrcDst*, int *nLength*)

32-bit complex floating point in place signal divide signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.11 NppStatus nppsDiv_32s16s_Sfs (const Npp16s * *pSrc1*, const Npp32s * *pSrc2*, Npp16s * *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal divided by 16-bit signed short signal, scale, then clamp to 16-bit signed short saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.12 NppStatus nppsDiv_32s_ISfs (const Npp32s ∗ *pSrc*, Npp32s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer in place signal divide signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.13 NppStatus nppsDiv_32s_Sfs (const Npp32s ∗ *pSrc1*, const Npp32s ∗ *pSrc2*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal divide signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.14 NppStatus nppsDiv_64f (const Npp64f ∗ *pSrc1*, const Npp64f ∗ *pSrc2*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal divide signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.15 NppStatus nppsDiv_64f_I (const Npp64f ∗ *pSrc*, Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point in place signal divide signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.16 NppStatus nppsDiv_64fc (const Npp64fc ∗ *pSrc1*, const Npp64fc ∗ *pSrc2*, Npp64fc ∗ *pDst*, int *nLength*)

64-bit complex floating point signal divide signal, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.17 NppStatus nppsDiv_64fc_I (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pSrcDst*, int *nLength*)

64-bit complex floating point in place signal divide signal, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.18 NppStatus nppsDiv_8u_ISfs (const Npp8u ∗ *pSrc*, Npp8u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char in place signal divide signal, with scaling, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.146.2.19 NppStatus nppsDiv_8u_Sfs (const Npp8u ∗ *pSrc1*, const Npp8u ∗ *pSrc2*, Npp8u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal divide signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.147 Div_Round

Sample by sample division of the samples of two signals with rounding.

Functions

- NppStatus nppsDiv_Round_8u_Sfs (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp8u ∗pDst, int nLength, NppRoundMode nRndMode, int nScaleFactor)

  8-bit unsigned char signal divide signal, scale, then clamp to saturated value.

- NppStatus nppsDiv_Round_16u_Sfs (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength, NppRoundMode nRndMode, int nScaleFactor)

  16-bit unsigned short signal divide signal, scale, round, then clamp to saturated value.

- NppStatus nppsDiv_Round_16s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, Npp16s ∗pDst, int nLength, NppRoundMode nRndMode, int nScaleFactor)

  16-bit signed short signal divide signal, scale, round, then clamp to saturated value.

- NppStatus nppsDiv_Round_8u_ISfs (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength, NppRoundMode nRndMode, int nScaleFactor)

  8-bit unsigned char in place signal divide signal, with scaling, rounding then clamp to saturated value.

- NppStatus nppsDiv_Round_16u_ISfs (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength, NppRoundMode nRndMode, int nScaleFactor)

  16-bit unsigned short in place signal divide signal, with scaling, rounding then clamp to saturated value.

- NppStatus nppsDiv_Round_16s_ISfs (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength, NppRoundMode nRndMode, int nScaleFactor)

  16-bit signed short in place signal divide signal, with scaling, rounding then clamp to saturated value.

7.147.1 Detailed Description

Sample by sample division of the samples of two signals with rounding.

7.147.2 Function Documentation

7.147.2.1 NppStatus nppsDiv_Round_16s_ISfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*, NppRoundMode *nRndMode*, int *nScaleFactor*)

16-bit signed short in place signal divide signal, with scaling, rounding then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

nRndMode various rounding modes.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.147.2.2 NppStatus nppsDiv_Round_16s_Sfs (const Npp16s * *pSrc1*, const Npp16s * *pSrc2*, Npp16s * *pDst*, int *nLength*, NppRoundMode *nRndMode*, int *nScaleFactor*)

16-bit signed short signal divide signal, scale, round, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nRndMode various rounding modes.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.147.2.3 NppStatus nppsDiv_Round_16u_ISfs (const Npp16u * *pSrc*, Npp16u * *pSrcDst*, int *nLength*, NppRoundMode *nRndMode*, int *nScaleFactor*)

16-bit unsigned short in place signal divide signal, with scaling, rounding then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

nRndMode various rounding modes.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.147.2.4 NppStatus nppsDiv_Round_16u_Sfs (const Npp16u * *pSrc1*, const Npp16u * *pSrc2*, Npp16u * *pDst*, int *nLength*, NppRoundMode *nRndMode*, int *nScaleFactor*)

16-bit unsigned short signal divide signal, scale, round, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nRndMode various rounding modes.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.147.2.5 NppStatus nppsDiv_Round_8u_ISfs (const Npp8u ∗ *pSrc*, Npp8u ∗ *pSrcDst*, int *nLength*, NppRoundMode *nRndMode*, int *nScaleFactor*)

8-bit unsigned char in place signal divide signal, with scaling, rounding then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal1 divisor elements to be divided into signal2 dividend elements

nLength Signal Length.

nRndMode various rounding modes.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.147.2.6 NppStatus nppsDiv_Round_8u_Sfs (const Npp8u ∗ *pSrc1*, const Npp8u ∗ *pSrc2*, Npp8u ∗ *pDst*, int *nLength*, NppRoundMode *nRndMode*, int *nScaleFactor*)

8-bit unsigned char signal divide signal, scale, then clamp to saturated value.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer, signal1 divisor elements to be divided into signal2 dividend elements.

pDst Destination Signal Pointer.

nLength Signal Length.

nRndMode various rounding modes.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.148 Abs

Absolute value of each sample of a signal.

Functions

- NppStatus nppsAbs_16s (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength)
  16-bit signed short signal absolute value.
- NppStatus nppsAbs_32s (const Npp32s ∗pSrc, Npp32s ∗pDst, int nLength)
  32-bit signed integer signal absolute value.
- NppStatus nppsAbs_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength)
  32-bit floating point signal absolute value.
- NppStatus nppsAbs_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength)
  64-bit floating point signal absolute value.
- NppStatus nppsAbs_16s_I (Npp16s ∗pSrcDst, int nLength)
  16-bit signed short signal absolute value.
- NppStatus nppsAbs_32s_I (Npp32s ∗pSrcDst, int nLength)
  32-bit signed integer signal absolute value.
- NppStatus nppsAbs_32f_I (Npp32f ∗pSrcDst, int nLength)
  32-bit floating point signal absolute value.
- NppStatus nppsAbs_64f_I (Npp64f ∗pSrcDst, int nLength)
  64-bit floating point signal absolute value.

7.148.1 Detailed Description

Absolute value of each sample of a signal.

7.148.2 Function Documentation

7.148.2.1 NppStatus nppsAbs_16s (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*)

16-bit signed short signal absolute value.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.148.2.2 NppStatus nppsAbs_16s_I (Npp16s * *pSrcDst*, int *nLength*)

16-bit signed short signal absolute value.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.148.2.3 NppStatus nppsAbs_32f (const Npp32f * *pSrc*, Npp32f * *pDst*, int *nLength*)

32-bit floating point signal absolute value.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.148.2.4 NppStatus nppsAbs_32f_I (Npp32f * *pSrcDst*, int *nLength*)

32-bit floating point signal absolute value.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.148.2.5 NppStatus nppsAbs_32s (const Npp32s * *pSrc*, Npp32s * *pDst*, int *nLength*)

32-bit signed integer signal absolute value.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.148.2.6 NppStatus nppsAbs_32s_I (Npp32s ∗ *pSrcDst*, int *nLength*)

32-bit signed integer signal absolute value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.148.2.7 NppStatus nppsAbs_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal absolute value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.148.2.8 NppStatus nppsAbs_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point signal absolute value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149 Sqr

Squares each sample of a signal.

Functions

- NppStatus nppsSqr_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength)

  32-bit floating point signal squared.

- NppStatus nppsSqr_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength)

  64-bit floating point signal squared.

- NppStatus nppsSqr_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength)

  32-bit complex floating point signal squared.

- NppStatus nppsSqr_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength)

  64-bit complex floating point signal squared.

- NppStatus nppsSqr_32f_I (Npp32f ∗pSrcDst, int nLength)

  32-bit floating point signal squared.

- NppStatus nppsSqr_64f_I (Npp64f ∗pSrcDst, int nLength)

  64-bit floating point signal squared.

- NppStatus nppsSqr_32fc_I (Npp32fc ∗pSrcDst, int nLength)

  32-bit complex floating point signal squared.

- NppStatus nppsSqr_64fc_I (Npp64fc ∗pSrcDst, int nLength)

  64-bit complex floating point signal squared.

- NppStatus nppsSqr_8u_Sfs (const Npp8u ∗pSrc, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal squared, scale, then clamp to saturated value.

- NppStatus nppsSqr_16u_Sfs (const Npp16u ∗pSrc, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal squared, scale, then clamp to saturated value.

- NppStatus nppsSqr_16s_Sfs (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal squared, scale, then clamp to saturated value.

- NppStatus nppsSqr_16sc_Sfs (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit complex signed short signal squared, scale, then clamp to saturated value.

- NppStatus nppsSqr_8u_ISfs (Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal squared, scale, then clamp to saturated value.

- NppStatus nppsSqr_16u_ISfs (Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal squared, scale, then clamp to saturated value.

- NppStatus nppsSqr_16s_ISfs (Npp16s *pSrcDst, int nLength, int nScaleFactor)
  16-bit signed short signal squared, scale, then clamp to saturated value.
- NppStatus nppsSqr_16sc_ISfs (Npp16sc *pSrcDst, int nLength, int nScaleFactor)
  16-bit complex signed short signal squared, scale, then clamp to saturated value.

7.149.1 Detailed Description

Squares each sample of a signal.

7.149.2 Function Documentation

7.149.2.1 NppStatus nppsSqr_16s_ISfs (Npp16s $*$ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal squared, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.2 NppStatus nppsSqr_16s_Sfs (const Npp16s $*$ *pSrc*, Npp16s $*$ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal squared, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.3 NppStatus nppsSqr_16sc_ISfs (Npp16sc $*$ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit complex signed short signal squared, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.4 NppStatus nppsSqr_16sc_Sfs (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit complex signed short signal squared, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.5 NppStatus nppsSqr_16u_ISfs (Npp16u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal squared, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.6 NppStatus nppsSqr_16u_Sfs (const Npp16u ∗ *pSrc*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal squared, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.7 NppStatus nppsSqr_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal squared.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.8 NppStatus nppsSqr_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point signal squared.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.9 NppStatus nppsSqr_32fc (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit complex floating point signal squared.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.10 NppStatus nppsSqr_32fc_I (Npp32fc ∗ *pSrcDst*, int *nLength*)

32-bit complex floating point signal squared.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.11 NppStatus nppsSqr_64f (const Npp64f * *pSrc*, Npp64f * *pDst*, int *nLength*)

64-bit floating point signal squared.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.12 NppStatus nppsSqr_64f_I (Npp64f * *pSrcDst*, int *nLength*)

64-bit floating point signal squared.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.13 NppStatus nppsSqr_64fc (const Npp64fc * *pSrc*, Npp64fc * *pDst*, int *nLength*)

64-bit complex floating point signal squared.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.14 NppStatus nppsSqr_64fc_I (Npp64fc * *pSrcDst*, int *nLength*)

64-bit complex floating point signal squared.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.15 NppStatus nppsSqr_8u_ISfs (Npp8u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal squared, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.149.2.16 NppStatus nppsSqr_8u_Sfs (const Npp8u ∗ *pSrc*, Npp8u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal squared, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150 Sqrt

Square root of each sample of a signal.

Functions

- NppStatus nppsSqrt_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength)

  32-bit floating point signal square root.

- NppStatus nppsSqrt_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength)

  64-bit floating point signal square root.

- NppStatus nppsSqrt_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength)

  32-bit complex floating point signal square root.

- NppStatus nppsSqrt_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength)

  64-bit complex floating point signal square root.

- NppStatus nppsSqrt_32f_I (Npp32f ∗pSrcDst, int nLength)

  32-bit floating point signal square root.

- NppStatus nppsSqrt_64f_I (Npp64f ∗pSrcDst, int nLength)

  64-bit floating point signal square root.

- NppStatus nppsSqrt_32fc_I (Npp32fc ∗pSrcDst, int nLength)

  32-bit complex floating point signal square root.

- NppStatus nppsSqrt_64fc_I (Npp64fc ∗pSrcDst, int nLength)

  64-bit complex floating point signal square root.

- NppStatus nppsSqrt_8u_Sfs (const Npp8u ∗pSrc, Npp8u ∗pDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_16u_Sfs (const Npp16u ∗pSrc, Npp16u ∗pDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_16s_Sfs (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_16sc_Sfs (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength, int nScaleFactor)

  16-bit complex signed short signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_64s_Sfs (const Npp64s ∗pSrc, Npp64s ∗pDst, int nLength, int nScaleFactor)

  64-bit signed integer signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_32s16s_Sfs (const Npp32s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal square root, scale, then clamp to 16-bit signed integer saturated value.

- NppStatus nppsSqrt_64s16s_Sfs (const Npp64s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)

  64-bit signed integer signal square root, scale, then clamp to 16-bit signed integer saturated value.

- NppStatus nppsSqrt_8u_ISfs (Npp8u ∗pSrcDst, int nLength, int nScaleFactor)

  8-bit unsigned char signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_16u_ISfs (Npp16u ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit unsigned short signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_16s_ISfs (Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_16sc_ISfs (Npp16sc ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit complex signed short signal square root, scale, then clamp to saturated value.

- NppStatus nppsSqrt_64s_ISfs (Npp64s ∗pSrcDst, int nLength, int nScaleFactor)

  64-bit signed integer signal square root, scale, then clamp to saturated value.

7.150.1 Detailed Description

Square root of each sample of a signal.

7.150.2 Function Documentation

7.150.2.1 NppStatus nppsSqrt_16s_ISfs (Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal square root, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.2 NppStatus nppsSqrt_16s_Sfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal square root, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.3 NppStatus nppsSqrt_16sc_ISfs (Npp16sc ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit complex signed short signal square root, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.4 NppStatus nppsSqrt_16sc_Sfs (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit complex signed short signal square root, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.5 NppStatus nppsSqrt_16u_ISfs (Npp16u ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal square root, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.6 NppStatus nppsSqrt_16u_Sfs (const Npp16u ∗ *pSrc*, Npp16u ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit unsigned short signal square root, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.7 NppStatus nppsSqrt_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal square root.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.8 NppStatus nppsSqrt_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point signal square root.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.9 NppStatus nppsSqrt_32fc (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit complex floating point signal square root.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.10 NppStatus nppsSqrt_32fc_I (Npp32fc ∗ *pSrcDst*, int *nLength*)

32-bit complex floating point signal square root.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.11 NppStatus nppsSqrt_32s16s_Sfs (const Npp32s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal square root, scale, then clamp to 16-bit signed integer saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.12 NppStatus nppsSqrt_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal square root.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.13 NppStatus nppsSqrt_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point signal square root.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.14 NppStatus nppsSqrt_64fc (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pDst*, int *nLength*)

64-bit complex floating point signal square root.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.15 NppStatus nppsSqrt_64fc_I (Npp64fc ∗ *pSrcDst*, int *nLength*)

64-bit complex floating point signal square root.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.16 NppStatus nppsSqrt_64s16s_Sfs (const Npp64s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

64-bit signed integer signal square root, scale, then clamp to 16-bit signed integer saturated value.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.
nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.17 NppStatus nppsSqrt_64s_ISfs (Npp64s * *pSrcDst*, int *nLength*, int *nScaleFactor*)

64-bit signed integer signal square root, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.18 NppStatus nppsSqrt_64s_Sfs (const Npp64s * *pSrc*, Npp64s * *pDst*, int *nLength*, int *nScaleFactor*)

64-bit signed integer signal square root, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.19 NppStatus nppsSqrt_8u_ISfs (Npp8u * *pSrcDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal square root, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.150.2.20 NppStatus nppsSqrt_8u_Sfs (const Npp8u * *pSrc*, Npp8u * *pDst*, int *nLength*, int *nScaleFactor*)

8-bit unsigned char signal square root, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.151 Cubrt

Cube root of each sample of a signal.

Functions

- NppStatus nppsCubrt_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength)

  32-bit floating point signal cube root.

- NppStatus nppsCubrt_32s16s_Sfs (const Npp32s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal cube root, scale, then clamp to 16-bit signed integer saturated value.

7.151.1 Detailed Description

Cube root of each sample of a signal.

7.151.2 Function Documentation

7.151.2.1 NppStatus nppsCubrt_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal cube root.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.151.2.2 NppStatus nppsCubrt_32s16s_Sfs (const Npp32s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal cube root, scale, then clamp to 16-bit signed integer saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152 Exp

E raised to the power of each sample of a signal.

Functions

- NppStatus nppsExp_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength)
  32-bit floating point signal exponent.
- NppStatus nppsExp_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength)
  64-bit floating point signal exponent.
- NppStatus nppsExp_32f64f (const Npp32f ∗pSrc, Npp64f ∗pDst, int nLength)
  32-bit floating point signal exponent with 64-bit floating point result.
- NppStatus nppsExp_32f_I (Npp32f ∗pSrcDst, int nLength)
  32-bit floating point signal exponent.
- NppStatus nppsExp_64f_I (Npp64f ∗pSrcDst, int nLength)
  64-bit floating point signal exponent.
- NppStatus nppsExp_16s_Sfs (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)
  16-bit signed short signal exponent, scale, then clamp to saturated value.
- NppStatus nppsExp_32s_Sfs (const Npp32s ∗pSrc, Npp32s ∗pDst, int nLength, int nScaleFactor)
  32-bit signed integer signal exponent, scale, then clamp to saturated value.
- NppStatus nppsExp_64s_Sfs (const Npp64s ∗pSrc, Npp64s ∗pDst, int nLength, int nScaleFactor)
  64-bit signed integer signal exponent, scale, then clamp to saturated value.
- NppStatus nppsExp_16s_ISfs (Npp16s ∗pSrcDst, int nLength, int nScaleFactor)
  16-bit signed short signal exponent, scale, then clamp to saturated value.
- NppStatus nppsExp_32s_ISfs (Npp32s ∗pSrcDst, int nLength, int nScaleFactor)
  32-bit signed integer signal exponent, scale, then clamp to saturated value.
- NppStatus nppsExp_64s_ISfs (Npp64s ∗pSrcDst, int nLength, int nScaleFactor)
  64-bit signed integer signal exponent, scale, then clamp to saturated value.

7.152.1 Detailed Description

E raised to the power of each sample of a signal.

7.152.2 Function Documentation

7.152.2.1 NppStatus nppsExp_16s_ISfs (Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal exponent, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.
nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.2 NppStatus nppsExp_16s_Sfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal exponent, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.
nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.3 NppStatus nppsExp_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal exponent.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.4 NppStatus nppsExp_32f64f (const Npp32f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*)

32-bit floating point signal exponent with 64-bit floating point result.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.5 NppStatus nppsExp_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point signal exponent.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.6 NppStatus nppsExp_32s_ISfs (Npp32s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal exponent, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.7 NppStatus nppsExp_32s_Sfs (const Npp32s ∗ *pSrc*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal exponent, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.8 NppStatus nppsExp_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal exponent.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.9 NppStatus nppsExp_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point signal exponent.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.10 NppStatus nppsExp_64s_ISfs (Npp64s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

64-bit signed integer signal exponent, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.152.2.11 NppStatus nppsExp_64s_Sfs (const Npp64s ∗ *pSrc*, Npp64s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

64-bit signed integer signal exponent, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153 Ln

Natural logarithm of each sample of a signal.

Functions

- NppStatus nppsLn_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength)

  32-bit floating point signal natural logarithm.

- NppStatus nppsLn_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength)

  64-bit floating point signal natural logarithm.

- NppStatus nppsLn_64f32f (const Npp64f ∗pSrc, Npp32f ∗pDst, int nLength)

  64-bit floating point signal natural logarithm with 32-bit floating point result.

- NppStatus nppsLn_32f_I (Npp32f ∗pSrcDst, int nLength)

  32-bit floating point signal natural logarithm.

- NppStatus nppsLn_64f_I (Npp64f ∗pSrcDst, int nLength)

  64-bit floating point signal natural logarithm.

- NppStatus nppsLn_16s_Sfs (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)

  16-bit signed short signal natural logarithm, scale, then clamp to saturated value.

- NppStatus nppsLn_32s_Sfs (const Npp32s ∗pSrc, Npp32s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal natural logarithm, scale, then clamp to saturated value.

- NppStatus nppsLn_32s16s_Sfs (const Npp32s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)

  32-bit signed integer signal natural logarithm, scale, then clamp to 16-bit signed short saturated value.

- NppStatus nppsLn_16s_ISfs (Npp16s ∗pSrcDst, int nLength, int nScaleFactor)

  16-bit signed short signal natural logarithm, scale, then clamp to saturated value.

- NppStatus nppsLn_32s_ISfs (Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

  32-bit signed integer signal natural logarithm, scale, then clamp to saturated value.

7.153.1 Detailed Description

Natural logarithm of each sample of a signal.

7.153.2 Function Documentation

7.153.2.1 NppStatus nppsLn_16s_ISfs (Npp16s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal natural logarithm, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.2 NppStatus nppsLn_16s_Sfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

16-bit signed short signal natural logarithm, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.3 NppStatus nppsLn_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal natural logarithm.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.4 NppStatus nppsLn_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point signal natural logarithm.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.5 NppStatus nppsLn_32s16s_Sfs (const Npp32s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal natural logarithm, scale, then clamp to 16-bit signed short saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.6 NppStatus nppsLn_32s_ISfs (Npp32s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal natural logarithm, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.7 NppStatus nppsLn_32s_Sfs (const Npp32s ∗ *pSrc*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal natural logarithm, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.8 NppStatus nppsLn_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal natural logarithm.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.9 NppStatus nppsLn_64f32f (const Npp64f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*)

64-bit floating point signal natural logarithm with 32-bit floating point result.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.153.2.10 NppStatus nppsLn_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point signal natural logarithm.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.154 10Log10

Ten times the decimal logarithm of each sample of a signal.

Functions

- NppStatus npps10Log10_32s_Sfs (const Npp32s ∗pSrc, Npp32s ∗pDst, int nLength, int nScaleFactor)

    32-bit signed integer signal 10 times base 10 logarithm, scale, then clamp to saturated value.

- NppStatus npps10Log10_32s_ISfs (Npp32s ∗pSrcDst, int nLength, int nScaleFactor)

    32-bit signed integer signal 10 times base 10 logarithm, scale, then clamp to saturated value.

7.154.1 Detailed Description

Ten times the decimal logarithm of each sample of a signal.

7.154.2 Function Documentation

7.154.2.1 NppStatus npps10Log10_32s_ISfs (Npp32s ∗ *pSrcDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal 10 times base 10 logarithm, scale, then clamp to saturated value.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.154.2.2 NppStatus npps10Log10_32s_Sfs (const Npp32s ∗ *pSrc*, Npp32s ∗ *pDst*, int *nLength*, int *nScaleFactor*)

32-bit signed integer signal 10 times base 10 logarithm, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.155 SumLn

Sums up the natural logarithm of each sample of a signal.

Functions

- NppStatus nppsSumLnGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for 32f SumLn.

- NppStatus nppsSumLn_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  32-bit floating point signal sum natural logarithm.

- NppStatus nppsSumLnGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for 64f SumLn.

- NppStatus nppsSumLn_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pDst, Npp8u ∗pDeviceBuffer)

  64-bit floating point signal sum natural logarithm.

- NppStatus nppsSumLnGetBufferSize_32f64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for 32f64f SumLn.

- NppStatus nppsSumLn_32f64f (const Npp32f ∗pSrc, int nLength, Npp64f ∗pDst, Npp8u ∗pDeviceBuffer)

  32-bit flaoting point input, 64-bit floating point output signal sum natural logarithm.

- NppStatus nppsSumLnGetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for 16s32f SumLn.

- NppStatus nppsSumLn_16s32f (const Npp16s ∗pSrc, int nLength, Npp32f ∗pDst, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer input, 32-bit floating point output signal sum natural logarithm.

7.155.1 Detailed Description

Sums up the natural logarithm of each sample of a signal.

7.155.2 Function Documentation

7.155.2.1 NppStatus nppsSumLn_16s32f (const Npp16s ∗ *pSrc*, int *nLength*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer input, 32-bit floating point output signal sum natural logarithm.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pDst Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.155.2.2 NppStatus nppsSumLn_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

32-bit floating point signal sum natural logarithm.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pDst Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.155.2.3 NppStatus nppsSumLn_32f64f (const Npp32f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

32-bit flaoting point input, 64-bit floating point output signal sum natural logarithm.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pDst Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.155.2.4 NppStatus nppsSumLn_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pDst*, Npp8u ∗ *pDeviceBuffer*)

64-bit floating point signal sum natural logarithm.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pDst Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.155.2.5 NppStatus nppsSumLnGetBufferSize_16s32f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for 16s32f SumLn.

This primitive provides the correct buffer size for nppsSumLn_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.155.2.6 NppStatus nppsSumLnGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for 32f SumLn.

This primitive provides the correct buffer size for nppsSumLn_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.155.2.7 NppStatus nppsSumLnGetBufferSize_32f64f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for 32f64f SumLn.

This primitive provides the correct buffer size for nppsSumLn_32f64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.155.2.8 NppStatus nppsSumLnGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for 64f SumLn.

This primitive provides the correct buffer size for nppsSumLn_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.156 Arctan

Inverse tangent of each sample of a signal.

Functions

- NppStatus nppsArctan_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength)
  32-bit floating point signal inverse tangent.
- NppStatus nppsArctan_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength)
  64-bit floating point signal inverse tangent.
- NppStatus nppsArctan_32f_I (Npp32f ∗pSrcDst, int nLength)
  32-bit floating point signal inverse tangent.
- NppStatus nppsArctan_64f_I (Npp64f ∗pSrcDst, int nLength)
  64-bit floating point signal inverse tangent.

7.156.1 Detailed Description

Inverse tangent of each sample of a signal.

7.156.2 Function Documentation

7.156.2.1 NppStatus nppsArctan_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*)

32-bit floating point signal inverse tangent.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.156.2.2 NppStatus nppsArctan_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point signal inverse tangent.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.156.2.3 NppStatus nppsArctan_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*)

64-bit floating point signal inverse tangent.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.156.2.4 NppStatus nppsArctan_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point signal inverse tangent.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.157 Normalize

Normalize each sample of a real or complex signal using offset and division operations.

Functions

- NppStatus nppsNormalize_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength, Npp32f vSub, Npp32f vDiv)

  32-bit floating point signal normalize.

- NppStatus nppsNormalize_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength, Npp32fc vSub, Npp32f vDiv)

  32-bit complex floating point signal normalize.

- NppStatus nppsNormalize_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength, Npp64f vSub, Npp64f vDiv)

  64-bit floating point signal normalize.

- NppStatus nppsNormalize_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength, Npp64fc vSub, Npp64f vDiv)

  64-bit complex floating point signal normalize.

- NppStatus nppsNormalize_16s_Sfs (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, Npp16s vSub, int vDiv, int nScaleFactor)

  16-bit signed short signal normalize, scale, then clamp to saturated value.

- NppStatus nppsNormalize_16sc_Sfs (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength, Npp16sc vSub, int vDiv, int nScaleFactor)

  16-bit complex signed short signal normalize, scale, then clamp to saturated value.

7.157.1 Detailed Description

Normalize each sample of a real or complex signal using offset and division operations.

7.157.2 Function Documentation

7.157.2.1 NppStatus nppsNormalize_16s_Sfs (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, Npp16s *vSub*, int *vDiv*, int *nScaleFactor*)

16-bit signed short signal normalize, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

vSub value subtracted from each signal element before division

vDiv divisor of post-subtracted signal element dividend

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.157.2.2 NppStatus nppsNormalize_16sc_Sfs (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pDst*, int *nLength*, Npp16sc *vSub*, int *vDiv*, int *nScaleFactor*)

16-bit complex signed short signal normalize, scale, then clamp to saturated value.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

vSub value subtracted from each signal element before division

vDiv divisor of post-subtracted signal element dividend

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.157.2.3 NppStatus nppsNormalize_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*, Npp32f *vSub*, Npp32f *vDiv*)

32-bit floating point signal normalize.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

vSub value subtracted from each signal element before division

vDiv divisor of post-subtracted signal element dividend

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.157.2.4 NppStatus nppsNormalize_32fc (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pDst*, int *nLength*, Npp32fc *vSub*, Npp32f *vDiv*)

32-bit complex floating point signal normalize.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

vSub value subtracted from each signal element before division

vDiv divisor of post-subtracted signal element dividend

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.157.2.5 NppStatus nppsNormalize_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*, Npp64f *vSub*, Npp64f *vDiv*)

64-bit floating point signal normalize.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

vSub value subtracted from each signal element before division

vDiv divisor of post-subtracted signal element dividend

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.157.2.6 NppStatus nppsNormalize_64fc (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pDst*, int *nLength*, Npp64fc *vSub*, Npp64f *vDiv*)

64-bit complex floating point signal normalize.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

vSub value subtracted from each signal element before division

vDiv divisor of post-subtracted signal element dividend

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.158 Cauchy, CauchyD, and CauchyDD2

Determine Cauchy robust error function and its first and second derivatives for each sample of a signal.

Functions

- NppStatus nppsCauchy_32f_I (Npp32f ∗pSrcDst, int nLength, Npp32f nParam)

  32-bit floating point signal Cauchy error calculation.

- NppStatus nppsCauchyD_32f_I (Npp32f ∗pSrcDst, int nLength, Npp32f nParam)

  32-bit floating point signal Cauchy first derivative.

- NppStatus nppsCauchyDD2_32f_I (Npp32f ∗pSrcDst, Npp32f ∗pD2FVal, int nLength, Npp32f nParam)

  32-bit floating point signal Cauchy first and second derivatives.

7.158.1 Detailed Description

Determine Cauchy robust error function and its first and second derivatives for each sample of a signal.

7.158.2 Function Documentation

7.158.2.1 NppStatus nppsCauchy_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*, Npp32f *nParam*)

32-bit floating point signal Cauchy error calculation.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nParam constant used in Cauchy formula

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.158.2.2 NppStatus nppsCauchyD_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*, Npp32f *nParam*)

32-bit floating point signal Cauchy first derivative.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nParam constant used in Cauchy formula

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.158.2.3 NppStatus nppsCauchyDD2_32f_I (Npp32f * *pSrcDst*, Npp32f * *pD2FVal*, int *nLength*, Npp32f *nParam*)

32-bit floating point signal Cauchy first and second derivatives.

Parameters:

pSrcDst In-Place Signal Pointer.

pD2FVal Source Signal Pointer. This signal contains the second derivative of the source signal.

nLength Signal Length.

nParam constant used in Cauchy formula

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.159 Logical And Shift Operations

Modules

- AndC

  Bitwise AND of a constant and each sample of a signal.

- And

  Sample by sample bitwise AND of samples from two signals.

- OrC

  Bitwise OR of a constant and each sample of a signal.

- Or

  Sample by sample bitwise OR of the samples from two signals.

- XorC

  Bitwise XOR of a constant and each sample of a signal.

- Xor

  Sample by sample bitwise XOR of the samples from two signals.

- Not

  Bitwise NOT of each sample of a signal.

- LShiftC

  Left shifts the bits of each sample of a signal by a constant amount.

- RShiftC

  Right shifts the bits of each sample of a signal by a constant amount.

7.160 AndC

Bitwise AND of a constant and each sample of a signal.

Functions

- NppStatus nppsAndC_8u (const Npp8u ∗pSrc, Npp8u nValue, Npp8u ∗pDst, int nLength)
  8-bit unsigned char signal and with constant.
- NppStatus nppsAndC_16u (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength)
  16-bit unsigned short signal and with constant.
- NppStatus nppsAndC_32u (const Npp32u ∗pSrc, Npp32u nValue, Npp32u ∗pDst, int nLength)
  32-bit unsigned integer signal and with constant.
- NppStatus nppsAndC_8u_I (Npp8u nValue, Npp8u ∗pSrcDst, int nLength)
  8-bit unsigned char in place signal and with constant.
- NppStatus nppsAndC_16u_I (Npp16u nValue, Npp16u ∗pSrcDst, int nLength)
  16-bit unsigned short in place signal and with constant.
- NppStatus nppsAndC_32u_I (Npp32u nValue, Npp32u ∗pSrcDst, int nLength)
  32-bit unsigned signed integer in place signal and with constant.

7.160.1 Detailed Description

Bitwise AND of a constant and each sample of a signal.

7.160.2 Function Documentation

7.160.2.1 NppStatus nppsAndC_16u (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal and with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be anded with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.160.2.2 NppStatus nppsAndC_16u_I (Npp16u *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short in place signal and with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be anded with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.160.2.3 NppStatus nppsAndC_32u (const Npp32u ∗ *pSrc*, Npp32u *nValue*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned integer signal and with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be anded with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.160.2.4 NppStatus nppsAndC_32u_I (Npp32u *nValue*, Npp32u ∗ *pSrcDst*, int *nLength*)

32-bit unsigned signed integer in place signal and with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be anded with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.160.2.5 NppStatus nppsAndC_8u (const Npp8u ∗ *pSrc*, Npp8u *nValue*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char signal and with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be anded with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.160.2.6 NppStatus nppsAndC_8u_I (Npp8u *nValue*, Npp8u ∗ *pSrcDst*, int *nLength*)

8-bit unsigned char in place signal and with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be anded with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.161 And

Sample by sample bitwise AND of samples from two signals.

Functions

- NppStatus nppsAnd_8u (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp8u ∗pDst, int nLength)

  8-bit unsigned char signal and with signal.

- NppStatus nppsAnd_16u (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength)

  16-bit unsigned short signal and with signal.

- NppStatus nppsAnd_32u (const Npp32u ∗pSrc1, const Npp32u ∗pSrc2, Npp32u ∗pDst, int nLength)

  32-bit unsigned integer signal and with signal.

- NppStatus nppsAnd_8u_I (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength)

  8-bit unsigned char in place signal and with signal.

- NppStatus nppsAnd_16u_I (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength)

  16-bit unsigned short in place signal and with signal.

- NppStatus nppsAnd_32u_I (const Npp32u ∗pSrc, Npp32u ∗pSrcDst, int nLength)

  32-bit unsigned integer in place signal and with signal.

7.161.1 Detailed Description

Sample by sample bitwise AND of samples from two signals.

7.161.2 Function Documentation

7.161.2.1 NppStatus nppsAnd_16u (const Npp16u ∗ *pSrc1*, const Npp16u ∗ *pSrc2*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal and with signal.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be anded with signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.161.2.2 NppStatus nppsAnd_16u_I (const Npp16u ∗ *pSrc*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short in place signal and with signal.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be anded with signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.161.2.3 NppStatus nppsAnd_32u (const Npp32u ∗ *pSrc1*, const Npp32u ∗ *pSrc2*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned integer signal and with signal.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be anded with signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.161.2.4 NppStatus nppsAnd_32u_I (const Npp32u ∗ *pSrc*, Npp32u ∗ *pSrcDst*, int *nLength*)

32-bit unsigned integer in place signal and with signal.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be anded with signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.161.2.5 NppStatus nppsAnd_8u (const Npp8u ∗ *pSrc1*, const Npp8u ∗ *pSrc2*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char signal and with signal.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be anded with signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.161.2.6 NppStatus nppsAnd_8u_I (const Npp8u ∗ *pSrc*, Npp8u ∗ *pSrcDst*, int *nLength*)

8-bit unsigned char in place signal and with signal.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be anded with signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.162 OrC

Bitwise OR of a constant and each sample of a signal.

Functions

- NppStatus nppsOrC_8u (const Npp8u ∗pSrc, Npp8u nValue, Npp8u ∗pDst, int nLength)
  8-bit unsigned char signal or with constant.
- NppStatus nppsOrC_16u (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength)
  16-bit unsigned short signal or with constant.
- NppStatus nppsOrC_32u (const Npp32u ∗pSrc, Npp32u nValue, Npp32u ∗pDst, int nLength)
  32-bit unsigned integer signal or with constant.
- NppStatus nppsOrC_8u_I (Npp8u nValue, Npp8u ∗pSrcDst, int nLength)
  8-bit unsigned char in place signal or with constant.
- NppStatus nppsOrC_16u_I (Npp16u nValue, Npp16u ∗pSrcDst, int nLength)
  16-bit unsigned short in place signal or with constant.
- NppStatus nppsOrC_32u_I (Npp32u nValue, Npp32u ∗pSrcDst, int nLength)
  32-bit unsigned signed integer in place signal or with constant.

7.162.1 Detailed Description

Bitwise OR of a constant and each sample of a signal.

7.162.2 Function Documentation

7.162.2.1 NppStatus nppsOrC_16u (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal or with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be ored with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.162.2.2 NppStatus nppsOrC_16u_I (Npp16u *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short in place signal or with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be ored with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.162.2.3 NppStatus nppsOrC_32u (const Npp32u ∗ *pSrc*, Npp32u *nValue*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned integer signal or with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be ored with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.162.2.4 NppStatus nppsOrC_32u_I (Npp32u *nValue*, Npp32u ∗ *pSrcDst*, int *nLength*)

32-bit unsigned signed integer in place signal or with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be ored with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.162.2.5 NppStatus nppsOrC_8u (const Npp8u ∗ *pSrc*, Npp8u *nValue*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char signal or with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be ored with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.162.2.6 NppStatus nppsOrC_8u_I (Npp8u *nValue*, Npp8u ∗ *pSrcDst*, int *nLength*)

8-bit unsigned char in place signal or with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be ored with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.163 Or

Sample by sample bitwise OR of the samples from two signals.

Functions

- NppStatus nppsOr_8u (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp8u ∗pDst, int nLength)

  8-bit unsigned char signal or with signal.

- NppStatus nppsOr_16u (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength)

  16-bit unsigned short signal or with signal.

- NppStatus nppsOr_32u (const Npp32u ∗pSrc1, const Npp32u ∗pSrc2, Npp32u ∗pDst, int nLength)

  32-bit unsigned integer signal or with signal.

- NppStatus nppsOr_8u_I (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength)

  8-bit unsigned char in place signal or with signal.

- NppStatus nppsOr_16u_I (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength)

  16-bit unsigned short in place signal or with signal.

- NppStatus nppsOr_32u_I (const Npp32u ∗pSrc, Npp32u ∗pSrcDst, int nLength)

  32-bit unsigned integer in place signal or with signal.

7.163.1 Detailed Description

Sample by sample bitwise OR of the samples from two signals.

7.163.2 Function Documentation

7.163.2.1 NppStatus nppsOr_16u (const Npp16u ∗ *pSrc1*, const Npp16u ∗ *pSrc2*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal or with signal.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be ored with signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.163.2.2 NppStatus nppsOr_16u_I (const Npp16u ∗ *pSrc*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short in place signal or with signal.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be ored with signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.163.2.3 NppStatus nppsOr_32u (const Npp32u ∗ *pSrc1*, const Npp32u ∗ *pSrc2*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned integer signal or with signal.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be ored with signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.163.2.4 NppStatus nppsOr_32u_I (const Npp32u ∗ *pSrc*, Npp32u ∗ *pSrcDst*, int *nLength*)

32-bit unsigned integer in place signal or with signal.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be ored with signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.163.2.5 NppStatus nppsOr_8u (const Npp8u ∗ *pSrc1*, const Npp8u ∗ *pSrc2*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char signal or with signal.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be ored with signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.163.2.6 NppStatus nppsOr_8u_I (const Npp8u ∗ *pSrc*, Npp8u ∗ *pSrcDst*, int *nLength*)

8-bit unsigned char in place signal or with signal.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be ored with signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.164 XorC

Bitwise XOR of a constant and each sample of a signal.

Functions

- NppStatus nppsXorC_8u (const Npp8u ∗pSrc, Npp8u nValue, Npp8u ∗pDst, int nLength)
  8-bit unsigned char signal exclusive or with constant.
- NppStatus nppsXorC_16u (const Npp16u ∗pSrc, Npp16u nValue, Npp16u ∗pDst, int nLength)
  16-bit unsigned short signal exclusive or with constant.
- NppStatus nppsXorC_32u (const Npp32u ∗pSrc, Npp32u nValue, Npp32u ∗pDst, int nLength)
  32-bit unsigned integer signal exclusive or with constant.
- NppStatus nppsXorC_8u_I (Npp8u nValue, Npp8u ∗pSrcDst, int nLength)
  8-bit unsigned char in place signal exclusive or with constant.
- NppStatus nppsXorC_16u_I (Npp16u nValue, Npp16u ∗pSrcDst, int nLength)
  16-bit unsigned short in place signal exclusive or with constant.
- NppStatus nppsXorC_32u_I (Npp32u nValue, Npp32u ∗pSrcDst, int nLength)
  32-bit unsigned signed integer in place signal exclusive or with constant.

7.164.1 Detailed Description

Bitwise XOR of a constant and each sample of a signal.

7.164.2 Function Documentation

7.164.2.1 NppStatus nppsXorC_16u (const Npp16u ∗ *pSrc*, Npp16u *nValue*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal exclusive or with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be exclusive ored with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.164.2.2 NppStatus nppsXorC_16u_I (Npp16u *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short in place signal exclusive or with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be exclusive ored with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.164.2.3 NppStatus nppsXorC_32u (const Npp32u ∗ *pSrc*, Npp32u *nValue*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned integer signal exclusive or with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be exclusive ored with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.164.2.4 NppStatus nppsXorC_32u_I (Npp32u *nValue*, Npp32u ∗ *pSrcDst*, int *nLength*)

32-bit unsigned signed integer in place signal exclusive or with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be exclusive ored with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.164.2.5 NppStatus nppsXorC_8u (const Npp8u ∗ *pSrc*, Npp8u *nValue*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char signal exclusive or with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be exclusive ored with each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.164.2.6 NppStatus nppsXorC_8u_I (Npp8u *nValue*, Npp8u * *pSrcDst*, int *nLength*)

8-bit unsigned char in place signal exclusive or with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be exclusive ored with each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.165 Xor

Sample by sample bitwise XOR of the samples from two signals.

Functions

- NppStatus nppsXor_8u (const Npp8u ∗pSrc1, const Npp8u ∗pSrc2, Npp8u ∗pDst, int nLength)

  8-bit unsigned char signal exclusive or with signal.

- NppStatus nppsXor_16u (const Npp16u ∗pSrc1, const Npp16u ∗pSrc2, Npp16u ∗pDst, int nLength)

  16-bit unsigned short signal exclusive or with signal.

- NppStatus nppsXor_32u (const Npp32u ∗pSrc1, const Npp32u ∗pSrc2, Npp32u ∗pDst, int nLength)

  32-bit unsigned integer signal exclusive or with signal.

- NppStatus nppsXor_8u_I (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength)

  8-bit unsigned char in place signal exclusive or with signal.

- NppStatus nppsXor_16u_I (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength)

  16-bit unsigned short in place signal exclusive or with signal.

- NppStatus nppsXor_32u_I (const Npp32u ∗pSrc, Npp32u ∗pSrcDst, int nLength)

  32-bit unsigned integer in place signal exclusive or with signal.

7.165.1 Detailed Description

Sample by sample bitwise XOR of the samples from two signals.

7.165.2 Function Documentation

7.165.2.1 NppStatus nppsXor_16u (const Npp16u ∗ *pSrc1*, const Npp16u ∗ *pSrc2*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal exclusive or with signal.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be exclusive ored with signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.165.2.2 NppStatus nppsXor_16u_I (const Npp16u * *pSrc*, Npp16u * *pSrcDst*, int *nLength*)

16-bit unsigned short in place signal exclusive or with signal.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be exclusive ored with signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.165.2.3 NppStatus nppsXor_32u (const Npp32u * *pSrc1*, const Npp32u * *pSrc2*, Npp32u * *pDst*, int *nLength*)

32-bit unsigned integer signal exclusive or with signal.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer. signal2 elements to be exclusive ored with signal1 elements

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.165.2.4 NppStatus nppsXor_32u_I (const Npp32u * *pSrc*, Npp32u * *pSrcDst*, int *nLength*)

32-bit unsigned integer in place signal exclusive or with signal.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer. signal2 elements to be exclusive ored with signal1 elements

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.165.2.5 NppStatus nppsXor_8u (const Npp8u * *pSrc1*, const Npp8u * *pSrc2*, Npp8u * *pDst*, int *nLength*)

8-bit unsigned char signal exclusive or with signal.

Parameters:

- ***pSrc1*** Source Signal Pointer.
- ***pSrc2*** Source Signal Pointer. signal2 elements to be exclusive ored with signal1 elements
- ***pDst*** Destination Signal Pointer.
- ***nLength*** Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.165.2.6 NppStatus nppsXor_8u_I (const Npp8u * *pSrc*, Npp8u * *pSrcDst*, int *nLength*)

8-bit unsigned char in place signal exclusive or with signal.

Parameters:

- ***pSrc*** Source Signal Pointer.
- ***pSrcDst*** In-Place Signal Pointer. signal2 elements to be exclusive ored with signal1 elements
- ***nLength*** Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.166 Not

Bitwise NOT of each sample of a signal.

Functions

- NppStatus nppsNot_8u (const Npp8u ∗pSrc, Npp8u ∗pDst, int nLength)

  8-bit unsigned char not signal.

- NppStatus nppsNot_16u (const Npp16u ∗pSrc, Npp16u ∗pDst, int nLength)

  16-bit unsigned short not signal.

- NppStatus nppsNot_32u (const Npp32u ∗pSrc, Npp32u ∗pDst, int nLength)

  32-bit unsigned integer not signal.

- NppStatus nppsNot_8u_I (Npp8u ∗pSrcDst, int nLength)

  8-bit unsigned char in place not signal.

- NppStatus nppsNot_16u_I (Npp16u ∗pSrcDst, int nLength)

  16-bit unsigned short in place not signal.

- NppStatus nppsNot_32u_I (Npp32u ∗pSrcDst, int nLength)

  32-bit unsigned signed integer in place not signal.

7.166.1 Detailed Description

Bitwise NOT of each sample of a signal.

7.166.2 Function Documentation

7.166.2.1 NppStatus nppsNot_16u (const Npp16u ∗ *pSrc*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short not signal.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.166.2.2 NppStatus nppsNot_16u_I (Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short in place not signal.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.166.2.3 NppStatus nppsNot_32u (const Npp32u ∗ *pSrc*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned integer not signal.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.166.2.4 NppStatus nppsNot_32u_I (Npp32u ∗ *pSrcDst*, int *nLength*)

32-bit unsigned signed integer in place not signal.

Parameters:

pSrcDst In-Place Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.166.2.5 NppStatus nppsNot_8u (const Npp8u ∗ *pSrc*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char not signal.

Parameters:

pSrc Source Signal Pointer.
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.166.2.6 NppStatus nppsNot_8u_I (Npp8u * *pSrcDst*, int *nLength*)

8-bit unsigned char in place not signal.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167 LShiftC

Left shifts the bits of each sample of a signal by a constant amount.

Functions

- NppStatus nppsLShiftC_8u (const Npp8u ∗pSrc, int nValue, Npp8u ∗pDst, int nLength)

  8-bit unsigned char signal left shift with constant.

- NppStatus nppsLShiftC_16u (const Npp16u ∗pSrc, int nValue, Npp16u ∗pDst, int nLength)

  16-bit unsigned short signal left shift with constant.

- NppStatus nppsLShiftC_16s (const Npp16s ∗pSrc, int nValue, Npp16s ∗pDst, int nLength)

  16-bit signed short signal left shift with constant.

- NppStatus nppsLShiftC_32u (const Npp32u ∗pSrc, int nValue, Npp32u ∗pDst, int nLength)

  32-bit unsigned integer signal left shift with constant.

- NppStatus nppsLShiftC_32s (const Npp32s ∗pSrc, int nValue, Npp32s ∗pDst, int nLength)

  32-bit signed integer signal left shift with constant.

- NppStatus nppsLShiftC_8u_I (int nValue, Npp8u ∗pSrcDst, int nLength)

  8-bit unsigned char in place signal left shift with constant.

- NppStatus nppsLShiftC_16u_I (int nValue, Npp16u ∗pSrcDst, int nLength)

  16-bit unsigned short in place signal left shift with constant.

- NppStatus nppsLShiftC_16s_I (int nValue, Npp16s ∗pSrcDst, int nLength)

  16-bit signed short in place signal left shift with constant.

- NppStatus nppsLShiftC_32u_I (int nValue, Npp32u ∗pSrcDst, int nLength)

  32-bit unsigned signed integer in place signal left shift with constant.

- NppStatus nppsLShiftC_32s_I (int nValue, Npp32s ∗pSrcDst, int nLength)

  32-bit signed signed integer in place signal left shift with constant.

7.167.1 Detailed Description

Left shifts the bits of each sample of a signal by a constant amount.

7.167.2 Function Documentation

7.167.2.1 NppStatus nppsLShiftC_16s (const Npp16s ∗ *pSrc*, int *nValue*, Npp16s ∗ *pDst*, int *nLength*)

16-bit signed short signal left shift with constant.

Parameters:

pSrc Source Signal Pointer.
nValue Constant value to be used to left shift each vector element
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.2 NppStatus nppsLShiftC_16s_I (int *nValue*, Npp16s * *pSrcDst*, int *nLength*)

16-bit signed short in place signal left shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.
nValue Constant value to be used to left shift each vector element
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.3 NppStatus nppsLShiftC_16u (const Npp16u * *pSrc*, int *nValue*, Npp16u * *pDst*, int *nLength*)

16-bit unsigned short signal left shift with constant.

Parameters:

pSrc Source Signal Pointer.
nValue Constant value to be used to left shift each vector element
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.4 NppStatus nppsLShiftC_16u_I (int *nValue*, Npp16u * *pSrcDst*, int *nLength*)

16-bit unsigned short in place signal left shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.
nValue Constant value to be used to left shift each vector element
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.5 NppStatus nppsLShiftC_32s (const Npp32s ∗ *pSrc*, int *nValue*, Npp32s ∗ *pDst*, int *nLength*)

32-bit signed integer signal left shift with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be used to left shift each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.6 NppStatus nppsLShiftC_32s_I (int *nValue*, Npp32s ∗ *pSrcDst*, int *nLength*)

32-bit signed signed integer in place signal left shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be used to left shift each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.7 NppStatus nppsLShiftC_32u (const Npp32u ∗ *pSrc*, int *nValue*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned integer signal left shift with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be used to left shift each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.8 NppStatus nppsLShiftC_32u_I (int *nValue*, Npp32u ∗ *pSrcDst*, int *nLength*)

32-bit unsigned signed integer in place signal left shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be used to left shift each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.9 NppStatus nppsLShiftC_8u (const Npp8u ∗ *pSrc*, int *nValue*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char signal left shift with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be used to left shift each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.167.2.10 NppStatus nppsLShiftC_8u_I (int *nValue*, Npp8u ∗ *pSrcDst*, int *nLength*)

8-bit unsigned char in place signal left shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be used to left shift each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168 RShiftC

Right shifts the bits of each sample of a signal by a constant amount.

Functions

- NppStatus nppsRShiftC_8u (const Npp8u ∗pSrc, int nValue, Npp8u ∗pDst, int nLength)

  8-bit unsigned char signal right shift with constant.

- NppStatus nppsRShiftC_16u (const Npp16u ∗pSrc, int nValue, Npp16u ∗pDst, int nLength)

  16-bit unsigned short signal right shift with constant.

- NppStatus nppsRShiftC_16s (const Npp16s ∗pSrc, int nValue, Npp16s ∗pDst, int nLength)

  16-bit signed short signal right shift with constant.

- NppStatus nppsRShiftC_32u (const Npp32u ∗pSrc, int nValue, Npp32u ∗pDst, int nLength)

  32-bit unsigned integer signal right shift with constant.

- NppStatus nppsRShiftC_32s (const Npp32s ∗pSrc, int nValue, Npp32s ∗pDst, int nLength)

  32-bit signed integer signal right shift with constant.

- NppStatus nppsRShiftC_8u_I (int nValue, Npp8u ∗pSrcDst, int nLength)

  8-bit unsigned char in place signal right shift with constant.

- NppStatus nppsRShiftC_16u_I (int nValue, Npp16u ∗pSrcDst, int nLength)

  16-bit unsigned short in place signal right shift with constant.

- NppStatus nppsRShiftC_16s_I (int nValue, Npp16s ∗pSrcDst, int nLength)

  16-bit signed short in place signal right shift with constant.

- NppStatus nppsRShiftC_32u_I (int nValue, Npp32u ∗pSrcDst, int nLength)

  32-bit unsigned signed integer in place signal right shift with constant.

- NppStatus nppsRShiftC_32s_I (int nValue, Npp32s ∗pSrcDst, int nLength)

  32-bit signed signed integer in place signal right shift with constant.

7.168.1 Detailed Description

Right shifts the bits of each sample of a signal by a constant amount.

7.168.2 Function Documentation

7.168.2.1 NppStatus nppsRShiftC_16s (const Npp16s ∗ *pSrc*, int *nValue*, Npp16s ∗ *pDst*, int *nLength*)

16-bit signed short signal right shift with constant.

Parameters:

pSrc Source Signal Pointer.
nValue Constant value to be used to right shift each vector element
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.2 NppStatus nppsRShiftC_16s_I (int *nValue*, Npp16s ∗ *pSrcDst*, int *nLength*)

16-bit signed short in place signal right shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.
nValue Constant value to be used to right shift each vector element
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.3 NppStatus nppsRShiftC_16u (const Npp16u ∗ *pSrc*, int *nValue*, Npp16u ∗ *pDst*, int *nLength*)

16-bit unsigned short signal right shift with constant.

Parameters:

pSrc Source Signal Pointer.
nValue Constant value to be used to right shift each vector element
pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.4 NppStatus nppsRShiftC_16u_I (int *nValue*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short in place signal right shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.
nValue Constant value to be used to right shift each vector element
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.5 NppStatus nppsRShiftC_32s (const Npp32s ∗ *pSrc*, int *nValue*, Npp32s ∗ *pDst*, int *nLength*)

32-bit signed integer signal right shift with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be used to right shift each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.6 NppStatus nppsRShiftC_32s_I (int *nValue*, Npp32s ∗ *pSrcDst*, int *nLength*)

32-bit signed signed integer in place signal right shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be used to right shift each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.7 NppStatus nppsRShiftC_32u (const Npp32u ∗ *pSrc*, int *nValue*, Npp32u ∗ *pDst*, int *nLength*)

32-bit unsigned integer signal right shift with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be used to right shift each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.8 NppStatus nppsRShiftC_32u_I (int *nValue*, Npp32u ∗ *pSrcDst*, int *nLength*)

32-bit unsigned signed integer in place signal right shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be used to right shift each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.9 NppStatus nppsRShiftC_8u (const Npp8u ∗ *pSrc*, int *nValue*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char signal right shift with constant.

Parameters:

pSrc Source Signal Pointer.

nValue Constant value to be used to right shift each vector element

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.168.2.10 NppStatus nppsRShiftC_8u_I (int *nValue*, Npp8u ∗ *pSrcDst*, int *nLength*)

8-bit unsigned char in place signal right shift with constant.

Parameters:

pSrcDst In-Place Signal Pointer.

nValue Constant value to be used to right shift each vector element

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.169 Conversion Functions

Modules

- Convert
- Threshold

7.170 Convert

Convert

Routines for converting the sample-data type of signals.

- NppStatus nppsConvert_8s16s (const Npp8s ∗pSrc, Npp16s ∗pDst, int nLength)
- NppStatus nppsConvert_8s32f (const Npp8s ∗pSrc, Npp32f ∗pDst, int nLength)
- NppStatus nppsConvert_8u32f (const Npp8u ∗pSrc, Npp32f ∗pDst, int nLength)
- NppStatus nppsConvert_16s8s_Sfs (const Npp16s ∗pSrc, Npp8s ∗pDst, Npp32u nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_16s32s (const Npp16s ∗pSrc, Npp32s ∗pDst, int nLength)
- NppStatus nppsConvert_16s32f (const Npp16s ∗pSrc, Npp32f ∗pDst, int nLength)
- NppStatus nppsConvert_16u32f (const Npp16u ∗pSrc, Npp32f ∗pDst, int nLength)
- NppStatus nppsConvert_32s16s (const Npp32s ∗pSrc, Npp16s ∗pDst, int nLength)
- NppStatus nppsConvert_32s32f (const Npp32s ∗pSrc, Npp32f ∗pDst, int nLength)
- NppStatus nppsConvert_32s64f (const Npp32s ∗pSrc, Npp64f ∗pDst, int nLength)
- NppStatus nppsConvert_32f64f (const Npp32f ∗pSrc, Npp64f ∗pDst, int nLength)
- NppStatus nppsConvert_64s64f (const Npp64s ∗pSrc, Npp64f ∗pDst, int nLength)
- NppStatus nppsConvert_64f32f (const Npp64f ∗pSrc, Npp32f ∗pDst, int nLength)
- NppStatus nppsConvert_16s32f_Sfs (const Npp16s ∗pSrc, Npp32f ∗pDst, int nLength, int nScaleFactor)
- NppStatus nppsConvert_16s64f_Sfs (const Npp16s ∗pSrc, Npp64f ∗pDst, int nLength, int nScaleFactor)
- NppStatus nppsConvert_32s16s_Sfs (const Npp32s ∗pSrc, Npp16s ∗pDst, int nLength, int nScaleFactor)
- NppStatus nppsConvert_32s32f_Sfs (const Npp32s ∗pSrc, Npp32f ∗pDst, int nLength, int nScaleFactor)
- NppStatus nppsConvert_32s64f_Sfs (const Npp32s ∗pSrc, Npp64f ∗pDst, int nLength, int nScaleFactor)
- NppStatus nppsConvert_32f8s_Sfs (const Npp32f ∗pSrc, Npp8s ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_32f8u_Sfs (const Npp32f ∗pSrc, Npp8u ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_32f16s_Sfs (const Npp32f ∗pSrc, Npp16s ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_32f16u_Sfs (const Npp32f ∗pSrc, Npp16u ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_32f32s_Sfs (const Npp32f ∗pSrc, Npp32s ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_64s32s_Sfs (const Npp64s ∗pSrc, Npp32s ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_64f16s_Sfs (const Npp64f ∗pSrc, Npp16s ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_64f32s_Sfs (const Npp64f ∗pSrc, Npp32s ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)
- NppStatus nppsConvert_64f64s_Sfs (const Npp64f ∗pSrc, Npp64s ∗pDst, int nLength, NppRoundMode eRoundMode, int nScaleFactor)

7.170.1 Function Documentation

7.170.1.1 NppStatus nppsConvert_16s32f (const Npp16s * *pSrc*, Npp32f * *pDst*, int *nLength*)

7.170.1.2 NppStatus nppsConvert_16s32f_Sfs (const Npp16s * *pSrc*, Npp32f * *pDst*, int *nLength*, int *nScaleFactor*)

7.170.1.3 NppStatus nppsConvert_16s32s (const Npp16s * *pSrc*, Npp32s * *pDst*, int *nLength*)

7.170.1.4 NppStatus nppsConvert_16s64f_Sfs (const Npp16s * *pSrc*, Npp64f * *pDst*, int *nLength*, int *nScaleFactor*)

7.170.1.5 NppStatus nppsConvert_16s8s_Sfs (const Npp16s * *pSrc*, Npp8s * *pDst*, Npp32u *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.6 NppStatus nppsConvert_16u32f (const Npp16u * *pSrc*, Npp32f * *pDst*, int *nLength*)

7.170.1.7 NppStatus nppsConvert_32f16s_Sfs (const Npp32f * *pSrc*, Npp16s * *pDst*, int *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.8 NppStatus nppsConvert_32f16u_Sfs (const Npp32f * *pSrc*, Npp16u * *pDst*, int *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.9 NppStatus nppsConvert_32f32s_Sfs (const Npp32f * *pSrc*, Npp32s * *pDst*, int *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.10 NppStatus nppsConvert_32f64f (const Npp32f * *pSrc*, Npp64f * *pDst*, int *nLength*)

7.170.1.11 NppStatus nppsConvert_32f8s_Sfs (const Npp32f * *pSrc*, Npp8s * *pDst*, int *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.12 NppStatus nppsConvert_32f8u_Sfs (const Npp32f * *pSrc*, Npp8u * *pDst*, int *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.13 NppStatus nppsConvert_32s16s (const Npp32s * *pSrc*, Npp16s * *pDst*, int *nLength*)

7.170.1.14 NppStatus nppsConvert_32s16s_Sfs (const Npp32s * *pSrc*, Npp16s * *pDst*, int *nLength*, int *nScaleFactor*)

7.170.1.15 NppStatus nppsConvert_32s32f (const Npp32s * *pSrc*, Npp32f * *pDst*, int *nLength*)

7.170.1.16 NppStatus nppsConvert_32s32f_Sfs (const Npp32s * *pSrc*, Npp32f * *pDst*, int *nLength*, int *nScaleFactor*)

7.170.1.17 NppStatus nppsConvert_32s64f (const Npp32s * *pSrc*, Npp64f * *pDst*, int *nLength*)

7.170.1.18 NppStatus nppsConvert_32s64f_Sfs (const Npp32s * *pSrc*, Npp64f * *pDst*, int *nLength*, int *nScaleFactor*)

7.170.1.19 NppStatus nppsConvert_64f16s_Sfs (const Npp64f * *pSrc*, Npp16s * *pDst*, int *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.20 NppStatus nppsConvert_64f32f (const Npp64f * *pSrc*, Npp32f * *pDst*, int *nLength*)

7.170.1.21 NppStatus nppsConvert_64f32s_Sfs (const Npp64f * *pSrc*, Npp32s * *pDst*, int *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.22 NppStatus nppsConvert_64f64s_Sfs (const Npp64f * *pSrc*, Npp64s * *pDst*, int *nLength*, NppRoundMode *eRoundMode*, int *nScaleFactor*)

7.170.1.23 NppStatus nppsConvert_64s32s_Sfs (const Npp64s * *pSrc*, Npp32s * *pDst*, int *nLength*,

7.171 Threshold

Threshold Functions

Performs the threshold operation on the samples of a signal by limiting the sample values by a specified constant value.

- NppStatus nppsThreshold_16s (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, Npp16s nLevel, NppCmpOp nRelOp)

  16-bit signed short signal threshold with constant level.

- NppStatus nppsThreshold_16s_I (Npp16s ∗pSrcDst, int nLength, Npp16s nLevel, NppCmpOp nRelOp)

  16-bit in place signed short signal threshold with constant level.

- NppStatus nppsThreshold_16sc (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength, Npp16s nLevel, NppCmpOp nRelOp)

  16-bit signed short complex number signal threshold with constant level.

- NppStatus nppsThreshold_16sc_I (Npp16sc ∗pSrcDst, int nLength, Npp16s nLevel, NppCmpOp nRelOp)

  16-bit in place signed short complex number signal threshold with constant level.

- NppStatus nppsThreshold_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength, Npp32f nLevel, NppCmpOp nRelOp)

  32-bit floating point signal threshold with constant level.

- NppStatus nppsThreshold_32f_I (Npp32f ∗pSrcDst, int nLength, Npp32f nLevel, NppCmpOp nRelOp)

  32-bit in place floating point signal threshold with constant level.

- NppStatus nppsThreshold_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength, Npp32f nLevel, NppCmpOp nRelOp)

  32-bit floating point complex number signal threshold with constant level.

- NppStatus nppsThreshold_32fc_I (Npp32fc ∗pSrcDst, int nLength, Npp32f nLevel, NppCmpOp nRelOp)

  32-bit in place floating point complex number signal threshold with constant level.

- NppStatus nppsThreshold_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength, Npp64f nLevel, NppCmpOp nRelOp)

  64-bit floating point signal threshold with constant level.

- NppStatus nppsThreshold_64f_I (Npp64f ∗pSrcDst, int nLength, Npp64f nLevel, NppCmpOp nRelOp)

  64-bit in place floating point signal threshold with constant level.

- NppStatus nppsThreshold_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength, Npp64f nLevel, NppCmpOp nRelOp)

  64-bit floating point complex number signal threshold with constant level.

- NppStatus nppsThreshold_64fc_I (Npp64fc ∗pSrcDst, int nLength, Npp64f nLevel, NppCmpOp nRelOp)

  64-bit in place floating point complex number signal threshold with constant level.

- NppStatus nppsThreshold_LT_16s (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, Npp16s nLevel)

  16-bit signed short signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_16s_I (Npp16s ∗pSrcDst, int nLength, Npp16s nLevel)

  16-bit in place signed short signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_16sc (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength, Npp16s nLevel)

  16-bit signed short complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_16sc_I (Npp16sc ∗pSrcDst, int nLength, Npp16s nLevel)

  16-bit in place signed short complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength, Npp32f nLevel)

  32-bit floating point signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_32f_I (Npp32f ∗pSrcDst, int nLength, Npp32f nLevel)

  32-bit in place floating point signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength, Npp32f nLevel)

  32-bit floating point complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_32fc_I (Npp32fc ∗pSrcDst, int nLength, Npp32f nLevel)

  32-bit in place floating point complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength, Npp64f nLevel)

  64-bit floating point signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_64f_I (Npp64f ∗pSrcDst, int nLength, Npp64f nLevel)

  64-bit in place floating point signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength, Npp64f nLevel)

  64-bit floating point complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LT_64fc_I (Npp64fc ∗pSrcDst, int nLength, Npp64f nLevel)

  64-bit in place floating point complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_GT_16s (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, Npp16s nLevel)

  16-bit signed short signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_16s_I (Npp16s ∗pSrcDst, int nLength, Npp16s nLevel)

  16-bit in place signed short signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_16sc (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength, Npp16s nLevel)

  16-bit signed short complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_16sc_I (Npp16sc ∗pSrcDst, int nLength, Npp16s nLevel)

  16-bit in place signed short complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength, Npp32f nLevel)

  32-bit floating point signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_32f_I (Npp32f ∗pSrcDst, int nLength, Npp32f nLevel)

  32-bit in place floating point signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength, Npp32f nLevel)

  32-bit floating point complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_32fc_I (Npp32fc ∗pSrcDst, int nLength, Npp32f nLevel)

  32-bit in place floating point complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength, Npp64f nLevel)

  64-bit floating point signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_64f_I (Npp64f ∗pSrcDst, int nLength, Npp64f nLevel)

  64-bit in place floating point signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength, Npp64f nLevel)

  64-bit floating point complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GT_64fc_I (Npp64fc ∗pSrcDst, int nLength, Npp64f nLevel)

  64-bit in place floating point complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_LTVal_16s (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, Npp16s nLevel, Npp16s nValue)

  16-bit signed short signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_16s_I (Npp16s ∗pSrcDst, int nLength, Npp16s nLevel, Npp16s nValue)

  16-bit in place signed short signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_16sc (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength, Npp16s nLevel, Npp16sc nValue)

  16-bit signed short complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_16sc_I (Npp16sc ∗pSrcDst, int nLength, Npp16s nLevel, Npp16sc nValue)

  16-bit in place signed short complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength, Npp32f nLevel, Npp32f nValue)

  32-bit floating point signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_32f_I (Npp32f ∗pSrcDst, int nLength, Npp32f nLevel, Npp32f nValue)

  32-bit in place floating point signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength, Npp32f nLevel, Npp32fc nValue)

  32-bit floating point complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_32fc_I (Npp32fc ∗pSrcDst, int nLength, Npp32f nLevel, Npp32fc nValue)

  32-bit in place floating point complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength, Npp64f nLevel, Npp64f nValue)

  64-bit floating point signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_64f_I (Npp64f ∗pSrcDst, int nLength, Npp64f nLevel, Npp64f nValue)

  64-bit in place floating point signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength, Npp64f nLevel, Npp64fc nValue)

  64-bit floating point complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_LTVal_64fc_I (Npp64fc ∗pSrcDst, int nLength, Npp64f nLevel, Npp64fc nValue)

  64-bit in place floating point complex number signal NPP_CMP_LESS threshold with constant level.

- NppStatus nppsThreshold_GTVal_16s (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength, Npp16s nLevel, Npp16s nValue)

  16-bit signed short signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_16s_I (Npp16s ∗pSrcDst, int nLength, Npp16s nLevel, Npp16s nValue)

  16-bit in place signed short signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_16sc (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength, Npp16s nLevel, Npp16sc nValue)

  16-bit signed short complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_16sc_I (Npp16sc ∗pSrcDst, int nLength, Npp16s nLevel, Npp16sc nValue)

  16-bit in place signed short complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength, Npp32f nLevel, Npp32f nValue)

  32-bit floating point signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_32f_I (Npp32f ∗pSrcDst, int nLength, Npp32f nLevel, Npp32f nValue)

  32-bit in place floating point signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength, Npp32f nLevel, Npp32fc nValue)

  32-bit floating point complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_32fc_I (Npp32fc ∗pSrcDst, int nLength, Npp32f nLevel, Npp32fc nValue)

  32-bit in place floating point complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_64f (const Npp64f ∗pSrc, Npp64f ∗pDst, int nLength, Npp64f nLevel, Npp64f nValue)

  64-bit floating point signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_64f_I (Npp64f ∗pSrcDst, int nLength, Npp64f nLevel, Npp64f nValue)

  64-bit in place floating point signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength, Npp64f nLevel, Npp64fc nValue)

  64-bit floating point complex number signal NPP_CMP_GREATER threshold with constant level.

- NppStatus nppsThreshold_GTVal_64fc_I (Npp64fc ∗pSrcDst, int nLength, Npp64f nLevel, Npp64fc nValue)

  64-bit in place floating point complex number signal NPP_CMP_GREATER threshold with constant level.

7.171.1 Function Documentation

7.171.1.1 NppStatus nppsThreshold_16s (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, Npp16s *nLevel*, NppCmpOp *nRelOp*)

16-bit signed short signal threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.2 NppStatus nppsThreshold_16s_I (Npp16s * *pSrcDst*, int *nLength*, Npp16s *nLevel*, NppCmpOp *nRelOp*)

16-bit in place signed short signal threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.3 NppStatus nppsThreshold_16sc (const Npp16sc * *pSrc*, Npp16sc * *pDst*, int *nLength*, Npp16s *nLevel*, NppCmpOp *nRelOp*)

16-bit signed short complex number signal threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.4 NppStatus nppsThreshold_16sc_I (Npp16sc * *pSrcDst*, int *nLength*, Npp16s *nLevel*, NppCmpOp *nRelOp*)

16-bit in place signed short complex number signal threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.5 NppStatus nppsThreshold_32f (const Npp32f * *pSrc*, Npp32f * *pDst*, int *nLength*, Npp32f *nLevel*, NppCmpOp *nRelOp*)

32-bit floating point signal threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.6 NppStatus nppsThreshold_32f_I (Npp32f * *pSrcDst*, int *nLength*, Npp32f *nLevel*, NppCmpOp *nRelOp*)

32-bit in place floating point signal threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.7 NppStatus nppsThreshold_32fc (const Npp32fc * *pSrc*, Npp32fc * *pDst*, int *nLength*, Npp32f *nLevel*, NppCmpOp *nRelOp*)

32-bit floating point complex number signal threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.8 NppStatus nppsThreshold_32fc_I (Npp32fc ∗ *pSrcDst*, int *nLength*, Npp32f *nLevel*, NppCmpOp *nRelOp*)

32-bit in place floating point complex number signal threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.9 NppStatus nppsThreshold_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*, Npp64f *nLevel*, NppCmpOp *nRelOp*)

64-bit floating point signal threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.10 NppStatus nppsThreshold_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*, NppCmpOp *nRelOp*)

64-bit in place floating point signal threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.11 NppStatus nppsThreshold_64fc (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pDst*, int *nLength*, Npp64f *nLevel*, NppCmpOp *nRelOp*)

64-bit floating point complex number signal threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.12 NppStatus nppsThreshold_64fc_I (Npp64fc ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*, NppCmpOp *nRelOp*)

64-bit in place floating point complex number signal threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nRelOp NppCmpOp type of thresholding operation (NPP_CMP_LESS or NPP_CMP_GREATER only).

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.13 NppStatus nppsThreshold_GT_16s (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, Npp16s *nLevel*)

16-bit signed short signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.14 NppStatus nppsThreshold_GT_16s_I (Npp16s ∗ *pSrcDst*, int *nLength*, Npp16s *nLevel*)

16-bit in place signed short signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.15 NppStatus nppsThreshold_GT_16sc (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pDst*, int *nLength*, Npp16s *nLevel*)

16-bit signed short complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.16 NppStatus nppsThreshold_GT_16sc_I (Npp16sc ∗ *pSrcDst*, int *nLength*, Npp16s *nLevel*)

16-bit in place signed short complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.17 NppStatus nppsThreshold_GT_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*, Npp32f *nLevel*)

32-bit floating point signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.18 NppStatus nppsThreshold_GT_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*, Npp32f *nLevel*)

32-bit in place floating point signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.19 NppStatus nppsThreshold_GT_32fc (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pDst*, int *nLength*, Npp32f *nLevel*)

32-bit floating point complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.20 NppStatus nppsThreshold_GT_32fc_I (Npp32fc ∗ *pSrcDst*, int *nLength*, Npp32f *nLevel*)

32-bit in place floating point complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.21 NppStatus nppsThreshold_GT_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*, Npp64f *nLevel*)

64-bit floating point signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.22 NppStatus nppsThreshold_GT_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*)

64-bit in place floating point signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.23 NppStatus nppsThreshold_GT_64fc (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pDst*, int *nLength*, Npp64f *nLevel*)

64-bit floating point complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.24 NppStatus nppsThreshold_GT_64fc_I (Npp64fc ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*)

64-bit in place floating point complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.25 NppStatus nppsThreshold_GTVal_16s (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, Npp16s *nLevel*, Npp16s *nValue*)

16-bit signed short signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.26 NppStatus nppsThreshold_GTVal_16s_I (Npp16s ∗ *pSrcDst*, int *nLength*, Npp16s *nLevel*, Npp16s *nValue*)

16-bit in place signed short signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.27 NppStatus nppsThreshold_GTVal_16sc (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pDst*, int *nLength*, Npp16s *nLevel*, Npp16sc *nValue*)

16-bit signed short complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.28 NppStatus nppsThreshold_GTVal_16sc_I (Npp16sc ∗ *pSrcDst*, int *nLength*, Npp16s *nLevel*, Npp16sc *nValue*)

16-bit in place signed short complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.29 NppStatus nppsThreshold_GTVal_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*, Npp32f *nLevel*, Npp32f *nValue*)

32-bit floating point signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.30 NppStatus nppsThreshold_GTVal_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*, Npp32f *nLevel*, Npp32f *nValue*)

32-bit in place floating point signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.31 NppStatus nppsThreshold_GTVal_32fc (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pDst*, int *nLength*, Npp32f *nLevel*, Npp32fc *nValue*)

32-bit floating point complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.32 NppStatus nppsThreshold_GTVal_32fc_I (Npp32fc ∗ *pSrcDst*, int *nLength*, Npp32f *nLevel*, Npp32fc *nValue*)

32-bit in place floating point complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.33 NppStatus nppsThreshold_GTVal_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*, Npp64f *nLevel*, Npp64f *nValue*)

64-bit floating point signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.34 NppStatus nppsThreshold_GTVal_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*, Npp64f *nValue*)

64-bit in place floating point signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.35 NppStatus nppsThreshold_GTVal_64fc (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pDst*, int *nLength*, Npp64f *nLevel*, Npp64fc *nValue*)

64-bit floating point complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.36 NppStatus nppsThreshold_GTVal_64fc_I (Npp64fc ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*, Npp64fc *nValue*)

64-bit in place floating point complex number signal NPP_CMP_GREATER threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.37 NppStatus nppsThreshold_LT_16s (const Npp16s * *pSrc*, Npp16s * *pDst*, int *nLength*, Npp16s *nLevel*)

16-bit signed short signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.38 NppStatus nppsThreshold_LT_16s_I (Npp16s * *pSrcDst*, int *nLength*, Npp16s *nLevel*)

16-bit in place signed short signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.39 NppStatus nppsThreshold_LT_16sc (const Npp16sc * *pSrc*, Npp16sc * *pDst*, int *nLength*, Npp16s *nLevel*)

16-bit signed short complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.40 NppStatus nppsThreshold_LT_16sc_I (Npp16sc * *pSrcDst*, int *nLength*, Npp16s *nLevel*)

16-bit in place signed short complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.41 NppStatus nppsThreshold_LT_32f (const Npp32f * *pSrc*, Npp32f * *pDst*, int *nLength*, Npp32f *nLevel*)

32-bit floating point signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.42 NppStatus nppsThreshold_LT_32f_I (Npp32f * *pSrcDst*, int *nLength*, Npp32f *nLevel*)

32-bit in place floating point signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.43 NppStatus nppsThreshold_LT_32fc (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pDst*, int *nLength*, Npp32f *nLevel*)

32-bit floating point complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.44 NppStatus nppsThreshold_LT_32fc_I (Npp32fc ∗ *pSrcDst*, int *nLength*, Npp32f *nLevel*)

32-bit in place floating point complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.45 NppStatus nppsThreshold_LT_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*, Npp64f *nLevel*)

64-bit floating point signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.46 NppStatus nppsThreshold_LT_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*)

64-bit in place floating point signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.47 NppStatus nppsThreshold_LT_64fc (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pDst*, int *nLength*, Npp64f *nLevel*)

64-bit floating point complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.48 NppStatus nppsThreshold_LT_64fc_I (Npp64fc ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*)

64-bit in place floating point complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.49 NppStatus nppsThreshold_LTVal_16s (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*, Npp16s *nLevel*, Npp16s *nValue*)

16-bit signed short signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.50 NppStatus nppsThreshold_LTVal_16s_I (Npp16s ∗ *pSrcDst*, int *nLength*, Npp16s *nLevel*, Npp16s *nValue*)

16-bit in place signed short signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.51 NppStatus nppsThreshold_LTVal_16sc (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pDst*, int *nLength*, Npp16s *nLevel*, Npp16sc *nValue*)

16-bit signed short complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.52 NppStatus nppsThreshold_LTVal_16sc_I (Npp16sc ∗ *pSrcDst*, int *nLength*, Npp16s *nLevel*, Npp16sc *nValue*)

16-bit in place signed short complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.53 NppStatus nppsThreshold_LTVal_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*, Npp32f *nLevel*, Npp32f *nValue*)

32-bit floating point signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.54 NppStatus nppsThreshold_LTVal_32f_I (Npp32f ∗ *pSrcDst*, int *nLength*, Npp32f *nLevel*, Npp32f *nValue*)

32-bit in place floating point signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.55 NppStatus nppsThreshold_LTVal_32fc (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pDst*, int *nLength*, Npp32f *nLevel*, Npp32fc *nValue*)

32-bit floating point complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.56 NppStatus nppsThreshold_LTVal_32fc_I (Npp32fc ∗ *pSrcDst*, int *nLength*, Npp32f *nLevel*, Npp32fc *nValue*)

32-bit in place floating point complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.57 NppStatus nppsThreshold_LTVal_64f (const Npp64f ∗ *pSrc*, Npp64f ∗ *pDst*, int *nLength*, Npp64f *nLevel*, Npp64f *nValue*)

64-bit floating point signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.58 NppStatus nppsThreshold_LTVal_64f_I (Npp64f ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*, Npp64f *nValue*)

64-bit in place floating point signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.59 NppStatus nppsThreshold_LTVal_64fc (const Npp64fc ∗ *pSrc*, Npp64fc ∗ *pDst*, int *nLength*, Npp64f *nLevel*, Npp64fc *nValue*)

64-bit floating point complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.171.1.60 NppStatus nppsThreshold_LTVal_64fc_I (Npp64fc ∗ *pSrcDst*, int *nLength*, Npp64f *nLevel*, Npp64fc *nValue*)

64-bit in place floating point complex number signal NPP_CMP_LESS threshold with constant level.

Parameters:

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

nLevel Constant threshold value (real part only and must be greater than 0) to be used to limit each signal sample

nValue Constant value to replace source value when threshold test is true.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.172 Filtering Functions

Functions that provide functionality of generating output signal based on the input signal like signal integral, etc.

Modules

- Integral

  Compute the indefinite interal of a given signal.

7.172.1 Detailed Description

Functions that provide functionality of generating output signal based on the input signal like signal integral, etc.

7.173 Integral

Compute the indefinite interal of a given signal.

Functions

- NppStatus nppsIntegralGetBufferSize_32s (int nLength, int ∗hpBufferSize)
- NppStatus nppsIntegral_32s (const Npp32s ∗pSrc, Npp32s ∗pDst, int nLength, Npp8u ∗pDeviceBuffer)

7.173.1 Detailed Description

Compute the indefinite interal of a given signal.

The i-th element is computed to be

$$s'_i = \sum_0^i s_j$$

7.173.2 Function Documentation

7.173.2.1 NppStatus nppsIntegral_32s (const Npp32s ∗ *pSrc*, Npp32s ∗ *pDst*, int *nLength*, Npp8u ∗ *pDeviceBuffer*)

7.173.2.2 NppStatus nppsIntegralGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

7.174 Initialization

Modules

- Set
- Zero
- Copy

7.175 Set

Set

Set methods for 1D vectors of various types.

The copy methods operate on vector data given as a pointer to the underlying data-type (e.g. 8-bit vectors would be passed as pointers to Npp8u type) and length of the vectors, i.e. the number of items.

- NppStatus nppsSet_8u (Npp8u nValue, Npp8u ∗pDst, int nLength)

  8-bit unsigned char, vector set method.

- NppStatus nppsSet_16s (Npp16s nValue, Npp16s ∗pDst, int nLength)

  16-bit integer, vector set method.

- NppStatus nppsSet_16sc (Npp16sc nValue, Npp16sc ∗pDst, int nLength)

  16-bit integer complex, vector set method.

- NppStatus nppsSet_32s (Npp32s nValue, Npp32s ∗pDst, int nLength)

  32-bit integer, vector set method.

- NppStatus nppsSet_32sc (Npp32sc nValue, Npp32sc ∗pDst, int nLength)

  32-bit integer complex, vector set method.

- NppStatus nppsSet_32f (Npp32f nValue, Npp32f ∗pDst, int nLength)

  32-bit float, vector set method.

- NppStatus nppsSet_32fc (Npp32fc nValue, Npp32fc ∗pDst, int nLength)

  32-bit float complex, vector set method.

- NppStatus nppsSet_64s (Npp64s nValue, Npp64s ∗pDst, int nLength)

  64-bit long long integer, vector set method.

- NppStatus nppsSet_64sc (Npp64sc nValue, Npp64sc ∗pDst, int nLength)

  64-bit long long integer complex, vector set method.

- NppStatus nppsSet_64f (Npp64f nValue, Npp64f ∗pDst, int nLength)

  64-bit double, vector set method.

- NppStatus nppsSet_64fc (Npp64fc nValue, Npp64fc ∗pDst, int nLength)

  64-bit double complex, vector set method.

7.175.1 Function Documentation

7.175.1.1 NppStatus nppsSet_16s (Npp16s *nValue*, Npp16s ∗ *pDst*, int *nLength*)

16-bit integer, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.2 NppStatus nppsSet_16sc (Npp16sc *nValue*, Npp16sc * *pDst*, int *nLength*)

16-bit integer complex, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.3 NppStatus nppsSet_32f (Npp32f *nValue*, Npp32f * *pDst*, int *nLength*)

32-bit float, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.4 NppStatus nppsSet_32fc (Npp32fc *nValue*, Npp32fc * *pDst*, int *nLength*)

32-bit float complex, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.5 NppStatus nppsSet_32s (Npp32s *nValue*, Npp32s ∗ *pDst*, int *nLength*)

32-bit integer, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.6 NppStatus nppsSet_32sc (Npp32sc *nValue*, Npp32sc ∗ *pDst*, int *nLength*)

32-bit integer complex, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.7 NppStatus nppsSet_64f (Npp64f *nValue*, Npp64f ∗ *pDst*, int *nLength*)

64-bit double, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.8 NppStatus nppsSet_64fc (Npp64fc *nValue*, Npp64fc ∗ *pDst*, int *nLength*)

64-bit double complex, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.9 NppStatus nppsSet_64s (Npp64s *nValue*, Npp64s ∗ *pDst*, int *nLength*)

64-bit long long integer, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.10 NppStatus nppsSet_64sc (Npp64sc *nValue*, Npp64sc ∗ *pDst*, int *nLength*)

64-bit long long integer complex, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.175.1.11 NppStatus nppsSet_8u (Npp8u *nValue*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char, vector set method.

Parameters:

nValue Value used to initialize the vector pDst.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176 Zero

Zero

Set signals to zero.

- NppStatus nppsZero_8u (Npp8u ∗pDst, int nLength)
  8-bit unsigned char, vector zero method.
- NppStatus nppsZero_16s (Npp16s ∗pDst, int nLength)
  16-bit integer, vector zero method.
- NppStatus nppsZero_16sc (Npp16sc ∗pDst, int nLength)
  16-bit integer complex, vector zero method.
- NppStatus nppsZero_32s (Npp32s ∗pDst, int nLength)
  32-bit integer, vector zero method.
- NppStatus nppsZero_32sc (Npp32sc ∗pDst, int nLength)
  32-bit integer complex, vector zero method.
- NppStatus nppsZero_32f (Npp32f ∗pDst, int nLength)
  32-bit float, vector zero method.
- NppStatus nppsZero_32fc (Npp32fc ∗pDst, int nLength)
  32-bit float complex, vector zero method.
- NppStatus nppsZero_64s (Npp64s ∗pDst, int nLength)
  64-bit long long integer, vector zero method.
- NppStatus nppsZero_64sc (Npp64sc ∗pDst, int nLength)
  64-bit long long integer complex, vector zero method.
- NppStatus nppsZero_64f (Npp64f ∗pDst, int nLength)
  64-bit double, vector zero method.
- NppStatus nppsZero_64fc (Npp64fc ∗pDst, int nLength)
  64-bit double complex, vector zero method.

7.176.1 Function Documentation

7.176.1.1 NppStatus nppsZero_16s (Npp16s ∗ *pDst*, int *nLength*)

16-bit integer, vector zero method.

Parameters:

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.2 NppStatus nppsZero_16sc (Npp16sc ∗ *pDst*, int *nLength*)

16-bit integer complex, vector zero method.

Parameters:

pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.3 NppStatus nppsZero_32f (Npp32f ∗ *pDst*, int *nLength*)

32-bit float, vector zero method.

Parameters:

pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.4 NppStatus nppsZero_32fc (Npp32fc ∗ *pDst*, int *nLength*)

32-bit float complex, vector zero method.

Parameters:

pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.5 NppStatus nppsZero_32s (Npp32s ∗ *pDst*, int *nLength*)

32-bit integer, vector zero method.

Parameters:

pDst Destination Signal Pointer.
nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.6 NppStatus nppsZero_32sc (Npp32sc ∗ *pDst*, int *nLength*)

32-bit integer complex, vector zero method.

Parameters:

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.7 NppStatus nppsZero_64f (Npp64f ∗ *pDst*, int *nLength*)

64-bit double, vector zero method.

Parameters:

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.8 NppStatus nppsZero_64fc (Npp64fc ∗ *pDst*, int *nLength*)

64-bit double complex, vector zero method.

Parameters:

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.9 NppStatus nppsZero_64s (Npp64s ∗ *pDst*, int *nLength*)

64-bit long long integer, vector zero method.

Parameters:

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.10 NppStatus nppsZero_64sc (Npp64sc * *pDst*, int *nLength*)

64-bit long long integer complex, vector zero method.

Parameters:

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.176.1.11 NppStatus nppsZero_8u (Npp8u * *pDst*, int *nLength*)

8-bit unsigned char, vector zero method.

Parameters:

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177 Copy

Copy

Copy methods for various type signals.

Copy methods operate on signal data given as a pointer to the underlying data-type (e.g. 8-bit vectors would be passed as pointers to Npp8u type) and length of the vectors, i.e. the number of items.

- NppStatus nppsCopy_8u (const Npp8u ∗pSrc, Npp8u ∗pDst, int nLength)

  8-bit unsigned char, vector copy method

- NppStatus nppsCopy_16s (const Npp16s ∗pSrc, Npp16s ∗pDst, int nLength)

  16-bit signed short, vector copy method.

- NppStatus nppsCopy_32s (const Npp32s ∗pSrc, Npp32s ∗pDst, int nLength)

  32-bit signed integer, vector copy method.

- NppStatus nppsCopy_32f (const Npp32f ∗pSrc, Npp32f ∗pDst, int nLength)

  32-bit float, vector copy method.

- NppStatus nppsCopy_64s (const Npp64s ∗pSrc, Npp64s ∗pDst, int nLength)

  64-bit signed integer, vector copy method.

- NppStatus nppsCopy_16sc (const Npp16sc ∗pSrc, Npp16sc ∗pDst, int nLength)

  16-bit complex short, vector copy method.

- NppStatus nppsCopy_32sc (const Npp32sc ∗pSrc, Npp32sc ∗pDst, int nLength)

  32-bit complex signed integer, vector copy method.

- NppStatus nppsCopy_32fc (const Npp32fc ∗pSrc, Npp32fc ∗pDst, int nLength)

  32-bit complex float, vector copy method.

- NppStatus nppsCopy_64sc (const Npp64sc ∗pSrc, Npp64sc ∗pDst, int nLength)

  64-bit complex signed integer, vector copy method.

- NppStatus nppsCopy_64fc (const Npp64fc ∗pSrc, Npp64fc ∗pDst, int nLength)

  64-bit complex double, vector copy method.

7.177.1 Function Documentation

7.177.1.1 NppStatus nppsCopy_16s (const Npp16s ∗ *pSrc*, Npp16s ∗ *pDst*, int *nLength*)

16-bit signed short, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.2 NppStatus nppsCopy_16sc (const Npp16sc ∗ *pSrc*, Npp16sc ∗ *pDst*, int *nLength*)

16-bit complex short, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.3 NppStatus nppsCopy_32f (const Npp32f ∗ *pSrc*, Npp32f ∗ *pDst*, int *nLength*)

32-bit float, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.4 NppStatus nppsCopy_32fc (const Npp32fc ∗ *pSrc*, Npp32fc ∗ *pDst*, int *nLength*)

32-bit complex float, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.5 NppStatus nppsCopy_32s (const Npp32s $*$ *pSrc*, Npp32s $*$ *pDst*, int *nLength*)

32-bit signed integer, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.6 NppStatus nppsCopy_32sc (const Npp32sc $*$ *pSrc*, Npp32sc $*$ *pDst*, int *nLength*)

32-bit complex signed integer, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.7 NppStatus nppsCopy_64fc (const Npp64fc $*$ *pSrc*, Npp64fc $*$ *pDst*, int *nLength*)

64-bit complex double, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.8 NppStatus nppsCopy_64s (const Npp64s $*$ *pSrc*, Npp64s $*$ *pDst*, int *nLength*)

64-bit signed integer, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.9 NppStatus nppsCopy_64sc (const Npp64sc ∗ *pSrc*, Npp64sc ∗ *pDst*, int *nLength*)

64-bit complex signed integer, vector copy method.

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.177.1.10 NppStatus nppsCopy_8u (const Npp8u ∗ *pSrc*, Npp8u ∗ *pDst*, int *nLength*)

8-bit unsigned char, vector copy method

Parameters:

pSrc Source Signal Pointer.

pDst Destination Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.178 Statistical Functions

Functions that provide global signal statistics like: sum, mean, standard deviation, min, max, etc.

Modules

- MinEvery And MaxEvery Functions

  Performs the min or max operation on the samples of a signal.

- Sum

  signal_min_every_or_max_every

- Maximum
- Minimum
- Mean
- Standard Deviation
- Mean And Standard Deviation
- Minimum_Maximum
- Infinity Norm
- L1 Norm
- L2 Norm
- Infinity Norm Diff
- L1 Norm Diff
- L2 Norm Diff
- Dot Product
- Count In Range
- Count Zero Crossings

7.178.1 Detailed Description

Functions that provide global signal statistics like: sum, mean, standard deviation, min, max, etc.

7.179 MinEvery And MaxEvery Functions

Performs the min or max operation on the samples of a signal.

Functions

- NppStatus nppsMinEvery_8u_I (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength)
  8-bit in place min value for each pair of elements.
- NppStatus nppsMinEvery_16u_I (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength)
  16-bit unsigned short integer in place min value for each pair of elements.
- NppStatus nppsMinEvery_16s_I (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength)
  16-bit signed short integer in place min value for each pair of elements.
- NppStatus nppsMinEvery_32s_I (const Npp32s ∗pSrc, Npp32s ∗pSrcDst, int nLength)
  32-bit signed integer in place min value for each pair of elements.
- NppStatus nppsMinEvery_32f_I (const Npp32f ∗pSrc, Npp32f ∗pSrcDst, int nLength)
  32-bit floating point in place min value for each pair of elements.
- NppStatus nppsMinEvery_64f_I (const Npp64f ∗pSrc, Npp64f ∗pSrcDst, int nLength)
  64-bit floating point in place min value for each pair of elements.
- NppStatus nppsMaxEvery_8u_I (const Npp8u ∗pSrc, Npp8u ∗pSrcDst, int nLength)
  8-bit in place max value for each pair of elements.
- NppStatus nppsMaxEvery_16u_I (const Npp16u ∗pSrc, Npp16u ∗pSrcDst, int nLength)
  16-bit unsigned short integer in place max value for each pair of elements.
- NppStatus nppsMaxEvery_16s_I (const Npp16s ∗pSrc, Npp16s ∗pSrcDst, int nLength)
  16-bit signed short integer in place max value for each pair of elements.
- NppStatus nppsMaxEvery_32s_I (const Npp32s ∗pSrc, Npp32s ∗pSrcDst, int nLength)
  32-bit signed integer in place max value for each pair of elements.
- NppStatus nppsMaxEvery_32f_I (const Npp32f ∗pSrc, Npp32f ∗pSrcDst, int nLength)
  32-bit floating point in place max value for each pair of elements.

7.179.1 Detailed Description

Performs the min or max operation on the samples of a signal.

7.179.2 Function Documentation

7.179.2.1 NppStatus nppsMaxEvery_16s_I (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*)

16-bit signed short integer in place max value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.2 NppStatus nppsMaxEvery_16u_I (const Npp16u ∗ *pSrc*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short integer in place max value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.3 NppStatus nppsMaxEvery_32f_I (const Npp32f ∗ *pSrc*, Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point in place max value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.4 NppStatus nppsMaxEvery_32s_I (const Npp32s ∗ *pSrc*, Npp32s ∗ *pSrcDst*, int *nLength*)

32-bit signed integer in place max value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.5 NppStatus nppsMaxEvery_8u_I (const Npp8u ∗ *pSrc*, Npp8u ∗ *pSrcDst*, int *nLength*)

8-bit in place max value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.6 NppStatus nppsMinEvery_16s_I (const Npp16s ∗ *pSrc*, Npp16s ∗ *pSrcDst*, int *nLength*)

16-bit signed short integer in place min value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.7 NppStatus nppsMinEvery_16u_I (const Npp16u ∗ *pSrc*, Npp16u ∗ *pSrcDst*, int *nLength*)

16-bit unsigned short integer in place min value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.8 NppStatus nppsMinEvery_32f_I (const Npp32f ∗ *pSrc*, Npp32f ∗ *pSrcDst*, int *nLength*)

32-bit floating point in place min value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.9 NppStatus nppsMinEvery_32s_I (const Npp32s ∗ *pSrc*, Npp32s ∗ *pSrcDst*, int *nLength*)

32-bit signed integer in place min value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.10 NppStatus nppsMinEvery_64f_I (const Npp64f ∗ *pSrc*, Npp64f ∗ *pSrcDst*, int *nLength*)

64-bit floating point in place min value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.179.2.11 NppStatus nppsMinEvery_8u_I (const Npp8u ∗ *pSrc*, Npp8u ∗ *pSrcDst*, int *nLength*)

8-bit in place min value for each pair of elements.

Parameters:

pSrc Source Signal Pointer.

pSrcDst In-Place Signal Pointer.

nLength Signal Length.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180 Sum

signal_min_every_or_max_every

Functions

- NppStatus nppsSumGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_32f.

- NppStatus nppsSumGetBufferSize_32fc (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_32fc.

- NppStatus nppsSumGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_64f.

- NppStatus nppsSumGetBufferSize_64fc (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_64fc.

- NppStatus nppsSumGetBufferSize_16s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_16s_Sfs.

- NppStatus nppsSumGetBufferSize_16sc_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_16sc_Sfs.

- NppStatus nppsSumGetBufferSize_16sc32sc_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_16sc32sc_Sfs.

- NppStatus nppsSumGetBufferSize_32s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_32s_Sfs.

- NppStatus nppsSumGetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsSum_16s32s_Sfs.

- NppStatus nppsSum_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pSum, Npp8u ∗pDeviceBuffer)

  32-bit float vector sum method

- NppStatus nppsSum_32fc (const Npp32fc ∗pSrc, int nLength, Npp32fc ∗pSum, Npp8u ∗pDeviceBuffer)

  32-bit float complex vector sum method

- NppStatus nppsSum_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pSum, Npp8u ∗pDeviceBuffer)

  64-bit double vector sum method

- NppStatus nppsSum_64fc (const Npp64fc ∗pSrc, int nLength, Npp64fc ∗pSum, Npp8u ∗pDeviceBuffer)

  64-bit double complex vector sum method

- NppStatus nppsSum_16s_Sfs (const Npp16s ∗pSrc, int nLength, Npp16s ∗pSum, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit short vector sum with integer scaling method

- NppStatus nppsSum_32s_Sfs (const Npp32s ∗pSrc, int nLength, Npp32s ∗pSum, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  32-bit integer vector sum with integer scaling method

- NppStatus nppsSum_16sc_Sfs (const Npp16sc ∗pSrc, int nLength, Npp16sc ∗pSum, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit short complex vector sum with integer scaling method

- NppStatus nppsSum_16sc32sc_Sfs (const Npp16sc ∗pSrc, int nLength, Npp32sc ∗pSum, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit short complex vector sum (32bit int complex) with integer scaling method

- NppStatus nppsSum_16s32s_Sfs (const Npp16s ∗pSrc, int nLength, Npp32s ∗pSum, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit integer vector sum (32bit) with integer scaling method

7.180.1 Detailed Description

signal_min_every_or_max_every

7.180.2 Function Documentation

7.180.2.1 NppStatus nppsSum_16s32s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pSum*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit integer vector sum (32bit) with integer scaling method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.2 NppStatus nppsSum_16s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pSum*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit short vector sum with integer scaling method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_16s_Sfs to determine the minium number of bytes required.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.3 NppStatus nppsSum_16sc32sc_Sfs (const Npp16sc * *pSrc*, int *nLength*, Npp32sc * *pSum*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit short complex vector sum (32bit int complex) with integer scaling method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_16sc32sc_Sfs to determine the minium number of bytes required.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.4 NppStatus nppsSum_16sc_Sfs (const Npp16sc * *pSrc*, int *nLength*, Npp16sc * *pSum*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit short complex vector sum with integer scaling method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_16sc_Sfs to determine the minium number of bytes required.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.5 NppStatus nppsSum_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pSum*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector sum method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.6 NppStatus nppsSum_32fc (const Npp32fc ∗ *pSrc*, int *nLength*, Npp32fc ∗ *pSum*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex vector sum method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_32fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.7 NppStatus nppsSum_32s_Sfs (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pSum*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector sum with integer scaling method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_32s_Sfs to determine the minium number of bytes required.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.8 NppStatus nppsSum_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pSum*, Npp8u ∗ *pDeviceBuffer*)

64-bit double vector sum method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.9 NppStatus nppsSum_64fc (const Npp64fc ∗ *pSrc*, int *nLength*, Npp64fc ∗ *pSum*, Npp8u ∗ *pDeviceBuffer*)

64-bit double complex vector sum method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pSum Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsSumGetBufferSize_64fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.180.2.10 NppStatus nppsSumGetBufferSize_16s32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.180.2.11 NppStatus nppsSumGetBufferSize_16s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_16s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.180.2.12 NppStatus nppsSumGetBufferSize_16sc32sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_16sc32sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.180.2.13 NppStatus nppsSumGetBufferSize_16sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_16sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.180.2.14 NppStatus nppsSumGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.180.2.15 NppStatus nppsSumGetBufferSize_32fc (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_32fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.180.2.16 NppStatus nppsSumGetBufferSize_32s_Sfs (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.180.2.17 NppStatus nppsSumGetBufferSize_64f (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.180.2.18 NppStatus nppsSumGetBufferSize_64fc (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsSum_64fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181 Maximum

Functions

- NppStatus nppsMaxGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMax_16s.

- NppStatus nppsMaxGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMax_32s.

- NppStatus nppsMaxGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMax_32f.

- NppStatus nppsMaxGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMax_64f.

- NppStatus nppsMax_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMax, Npp8u ∗pDeviceBuffer)

  16-bit integer vector max method

- NppStatus nppsMax_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMax, Npp8u ∗pDeviceBuffer)

  32-bit integer vector max method

- NppStatus nppsMax_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pMax, Npp8u ∗pDeviceBuffer)

  32-bit float vector max method

- NppStatus nppsMax_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pMax, Npp8u ∗pDeviceBuffer)

  64-bit float vector max method

- NppStatus nppsMaxIndxGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMaxIndx_16s.

- NppStatus nppsMaxIndxGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMaxIndx_32s.

- NppStatus nppsMaxIndxGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMaxIndx_32f.

- NppStatus nppsMaxIndxGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMaxIndx_64f.

- NppStatus nppsMaxIndx_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMax, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  16-bit integer vector max index method

- NppStatus nppsMaxIndx_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMax, int ∗pIndx, Npp8u ∗pDeviceBuffer)

32-bit integer vector max index method

- NppStatus nppsMaxIndx_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pMax, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  32-bit float vector max index method

- NppStatus nppsMaxIndx_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pMax, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  64-bit float vector max index method

- NppStatus nppsMaxAbsGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMaxAbs_16s.

- NppStatus nppsMaxAbsGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMaxAbs_32s.

- NppStatus nppsMaxAbs_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMaxAbs, Npp8u ∗pDeviceBuffer)

  16-bit integer vector max absolute method

- NppStatus nppsMaxAbs_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMaxAbs, Npp8u ∗pDeviceBuffer)

  32-bit integer vector max absolute method

- NppStatus nppsMaxAbsIndxGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMaxAbsIndx_16s.

- NppStatus nppsMaxAbsIndxGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMaxAbsIndx_32s.

- NppStatus nppsMaxAbsIndx_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMaxAbs, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  16-bit integer vector max absolute index method

- NppStatus nppsMaxAbsIndx_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMaxAbs, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  32-bit integer vector max absolute index method

7.181.1 Function Documentation

7.181.1.1 NppStatus nppsMax_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

16-bit integer vector max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMax Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.2 NppStatus nppsMax_32f (const Npp32f * *pSrc*, int *nLength*, Npp32f * *pMax*, Npp8u * *pDeviceBuffer*)

32-bit float vector max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMax Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.3 NppStatus nppsMax_32s (const Npp32s * *pSrc*, int *nLength*, Npp32s * *pMax*, Npp8u * *pDeviceBuffer*)

32-bit integer vector max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMax Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.4 NppStatus nppsMax_64f (const Npp64f * *pSrc*, int *nLength*, Npp64f * *pMax*, Npp8u * *pDeviceBuffer*)

64-bit float vector max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMax Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.5 NppStatus nppsMaxAbs_16s (const Npp16s * *pSrc*, int *nLength*, Npp16s * *pMaxAbs*, Npp8u * *pDeviceBuffer*)

16-bit integer vector max absolute method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMaxAbs Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxAbsGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.6 NppStatus nppsMaxAbs_32s (const Npp32s * *pSrc*, int *nLength*, Npp32s * *pMaxAbs*, Npp8u * *pDeviceBuffer*)

32-bit integer vector max absolute method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMaxAbs Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxAbsGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.7 NppStatus nppsMaxAbsGetBufferSize_16s (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMaxAbs_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.8 NppStatus nppsMaxAbsGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMaxAbs_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.9 NppStatus nppsMaxAbsIndx_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMaxAbs*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

16-bit integer vector max absolute index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMaxAbs Pointer to the output result.

pIndx Pointer to the index value of the first maximum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxAbsIndxGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.10 NppStatus nppsMaxAbsIndx_32s (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMaxAbs*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector max absolute index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMaxAbs Pointer to the output result.

pIndx Pointer to the index value of the first maximum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxAbsIndxGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.11 NppStatus nppsMaxAbsIndxGetBufferSize_16s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMaxAbsIndx_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.12 NppStatus nppsMaxAbsIndxGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMaxAbsIndx_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.13 NppStatus nppsMaxGetBufferSize_16s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMax_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.14 NppStatus nppsMaxGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMax_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.15 NppStatus nppsMaxGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMax_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.16 NppStatus nppsMaxGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMax_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.17 NppStatus nppsMaxIndx_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMax*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

16-bit integer vector max index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMax Pointer to the output result.

pIndx Pointer to the index value of the first maximum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxIndxGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.18 NppStatus nppsMaxIndx_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pMax*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector max index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMax Pointer to the output result.

pIndx Pointer to the index value of the first maximum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxIndxGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.19 NppStatus nppsMaxIndx_32s (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMax*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector max index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMax Pointer to the output result.

pIndx Pointer to the index value of the first maximum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxIndxGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.20 NppStatus nppsMaxIndx_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pMax*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

64-bit float vector max index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMax Pointer to the output result.

pIndx Pointer to the index value of the first maximum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMaxIndxGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.181.1.21 NppStatus nppsMaxIndxGetBufferSize_16s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMaxIndx_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.22 NppStatus nppsMaxIndxGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMaxIndx_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.23 NppStatus nppsMaxIndxGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMaxIndx_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.181.1.24 NppStatus nppsMaxIndxGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMaxIndx_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182 Minimum

Functions

- NppStatus nppsMinGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMin_16s.

- NppStatus nppsMinGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMin_32s.

- NppStatus nppsMinGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMin_32f.

- NppStatus nppsMinGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMin_64f.

- NppStatus nppsMin_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMin, Npp8u ∗pDeviceBuffer)

  16-bit integer vector min method

- NppStatus nppsMin_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMin, Npp8u ∗pDeviceBuffer)

  32-bit integer vector min method

- NppStatus nppsMin_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pMin, Npp8u ∗pDeviceBuffer)

  32-bit integer vector min method

- NppStatus nppsMin_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pMin, Npp8u ∗pDeviceBuffer)

  64-bit integer vector min method

- NppStatus nppsMinIndxGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMinIndx_16s.

- NppStatus nppsMinIndxGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMinIndx_32s.

- NppStatus nppsMinIndxGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMinIndx_32f.

- NppStatus nppsMinIndxGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMinIndx_64f.

- NppStatus nppsMinIndx_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMin, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  16-bit integer vector min index method

- NppStatus nppsMinIndx_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMin, int ∗pIndx, Npp8u ∗pDeviceBuffer)

32-bit integer vector min index method

- NppStatus nppsMinIndx_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pMin, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  32-bit float vector min index method

- NppStatus nppsMinIndx_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pMin, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  64-bit float vector min index method

- NppStatus nppsMinAbsGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMinAbs_16s.

- NppStatus nppsMinAbsGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMinAbs_32s.

- NppStatus nppsMinAbs_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMinAbs, Npp8u ∗pDeviceBuffer)

  16-bit integer vector min absolute method

- NppStatus nppsMinAbs_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMinAbs, Npp8u ∗pDeviceBuffer)

  32-bit integer vector min absolute method

- NppStatus nppsMinAbsIndxGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMinAbsIndx_16s.

- NppStatus nppsMinAbsIndxGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMinAbsIndx_32s.

- NppStatus nppsMinAbsIndx_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMinAbs, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  16-bit integer vector min absolute index method

- NppStatus nppsMinAbsIndx_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMinAbs, int ∗pIndx, Npp8u ∗pDeviceBuffer)

  32-bit integer vector min absolute index method

7.182.1 Function Documentation

7.182.1.1 NppStatus nppsMin_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMin*, Npp8u ∗ *pDeviceBuffer*)

16-bit integer vector min method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.2 NppStatus nppsMin_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pMin*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector min method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.3 NppStatus nppsMin_32s (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMin*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector min method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.4 NppStatus nppsMin_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pMin*, Npp8u ∗ *pDeviceBuffer*)

64-bit integer vector min method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.5 NppStatus nppsMinAbs_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMinAbs*, Npp8u ∗ *pDeviceBuffer*)

16-bit integer vector min absolute method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMinAbs Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinAbsGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.6 NppStatus nppsMinAbs_32s (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMinAbs*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector min absolute method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMinAbs Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinAbsGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.7 NppStatus nppsMinAbsGetBufferSize_16s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMinAbs_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.8 NppStatus nppsMinAbsGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMinAbs_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.9 NppStatus nppsMinAbsIndx_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMinAbs*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

16-bit integer vector min absolute index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMinAbs Pointer to the output result.

pIndx Pointer to the index value of the first minimum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinAbsIndxGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.10 NppStatus nppsMinAbsIndx_32s (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMinAbs*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector min absolute index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMinAbs Pointer to the output result.

pIndx Pointer to the index value of the first minimum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinAbsIndxGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.11 NppStatus nppsMinAbsIndxGetBufferSize_16s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMinAbsIndx_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.12 NppStatus nppsMinAbsIndxGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMinAbsIndx_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.13 NppStatus nppsMinGetBufferSize_16s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMin_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.14 NppStatus nppsMinGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMin_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.15 NppStatus nppsMinGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMin_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.16 NppStatus nppsMinGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMin_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.17 NppStatus nppsMinIndx_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMin*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

16-bit integer vector min index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the output result.

pIndx Pointer to the index value of the first minimum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinIndxGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.18 NppStatus nppsMinIndx_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pMin*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector min index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the output result.

pIndx Pointer to the index value of the first minimum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinIndxGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.19 NppStatus nppsMinIndx_32s (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMin*, int ∗ *pIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector min index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the output result.

pIndx Pointer to the index value of the first minimum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinIndxGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.20 NppStatus nppsMinIndx_64f (const Npp64f * *pSrc*, int *nLength*, Npp64f * *pMin*, int * *pIndx*, Npp8u * *pDeviceBuffer*)

64-bit float vector min index method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the output result.

pIndx Pointer to the index value of the first minimum element.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinIndxGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.182.1.21 NppStatus nppsMinIndxGetBufferSize_16s (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMinIndx_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.22 NppStatus nppsMinIndxGetBufferSize_32f (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMinIndx_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.23 NppStatus nppsMinIndxGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMinIndx_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.182.1.24 NppStatus nppsMinIndxGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMinIndx_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.183 Mean

Functions

- NppStatus nppsMeanGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMean_32f.

- NppStatus nppsMeanGetBufferSize_32fc (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMean_32fc.

- NppStatus nppsMeanGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMean_64f.

- NppStatus nppsMeanGetBufferSize_64fc (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMean_64fc.

- NppStatus nppsMeanGetBufferSize_16s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMean_16s_Sfs.

- NppStatus nppsMeanGetBufferSize_32s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMean_32s_Sfs.

- NppStatus nppsMeanGetBufferSize_16sc_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMean_16sc_Sfs.

- NppStatus nppsMean_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pMean, Npp8u ∗pDeviceBuffer)

  32-bit float vector mean method

- NppStatus nppsMean_32fc (const Npp32fc ∗pSrc, int nLength, Npp32fc ∗pMean, Npp8u ∗pDeviceBuffer)

  32-bit float complex vector mean method

- NppStatus nppsMean_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pMean, Npp8u ∗pDeviceBuffer)

  64-bit double vector mean method

- NppStatus nppsMean_64fc (const Npp64fc ∗pSrc, int nLength, Npp64fc ∗pMean, Npp8u ∗pDeviceBuffer)

  64-bit double complex vector mean method

- NppStatus nppsMean_16s_Sfs (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMean, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit short vector mean with integer scaling method

- NppStatus nppsMean_32s_Sfs (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMean, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  32-bit integer vector mean with integer scaling method

- NppStatus nppsMean_16sc_Sfs (const Npp16sc ∗pSrc, int nLength, Npp16sc ∗pMean, int nScaleFactor, Npp8u ∗pDeviceBuffer)

16-bit short complex vector mean with integer scaling method

7.183.1 Function Documentation

7.183.1.1 NppStatus nppsMean_16s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMean*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit short vector mean with integer scaling method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanGetBufferSize_16s_Sfs to determine the minium number of bytes required.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.183.1.2 NppStatus nppsMean_16sc_Sfs (const Npp16sc ∗ *pSrc*, int *nLength*, Npp16sc ∗ *pMean*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit short complex vector mean with integer scaling method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanGetBufferSize_16sc_Sfs to determine the minium number of bytes required.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.183.1.3 NppStatus nppsMean_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pMean*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector mean method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.183.1.4 NppStatus nppsMean_32fc (const Npp32fc ∗ *pSrc*, int *nLength*, Npp32fc ∗ *pMean*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex vector mean method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanGetBufferSize_32fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.183.1.5 NppStatus nppsMean_32s_Sfs (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMean*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

32-bit integer vector mean with integer scaling method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanGetBufferSize_32s_Sfs to determine the minium number of bytes required.

nScaleFactor Integer Result Scaling.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.183.1.6 NppStatus nppsMean_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pMean*, Npp8u ∗ *pDeviceBuffer*)

64-bit double vector mean method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.183.1.7 NppStatus nppsMean_64fc (const Npp64fc ∗ *pSrc*, int *nLength*, Npp64fc ∗ *pMean*, Npp8u ∗ *pDeviceBuffer*)

64-bit double complex vector mean method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanGetBufferSize_64fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.183.1.8 NppStatus nppsMeanGetBufferSize_16s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMean_16s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.183.1.9 NppStatus nppsMeanGetBufferSize_16sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMean_16sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.183.1.10 NppStatus nppsMeanGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMean_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.183.1.11 NppStatus nppsMeanGetBufferSize_32fc (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMean_32fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.183.1.12 NppStatus nppsMeanGetBufferSize_32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMean_32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.183.1.13 NppStatus nppsMeanGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMean_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.183.1.14 NppStatus nppsMeanGetBufferSize_64fc (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMean_64fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.184 Standard Deviation

Functions

- NppStatus nppsStdDevGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsStdDev_32f.

- NppStatus nppsStdDevGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsStdDev_64f.

- NppStatus nppsStdDevGetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsStdDev_16s32s_Sfs.

- NppStatus nppsStdDevGetBufferSize_16s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsStdDev_16s_Sfs.

- NppStatus nppsStdDev_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pStdDev, Npp8u ∗pDeviceBuffer)

  32-bit float vector standard deviation method

- NppStatus nppsStdDev_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pStdDev, Npp8u ∗pDeviceBuffer)

  64-bit float vector standard deviation method

- NppStatus nppsStdDev_16s32s_Sfs (const Npp16s ∗pSrc, int nLength, Npp32s ∗pStdDev, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit float vector standard deviation method (return value is 32-bit)

- NppStatus nppsStdDev_16s_Sfs (const Npp16s ∗pSrc, int nLength, Npp16s ∗pStdDev, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit float vector standard deviation method (return value is also 16-bit)

7.184.1 Function Documentation

7.184.1.1 NppStatus nppsStdDev_16s32s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pStdDev*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit float vector standard deviation method (return value is 32-bit)

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pStdDev Pointer to the output result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsStdDevGetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.184.1.2 NppStatus nppsStdDev_16s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pStdDev*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit float vector standard deviation method (return value is also 16-bit)

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pStdDev Pointer to the output result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsStdDevGetBufferSize_16s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.184.1.3 NppStatus nppsStdDev_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pStdDev*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector standard deviation method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pStdDev Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsStdDevGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.184.1.4 NppStatus nppsStdDev_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pStdDev*, Npp8u ∗ *pDeviceBuffer*)

64-bit float vector standard deviation method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pStdDev Pointer to the output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsStdDevGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.184.1.5 NppStatus nppsStdDevGetBufferSize_16s32s_Sfs (int *nLength*, int $*$ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsStdDev_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.184.1.6 NppStatus nppsStdDevGetBufferSize_16s_Sfs (int *nLength*, int $*$ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsStdDev_16s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.184.1.7 NppStatus nppsStdDevGetBufferSize_32f (int *nLength*, int $*$ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsStdDev_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.184.1.8 NppStatus nppsStdDevGetBufferSize_64f (int *nLength*, int $*$ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsStdDev_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.185 Mean And Standard Deviation

Functions

- NppStatus nppsMeanStdDevGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMeanStdDev_32f.

- NppStatus nppsMeanStdDevGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMeanStdDev_64f.

- NppStatus nppsMeanStdDevGetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMeanStdDev_16s32s_Sfs.

- NppStatus nppsMeanStdDevGetBufferSize_16s_Sfs (int nLength, int ∗hpBufferSize)

  Device scratch buffer size (in bytes) for nppsMeanStdDev_16s_Sfs.

- NppStatus nppsMeanStdDev_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pMean, Npp32f ∗pStdDev, Npp8u ∗pDeviceBuffer)

  32-bit float vector mean and standard deviation method

- NppStatus nppsMeanStdDev_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pMean, Npp64f ∗pStdDev, Npp8u ∗pDeviceBuffer)

  64-bit float vector mean and standard deviation method

- NppStatus nppsMeanStdDev_16s32s_Sfs (const Npp16s ∗pSrc, int nLength, Npp32s ∗pMean, Npp32s ∗pStdDev, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit float vector mean and standard deviation method (return values are 32-bit)

- NppStatus nppsMeanStdDev_16s_Sfs (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMean, Npp16s ∗pStdDev, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit float vector mean and standard deviation method (return values are also 16-bit)

7.185.1 Function Documentation

7.185.1.1 NppStatus nppsMeanStdDev_16s32s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMean*, Npp32s ∗ *pStdDev*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit float vector mean and standard deviation method (return values are 32-bit)

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output mean value.

pStdDev Pointer to the output standard deviation value.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanStdDevGetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.185.1.2 NppStatus nppsMeanStdDev_16s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMean*, Npp16s ∗ *pStdDev*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit float vector mean and standard deviation method (return values are also 16-bit)

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output mean value.

pStdDev Pointer to the output standard deviation value.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanStdDevGetBufferSize_16s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.185.1.3 NppStatus nppsMeanStdDev_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pMean*, Npp32f ∗ *pStdDev*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector mean and standard deviation method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output mean value.

pStdDev Pointer to the output standard deviation value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanStdDevGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.185.1.4 NppStatus nppsMeanStdDev_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pMean*, Npp64f ∗ *pStdDev*, Npp8u ∗ *pDeviceBuffer*)

64-bit float vector mean and standard deviation method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMean Pointer to the output mean value.

pStdDev Pointer to the output standard deviation value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMeanStdDevGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.185.1.5 NppStatus nppsMeanStdDevGetBufferSize_16s32s_Sfs (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMeanStdDev_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.185.1.6 NppStatus nppsMeanStdDevGetBufferSize_16s_Sfs (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMeanStdDev_16s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.185.1.7 NppStatus nppsMeanStdDevGetBufferSize_32f (int *nLength*, int * *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMeanStdDev_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.185.1.8 NppStatus nppsMeanStdDevGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device scratch buffer size (in bytes) for nppsMeanStdDev_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.* Scratch Buffer and Host Pointer.

Returns:

NPP_SUCCESS

7.186 Minimum_Maximum

Functions

- NppStatus nppsMinMaxGetBufferSize_8u (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMax_8u.

- NppStatus nppsMinMaxGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMax_16s.

- NppStatus nppsMinMaxGetBufferSize_16u (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMax_16u.

- NppStatus nppsMinMaxGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMax_32s.

- NppStatus nppsMinMaxGetBufferSize_32u (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMax_32u.

- NppStatus nppsMinMaxGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMax_32f.

- NppStatus nppsMinMaxGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMax_64f.

- NppStatus nppsMinMax_8u (const Npp8u ∗pSrc, int nLength, Npp8u ∗pMin, Npp8u ∗pMax, Npp8u ∗pDeviceBuffer)

  8-bit char vector min and max method

- NppStatus nppsMinMax_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMin, Npp16s ∗pMax, Npp8u ∗pDeviceBuffer)

  16-bit signed short vector min and max method

- NppStatus nppsMinMax_16u (const Npp16u ∗pSrc, int nLength, Npp16u ∗pMin, Npp16u ∗pMax, Npp8u ∗pDeviceBuffer)

  16-bit unsigned short vector min and max method

- NppStatus nppsMinMax_32u (const Npp32u ∗pSrc, int nLength, Npp32u ∗pMin, Npp32u ∗pMax, Npp8u ∗pDeviceBuffer)

  32-bit unsigned int vector min and max method

- NppStatus nppsMinMax_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMin, Npp32s ∗pMax, Npp8u ∗pDeviceBuffer)

  32-bit signed int vector min and max method

- NppStatus nppsMinMax_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pMin, Npp32f ∗pMax, Npp8u ∗pDeviceBuffer)

  32-bit float vector min and max method

- NppStatus nppsMinMax_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pMin, Npp64f ∗pMax, Npp8u ∗pDeviceBuffer)

64-bit double vector min and max method

- NppStatus nppsMinMaxIndxGetBufferSize_8u (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMaxIndx_8u.

- NppStatus nppsMinMaxIndxGetBufferSize_16s (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMaxIndx_16s.

- NppStatus nppsMinMaxIndxGetBufferSize_16u (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMaxIndx_16u.

- NppStatus nppsMinMaxIndxGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMaxIndx_32s.

- NppStatus nppsMinMaxIndxGetBufferSize_32u (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMaxIndx_32u.

- NppStatus nppsMinMaxIndxGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMaxIndx_32f.

- NppStatus nppsMinMaxIndxGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsMinMaxIndx_64f.

- NppStatus nppsMinMaxIndx_8u (const Npp8u ∗pSrc, int nLength, Npp8u ∗pMin, int ∗pMinIndx, Npp8u ∗pMax, int ∗pMaxIndx, Npp8u ∗pDeviceBuffer)

  8-bit char vector min and max with indices method

- NppStatus nppsMinMaxIndx_16s (const Npp16s ∗pSrc, int nLength, Npp16s ∗pMin, int ∗pMinIndx, Npp16s ∗pMax, int ∗pMaxIndx, Npp8u ∗pDeviceBuffer)

  16-bit signed short vector min and max with indices method

- NppStatus nppsMinMaxIndx_16u (const Npp16u ∗pSrc, int nLength, Npp16u ∗pMin, int ∗pMinIndx, Npp16u ∗pMax, int ∗pMaxIndx, Npp8u ∗pDeviceBuffer)

  16-bit unsigned short vector min and max with indices method

- NppStatus nppsMinMaxIndx_32s (const Npp32s ∗pSrc, int nLength, Npp32s ∗pMin, int ∗pMinIndx, Npp32s ∗pMax, int ∗pMaxIndx, Npp8u ∗pDeviceBuffer)

  32-bit signed short vector min and max with indices method

- NppStatus nppsMinMaxIndx_32u (const Npp32u ∗pSrc, int nLength, Npp32u ∗pMin, int ∗pMinIndx, Npp32u ∗pMax, int ∗pMaxIndx, Npp8u ∗pDeviceBuffer)

  32-bit unsigned short vector min and max with indices method

- NppStatus nppsMinMaxIndx_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pMin, int ∗pMinIndx, Npp32f ∗pMax, int ∗pMaxIndx, Npp8u ∗pDeviceBuffer)

  32-bit float vector min and max with indices method

- NppStatus nppsMinMaxIndx_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pMin, int ∗pMinIndx, Npp64f ∗pMax, int ∗pMaxIndx, Npp8u ∗pDeviceBuffer)

  64-bit float vector min and max with indices method

7.186.1 Function Documentation

7.186.1.1 NppStatus nppsMinMax_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMin*, Npp16s ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short vector min and max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMax Pointer to the max output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.2 NppStatus nppsMinMax_16u (const Npp16u ∗ *pSrc*, int *nLength*, Npp16u ∗ *pMin*, Npp16u ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

16-bit unsigned short vector min and max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMax Pointer to the max output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxGetBufferSize_16u to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.3 NppStatus nppsMinMax_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pMin*, Npp32f ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector min and max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMax Pointer to the max output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.4 NppStatus nppsMinMax_32s (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMin*, Npp32s ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

32-bit signed int vector min and max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMax Pointer to the max output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.5 NppStatus nppsMinMax_32u (const Npp32u ∗ *pSrc*, int *nLength*, Npp32u ∗ *pMin*, Npp32u ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

32-bit unsigned int vector min and max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMax Pointer to the max output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxGetBufferSize_32u to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.6 NppStatus nppsMinMax_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pMin*, Npp64f ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

64-bit double vector min and max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMax Pointer to the max output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.7 NppStatus nppsMinMax_8u (const Npp8u ∗ *pSrc*, int *nLength*, Npp8u ∗ *pMin*, Npp8u ∗ *pMax*, Npp8u ∗ *pDeviceBuffer*)

8-bit char vector min and max method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMax Pointer to the max output result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxGetBufferSize_8u to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.8 NppStatus nppsMinMaxGetBufferSize_16s (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMax_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.9 NppStatus nppsMinMaxGetBufferSize_16u (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMax_16u.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.10 NppStatus nppsMinMaxGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMax_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.11 NppStatus nppsMinMaxGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMax_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.12 NppStatus nppsMinMaxGetBufferSize_32u (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMax_32u.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.13 NppStatus nppsMinMaxGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMax_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.14 NppStatus nppsMinMaxGetBufferSize_8u (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMax_8u.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.15 NppStatus nppsMinMaxIndx_16s (const Npp16s ∗ *pSrc*, int *nLength*, Npp16s ∗ *pMin*, int ∗ *pMinIndx*, Npp16s ∗ *pMax*, int ∗ *pMaxIndx*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short vector min and max with indices method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMinIndx Pointer to the index of the first min value.

pMax Pointer to the max output result.

pMaxIndx Pointer to the index of the first max value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxIndxGetBufferSize_16s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.16 NppStatus nppsMinMaxIndx_16u (const Npp16u ∗ *pSrc*, int *nLength*, Npp16u ∗ *pMin*, int ∗ *pMinIndx*, Npp16u ∗ *pMax*, int ∗ *pMaxIndx*, Npp8u ∗ *pDeviceBuffer*)

16-bit unsigned short vector min and max with indices method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMinIndx Pointer to the index of the first min value.

pMax Pointer to the max output result.

pMaxIndx Pointer to the index of the first max value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxIndxGetBufferSize_16u to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.17 NppStatus nppsMinMaxIndx_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pMin*, int ∗ *pMinIndx*, Npp32f ∗ *pMax*, int ∗ *pMaxIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector min and max with indices method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMinIndx Pointer to the index of the first min value.

pMax Pointer to the max output result.

pMaxIndx Pointer to the index of the first max value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxIndxGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.18 NppStatus nppsMinMaxIndx_32s (const Npp32s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pMin*, int ∗ *pMinIndx*, Npp32s ∗ *pMax*, int ∗ *pMaxIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit signed short vector min and max with indices method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMinIndx Pointer to the index of the first min value.

pMax Pointer to the max output result.

pMaxIndx Pointer to the index of the first max value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxIndxGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.19 NppStatus nppsMinMaxIndx_32u (const Npp32u ∗ *pSrc*, int *nLength*, Npp32u ∗ *pMin*, int ∗ *pMinIndx*, Npp32u ∗ *pMax*, int ∗ *pMaxIndx*, Npp8u ∗ *pDeviceBuffer*)

32-bit unsigned short vector min and max with indices method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMinIndx Pointer to the index of the first min value.

pMax Pointer to the max output result.

pMaxIndx Pointer to the index of the first max value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxIndxGetBufferSize_32u to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.20 NppStatus nppsMinMaxIndx_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pMin*, int ∗ *pMinIndx*, Npp64f ∗ *pMax*, int ∗ *pMaxIndx*, Npp8u ∗ *pDeviceBuffer*)

64-bit float vector min and max with indices method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMinIndx Pointer to the index of the first min value.

pMax Pointer to the max output result.

pMaxIndx Pointer to the index of the first max value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxIndxGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.21 NppStatus nppsMinMaxIndx_8u (const Npp8u ∗ *pSrc*, int *nLength*, Npp8u ∗ *pMin*, int ∗ *pMinIndx*, Npp8u ∗ *pMax*, int ∗ *pMaxIndx*, Npp8u ∗ *pDeviceBuffer*)

8-bit char vector min and max with indices method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pMin Pointer to the min output result.

pMinIndx Pointer to the index of the first min value.

pMax Pointer to the max output result.

pMaxIndx Pointer to the index of the first max value.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsMinMaxIndxGetBufferSize_8u to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.186.1.22 NppStatus nppsMinMaxIndxGetBufferSize_16s (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMaxIndx_16s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.23 NppStatus nppsMinMaxIndxGetBufferSize_16u (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMaxIndx_16u.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.24 NppStatus nppsMinMaxIndxGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMaxIndx_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.25 NppStatus nppsMinMaxIndxGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMaxIndx_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.26 NppStatus nppsMinMaxIndxGetBufferSize_32u (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMaxIndx_32u.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.27 NppStatus nppsMinMaxIndxGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMaxIndx_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.186.1.28 NppStatus nppsMinMaxIndxGetBufferSize_8u (int *nLength*, int $*$ *hpBufferSize*)

Device-buffer size (in bytes) for nppsMinMaxIndx_8u.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.187 Infinity Norm

Functions

- NppStatus nppsNormInfGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_Inf_32f.

- NppStatus nppsNorm_Inf_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float vector C norm method

- NppStatus nppsNormInfGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_Inf_64f.

- NppStatus nppsNorm_Inf_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float vector C norm method

- NppStatus nppsNormInfGetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_Inf_16s32f.

- NppStatus nppsNorm_Inf_16s32f (const Npp16s ∗pSrc, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer vector C norm method, return value is 32-bit float.

- NppStatus nppsNormInfGetBufferSize_32fc32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_Inf_32fc32f.

- NppStatus nppsNorm_Inf_32fc32f (const Npp32fc ∗pSrc, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float complex vector C norm method, return value is 32-bit float.

- NppStatus nppsNormInfGetBufferSize_64fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_Inf_64fc64f.

- NppStatus nppsNorm_Inf_64fc64f (const Npp64fc ∗pSrc, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float complex vector C norm method, return value is 64-bit float.

- NppStatus nppsNormInfGetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_Inf_16s32s_Sfs.

- NppStatus nppsNorm_Inf_16s32s_Sfs (const Npp16s ∗pSrc, int nLength, Npp32s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer vector C norm method, return value is 32-bit signed integer.

7.187.1 Function Documentation

7.187.1.1 NppStatus nppsNorm_Inf_16s32f (const Npp16s ∗ *pSrc*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer vector C norm method, return value is 32-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormInfGetBufferSize_16s32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.187.1.2 NppStatus nppsNorm_Inf_16s32s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pNorm*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer vector C norm method, return value is 32-bit signed integer.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormInfGetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.187.1.3 NppStatus nppsNorm_Inf_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector C norm method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormInfGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.187.1.4 NppStatus nppsNorm_Inf_32fc32f (const Npp32fc ∗ *pSrc*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex vector C norm method, return value is 32-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormInfGetBufferSize_32fc32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.187.1.5 NppStatus nppsNorm_Inf_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float vector C norm method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormInfGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.187.1.6 NppStatus nppsNorm_Inf_64fc64f (const Npp64fc ∗ *pSrc*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float complex vector C norm method, return value is 64-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormInfGetBufferSize_64fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.187.1.7 NppStatus nppsNormInfGetBufferSize_16s32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_Inf_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.187.1.8 NppStatus nppsNormInfGetBufferSize_16s32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_Inf_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.187.1.9 NppStatus nppsNormInfGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_Inf_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.187.1.10 NppStatus nppsNormInfGetBufferSize_32fc32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_Inf_32fc32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.187.1.11 NppStatus nppsNormInfGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_Inf_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.187.1.12 NppStatus nppsNormInfGetBufferSize_64fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_Inf_64fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.188 L1 Norm

Functions

- NppStatus nppsNormL1GetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L1_32f.

- NppStatus nppsNorm_L1_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float vector L1 norm method

- NppStatus nppsNormL1GetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L1_64f.

- NppStatus nppsNorm_L1_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float vector L1 norm method

- NppStatus nppsNormL1GetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L1_16s32f.

- NppStatus nppsNorm_L1_16s32f (const Npp16s ∗pSrc, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer vector L1 norm method, return value is 32-bit float.

- NppStatus nppsNormL1GetBufferSize_32fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L1_32fc64f.

- NppStatus nppsNorm_L1_32fc64f (const Npp32fc ∗pSrc, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float complex vector L1 norm method, return value is 64-bit float.

- NppStatus nppsNormL1GetBufferSize_64fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L1_64fc64f.

- NppStatus nppsNorm_L1_64fc64f (const Npp64fc ∗pSrc, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float complex vector L1 norm method, return value is 64-bit float.

- NppStatus nppsNormL1GetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L1_16s32s_Sfs.

- NppStatus nppsNorm_L1_16s32s_Sfs (const Npp16s ∗pSrc, int nLength, Npp32s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer vector L1 norm method, return value is 32-bit signed integer.

- NppStatus nppsNormL1GetBufferSize_16s64s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L1_16s64s_Sfs.

- NppStatus nppsNorm_L1_16s64s_Sfs (const Npp16s ∗pSrc, int nLength, Npp64s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

16-bit signed short integer vector L1 norm method, return value is 64-bit signed integer.

7.188.1 Function Documentation

7.188.1.1 NppStatus nppsNorm_L1_16s32f (const Npp16s * *pSrc*, int *nLength*, Npp32f * *pNorm*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer vector L1 norm method, return value is 32-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the L1 norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL1GetBufferSize_16s32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.188.1.2 NppStatus nppsNorm_L1_16s32s_Sfs (const Npp16s * *pSrc*, int *nLength*, Npp32s * *pNorm*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer vector L1 norm method, return value is 32-bit signed integer.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL1GetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.188.1.3 NppStatus nppsNorm_L1_16s64s_Sfs (const Npp16s * *pSrc*, int *nLength*, Npp64s * *pNorm*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer vector L1 norm method, return value is 64-bit signed integer.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL1GetBufferSize_16s64s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.188.1.4 NppStatus nppsNorm_L1_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector L1 norm method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL1GetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.188.1.5 NppStatus nppsNorm_L1_32fc64f (const Npp32fc ∗ *pSrc*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex vector L1 norm method, return value is 64-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL1GetBufferSize_32fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.188.1.6 NppStatus nppsNorm_L1_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float vector L1 norm method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL1GetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.188.1.7 NppStatus nppsNorm_L1_64fc64f (const Npp64fc * *pSrc*, int *nLength*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

64-bit float complex vector L1 norm method, return value is 64-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL1GetBufferSize_64fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.188.1.8 NppStatus nppsNormL1GetBufferSize_16s32f (int *nLength*, int * *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L1_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.188.1.9 NppStatus nppsNormL1GetBufferSize_16s32s_Sfs (int *nLength*, int * *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L1_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.188.1.10 NppStatus nppsNormL1GetBufferSize_16s64s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L1_16s64s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.188.1.11 NppStatus nppsNormL1GetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L1_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.188.1.12 NppStatus nppsNormL1GetBufferSize_32fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L1_32fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.188.1.13 NppStatus nppsNormL1GetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L1_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.188.1.14 NppStatus nppsNormL1GetBufferSize_64fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L1_64fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.189 L2 Norm

Functions

- NppStatus nppsNormL2GetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L2_32f.

- NppStatus nppsNorm_L2_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float vector L2 norm method

- NppStatus nppsNormL2GetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L2_64f.

- NppStatus nppsNorm_L2_64f (const Npp64f ∗pSrc, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float vector L2 norm method

- NppStatus nppsNormL2GetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L2_16s32f.

- NppStatus nppsNorm_L2_16s32f (const Npp16s ∗pSrc, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer vector L2 norm method, return value is 32-bit float.

- NppStatus nppsNormL2GetBufferSize_32fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L2_32fc64f.

- NppStatus nppsNorm_L2_32fc64f (const Npp32fc ∗pSrc, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float complex vector L2 norm method, return value is 64-bit float.

- NppStatus nppsNormL2GetBufferSize_64fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L2_64fc64f.

- NppStatus nppsNorm_L2_64fc64f (const Npp64fc ∗pSrc, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float complex vector L2 norm method, return value is 64-bit float.

- NppStatus nppsNormL2GetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L2_16s32s_Sfs.

- NppStatus nppsNorm_L2_16s32s_Sfs (const Npp16s ∗pSrc, int nLength, Npp32s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer vector L2 norm method, return value is 32-bit signed integer.

- NppStatus nppsNormL2SqrGetBufferSize_16s64s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNorm_L2Sqr_16s64s_Sfs.

- NppStatus nppsNorm_L2Sqr_16s64s_Sfs (const Npp16s ∗pSrc, int nLength, Npp64s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

16-bit signed short integer vector L2 Square norm method, return value is 64-bit signed integer.

7.189.1 Function Documentation

7.189.1.1 NppStatus nppsNorm_L2_16s32f (const Npp16s ∗ *pSrc*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer vector L2 norm method, return value is 32-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL2GetBufferSize_16s32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.189.1.2 NppStatus nppsNorm_L2_16s32s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp32s ∗ *pNorm*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer vector L2 norm method, return value is 32-bit signed integer.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL2GetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.189.1.3 NppStatus nppsNorm_L2_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float vector L2 norm method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL2GetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.189.1.4 NppStatus nppsNorm_L2_32fc64f (const Npp32fc ∗ *pSrc*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex vector L2 norm method, return value is 64-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL2GetBufferSize_32fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.189.1.5 NppStatus nppsNorm_L2_64f (const Npp64f ∗ *pSrc*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float vector L2 norm method

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL2GetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.189.1.6 NppStatus nppsNorm_L2_64fc64f (const Npp64fc ∗ *pSrc*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float complex vector L2 norm method, return value is 64-bit float.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL2GetBufferSize_64fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.189.1.7 NppStatus nppsNorm_L2Sqr_16s64s_Sfs (const Npp16s ∗ *pSrc*, int *nLength*, Npp64s ∗ *pNorm*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer vector L2 Square norm method, return value is 64-bit signed integer.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormL2SqrGetBufferSize_16s64s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.189.1.8 NppStatus nppsNormL2GetBufferSize_16s32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L2_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.189.1.9 NppStatus nppsNormL2GetBufferSize_16s32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L2_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.189.1.10 NppStatus nppsNormL2GetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L2_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.189.1.11 NppStatus nppsNormL2GetBufferSize_32fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L2_32fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.189.1.12 NppStatus nppsNormL2GetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L2_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.189.1.13 NppStatus nppsNormL2GetBufferSize_64fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L2_64fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.189.1.14 NppStatus nppsNormL2SqrGetBufferSize_16s64s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNorm_L2Sqr_16s64s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.190 Infinity Norm Diff

Functions

- NppStatus nppsNormDiffInfGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_Inf_32f.

- NppStatus nppsNormDiff_Inf_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float C norm method on two vectors' difference

- NppStatus nppsNormDiffInfGetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_Inf_64f.

- NppStatus nppsNormDiff_Inf_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float C norm method on two vectors' difference

- NppStatus nppsNormDiffInfGetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_Inf_16s32f.

- NppStatus nppsNormDiff_Inf_16s32f (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer C norm method on two vectors' difference, return value is 32-bit float.

- NppStatus nppsNormDiffInfGetBufferSize_32fc32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_Inf_32fc32f.

- NppStatus nppsNormDiff_Inf_32fc32f (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float complex C norm method on two vectors' difference, return value is 32-bit float.

- NppStatus nppsNormDiffInfGetBufferSize_64fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_Inf_64fc64f.

- NppStatus nppsNormDiff_Inf_64fc64f (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float complex C norm method on two vectors' difference, return value is 64-bit float.

- NppStatus nppsNormDiffInfGetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_Inf_16s32s_Sfs.

- NppStatus nppsNormDiff_Inf_16s32s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp32s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer C norm method on two vectors' difference, return value is 32-bit signed integer.

7.190.1 Function Documentation

7.190.1.1 NppStatus nppsNormDiff_Inf_16s32f (const Npp16s * *pSrc1*, const Npp16s * *pSrc2*, int *nLength*, Npp32f * *pNorm*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer C norm method on two vectors' difference, return value is 32-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffInfGetBufferSize_16s32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.190.1.2 NppStatus nppsNormDiff_Inf_16s32s_Sfs (const Npp16s * *pSrc1*, const Npp16s * *pSrc2*, int *nLength*, Npp32s * *pNorm*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer C norm method on two vectors' difference, return value is 32-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffInfGetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.190.1.3 NppStatus nppsNormDiff_Inf_32f (const Npp32f * *pSrc1*, const Npp32f * *pSrc2*, int *nLength*, Npp32f * *pNorm*, Npp8u * *pDeviceBuffer*)

32-bit float C norm method on two vectors' difference

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffInfGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.190.1.4 NppStatus nppsNormDiff_Inf_32fc32f (const Npp32fc ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex C norm method on two vectors' difference, return value is 32-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffInfGetBufferSize_32fc32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.190.1.5 NppStatus nppsNormDiff_Inf_64f (const Npp64f ∗ *pSrc1*, const Npp64f ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float C norm method on two vectors' difference

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffInfGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.190.1.6 NppStatus nppsNormDiff_Inf_64fc64f (const Npp64fc ∗ *pSrc1*, const Npp64fc ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float complex C norm method on two vectors' difference, return value is 64-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffInfGetBufferSize_64fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.190.1.7 NppStatus nppsNormDiffInfGetBufferSize_16s32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_Inf_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.190.1.8 NppStatus nppsNormDiffInfGetBufferSize_16s32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_Inf_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.190.1.9 NppStatus nppsNormDiffInfGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_Inf_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.190.1.10 NppStatus nppsNormDiffInfGetBufferSize_32fc32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_Inf_32fc32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.190.1.11 NppStatus nppsNormDiffInfGetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_Inf_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.190.1.12 NppStatus nppsNormDiffInfGetBufferSize_64fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_Inf_64fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.191 L1 Norm Diff

Functions

- NppStatus nppsNormDiffL1GetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L1_32f.

- NppStatus nppsNormDiff_L1_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float L1 norm method on two vectors' difference

- NppStatus nppsNormDiffL1GetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L1_64f.

- NppStatus nppsNormDiff_L1_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float L1 norm method on two vectors' difference

- NppStatus nppsNormDiffL1GetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L1_16s32f.

- NppStatus nppsNormDiff_L1_16s32f (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer L1 norm method on two vectors' difference, return value is 32-bit float.

- NppStatus nppsNormDiffL1GetBufferSize_32fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L1_32fc64f.

- NppStatus nppsNormDiff_L1_32fc64f (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float complex L1 norm method on two vectors' difference, return value is 64-bit float.

- NppStatus nppsNormDiffL1GetBufferSize_64fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L1_64fc64f.

- NppStatus nppsNormDiff_L1_64fc64f (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float complex L1 norm method on two vectors' difference, return value is 64-bit float.

- NppStatus nppsNormDiffL1GetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L1_16s32s_Sfs.

- NppStatus nppsNormDiff_L1_16s32s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp32s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer L1 norm method on two vectors' difference, return value is 32-bit signed integer.

- NppStatus nppsNormDiffL1GetBufferSize_16s64s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L1_16s64s_Sfs.

- NppStatus nppsNormDiff_L1_16s64s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp64s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

16-bit signed short integer L1 norm method on two vectors' difference, return value is 64-bit signed integer.

7.191.1 Function Documentation

7.191.1.1 NppStatus nppsNormDiff_L1_16s32f (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer L1 norm method on two vectors' difference, return value is 32-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the L1 norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL1GetBufferSize_16s32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.191.1.2 NppStatus nppsNormDiff_L1_16s32s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, int *nLength*, Npp32s ∗ *pNorm*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer L1 norm method on two vectors' difference, return value is 32-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer..

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL1GetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.191.1.3 NppStatus nppsNormDiff_L1_16s64s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, int *nLength*, Npp64s ∗ *pNorm*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer L1 norm method on two vectors' difference, return value is 64-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL1GetBufferSize_16s64s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.191.1.4 NppStatus nppsNormDiff_L1_32f (const Npp32f ∗ *pSrc1*, const Npp32f ∗ *pSrc2*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float L1 norm method on two vectors' difference

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL1GetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.191.1.5 NppStatus nppsNormDiff_L1_32fc64f (const Npp32fc ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex L1 norm method on two vectors' difference, return value is 64-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL1GetBufferSize_32fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.191.1.6 NppStatus nppsNormDiff_L1_64f (const Npp64f ∗ *pSrc1*, const Npp64f ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float L1 norm method on two vectors' difference

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL1GetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.191.1.7 NppStatus nppsNormDiff_L1_64fc64f (const Npp64fc ∗ *pSrc1*, const Npp64fc ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float complex L1 norm method on two vectors' difference, return value is 64-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL1GetBufferSize_64fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.191.1.8 NppStatus nppsNormDiffL1GetBufferSize_16s32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L1_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.191.1.9 NppStatus nppsNormDiffL1GetBufferSize_16s32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L1_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.191.1.10 NppStatus nppsNormDiffL1GetBufferSize_16s64s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L1_16s64s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.191.1.11 NppStatus nppsNormDiffL1GetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L1_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.191.1.12 NppStatus nppsNormDiffL1GetBufferSize_32fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L1_32fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.191.1.13 NppStatus nppsNormDiffL1GetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L1_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.191.1.14 NppStatus nppsNormDiffL1GetBufferSize_64fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L1_64fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.192 L2 Norm Diff

Functions

- NppStatus nppsNormDiffL2GetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L2_32f.

- NppStatus nppsNormDiff_L2_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float L2 norm method on two vectors' difference

- NppStatus nppsNormDiffL2GetBufferSize_64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L2_64f.

- NppStatus nppsNormDiff_L2_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float L2 norm method on two vectors' difference

- NppStatus nppsNormDiffL2GetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L2_16s32f.

- NppStatus nppsNormDiff_L2_16s32f (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp32f ∗pNorm, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer L2 norm method on two vectors' difference, return value is 32-bit float.

- NppStatus nppsNormDiffL2GetBufferSize_32fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L2_32fc64f.

- NppStatus nppsNormDiff_L2_32fc64f (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  32-bit float complex L2 norm method on two vectors' difference, return value is 64-bit float.

- NppStatus nppsNormDiffL2GetBufferSize_64fc64f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L2_64fc64f.

- NppStatus nppsNormDiff_L2_64fc64f (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, int nLength, Npp64f ∗pNorm, Npp8u ∗pDeviceBuffer)

  64-bit float complex L2 norm method on two vectors' difference, return value is 64-bit float.

- NppStatus nppsNormDiffL2GetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L2_16s32s_Sfs.

- NppStatus nppsNormDiff_L2_16s32s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp32s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer L2 norm method on two vectors' difference, return value is 32-bit signed integer.

- NppStatus nppsNormDiffL2SqrGetBufferSize_16s64s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsNormDiff_L2Sqr_16s64s_Sfs.

- NppStatus nppsNormDiff_L2Sqr_16s64s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp64s ∗pNorm, int nScaleFactor, Npp8u ∗pDeviceBuffer)

16-bit signed short integer L2 Square norm method on two vectors' difference, return value is 64-bit signed integer.

7.192.1 Function Documentation

7.192.1.1 NppStatus nppsNormDiff_L2_16s32f (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer L2 norm method on two vectors' difference, return value is 32-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL2GetBufferSize_16s32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.192.1.2 NppStatus nppsNormDiff_L2_16s32s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, int *nLength*, Npp32s ∗ *pNorm*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer L2 norm method on two vectors' difference, return value is 32-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL2GetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.192.1.3 NppStatus nppsNormDiff_L2_32f (const Npp32f ∗ *pSrc1*, const Npp32f ∗ *pSrc2*, int *nLength*, Npp32f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float L2 norm method on two vectors' difference

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL2GetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.192.1.4 NppStatus nppsNormDiff_L2_32fc64f (const Npp32fc ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex L2 norm method on two vectors' difference, return value is 64-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL2GetBufferSize_32fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.192.1.5 NppStatus nppsNormDiff_L2_64f (const Npp64f ∗ *pSrc1*, const Npp64f ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pNorm*, Npp8u ∗ *pDeviceBuffer*)

64-bit float L2 norm method on two vectors' difference

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL2GetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.192.1.6 NppStatus nppsNormDiff_L2_64fc64f (const Npp64fc * *pSrc1*, const Npp64fc * *pSrc2*, int *nLength*, Npp64f * *pNorm*, Npp8u * *pDeviceBuffer*)

64-bit float complex L2 norm method on two vectors' difference, return value is 64-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL2GetBufferSize_64fc64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.192.1.7 NppStatus nppsNormDiff_L2Sqr_16s64s_Sfs (const Npp16s * *pSrc1*, const Npp16s * *pSrc2*, int *nLength*, Npp64s * *pNorm*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer L2 Square norm method on two vectors' difference, return value is 64-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pNorm Pointer to the norm result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsNormDiffL2SqrGetBufferSize_16s64s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.192.1.8 NppStatus nppsNormDiffL2GetBufferSize_16s32f (int *nLength*, int * *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L2_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.192.1.9 NppStatus nppsNormDiffL2GetBufferSize_16s32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L2_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.192.1.10 NppStatus nppsNormDiffL2GetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L2_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.192.1.11 NppStatus nppsNormDiffL2GetBufferSize_32fc64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L2_32fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.192.1.12 NppStatus nppsNormDiffL2GetBufferSize_64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L2_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.192.1.13 NppStatus nppsNormDiffL2GetBufferSize_64fc64f (int *nLength*, int * *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L2_64fc64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.192.1.14 NppStatus nppsNormDiffL2SqrGetBufferSize_16s64s_Sfs (int *nLength*, int * *hpBufferSize*)

Device-buffer size (in bytes) for nppsNormDiff_L2Sqr_16s64s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193 Dot Product

Functions

- NppStatus nppsDotProdGetBufferSize_32f (int nLength, int ∗hpBufferSize)

    Device-buffer size (in bytes) for nppsDotProd_32f.

- NppStatus nppsDotProd_32f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, int nLength, Npp32f ∗pDp, Npp8u ∗pDeviceBuffer)

    32-bit float dot product method, return value is 32-bit float.

- NppStatus nppsDotProdGetBufferSize_32fc (int nLength, int ∗hpBufferSize)

    Device-buffer size (in bytes) for nppsDotProd_32fc.

- NppStatus nppsDotProd_32fc (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, int nLength, Npp32fc ∗pDp, Npp8u ∗pDeviceBuffer)

    32-bit float complex dot product method, return value is 32-bit float complex.

- NppStatus nppsDotProdGetBufferSize_32f32fc (int nLength, int ∗hpBufferSize)

    Device-buffer size (in bytes) for nppsDotProd_32f32fc.

- NppStatus nppsDotProd_32f32fc (const Npp32f ∗pSrc1, const Npp32fc ∗pSrc2, int nLength, Npp32fc ∗pDp, Npp8u ∗pDeviceBuffer)

    32-bit float and 32-bit float complex dot product method, return value is 32-bit float complex.

- NppStatus nppsDotProdGetBufferSize_32f64f (int nLength, int ∗hpBufferSize)

    Device-buffer size (in bytes) for nppsDotProd_32f64f.

- NppStatus nppsDotProd_32f64f (const Npp32f ∗pSrc1, const Npp32f ∗pSrc2, int nLength, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

    32-bit float dot product method, return value is 64-bit float.

- NppStatus nppsDotProdGetBufferSize_32fc64fc (int nLength, int ∗hpBufferSize)

    Device-buffer size (in bytes) for nppsDotProd_32fc64fc.

- NppStatus nppsDotProd_32fc64fc (const Npp32fc ∗pSrc1, const Npp32fc ∗pSrc2, int nLength, Npp64fc ∗pDp, Npp8u ∗pDeviceBuffer)

    32-bit float complex dot product method, return value is 64-bit float complex.

- NppStatus nppsDotProdGetBufferSize_32f32fc64fc (int nLength, int ∗hpBufferSize)

    Device-buffer size (in bytes) for nppsDotProd_32f32fc64fc.

- NppStatus nppsDotProd_32f32fc64fc (const Npp32f ∗pSrc1, const Npp32fc ∗pSrc2, int nLength, Npp64fc ∗pDp, Npp8u ∗pDeviceBuffer)

    32-bit float and 32-bit float complex dot product method, return value is 64-bit float complex.

- NppStatus nppsDotProdGetBufferSize_64f (int nLength, int ∗hpBufferSize)

    Device-buffer size (in bytes) for nppsDotProd_64f.

- NppStatus nppsDotProd_64f (const Npp64f ∗pSrc1, const Npp64f ∗pSrc2, int nLength, Npp64f ∗pDp, Npp8u ∗pDeviceBuffer)

64-bit float dot product method, return value is 64-bit float.

- NppStatus nppsDotProdGetBufferSize_64fc (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_64fc.

- NppStatus nppsDotProd_64fc (const Npp64fc ∗pSrc1, const Npp64fc ∗pSrc2, int nLength, Npp64fc ∗pDp, Npp8u ∗pDeviceBuffer)

  64-bit float complex dot product method, return value is 64-bit float complex.

- NppStatus nppsDotProdGetBufferSize_64f64fc (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_64f64fc.

- NppStatus nppsDotProd_64f64fc (const Npp64f ∗pSrc1, const Npp64fc ∗pSrc2, int nLength, Npp64fc ∗pDp, Npp8u ∗pDeviceBuffer)

  64-bit float and 64-bit float complex dot product method, return value is 64-bit float complex.

- NppStatus nppsDotProdGetBufferSize_16s64s (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s64s.

- NppStatus nppsDotProd_16s64s (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp64s ∗pDp, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer dot product method, return value is 64-bit signed integer.

- NppStatus nppsDotProdGetBufferSize_16sc64sc (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16sc64sc.

- NppStatus nppsDotProd_16sc64sc (const Npp16sc ∗pSrc1, const Npp16sc ∗pSrc2, int nLength, Npp64sc ∗pDp, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer complex dot product method, return value is 64-bit signed integer complex.

- NppStatus nppsDotProdGetBufferSize_16s16sc64sc (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s16sc64sc.

- NppStatus nppsDotProd_16s16sc64sc (const Npp16s ∗pSrc1, const Npp16sc ∗pSrc2, int nLength, Npp64sc ∗pDp, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer and 16-bit signed short integer short dot product method, return value is 64-bit signed integer complex.

- NppStatus nppsDotProdGetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s32f.

- NppStatus nppsDotProd_16s32f (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp32f ∗pDp, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer dot product method, return value is 32-bit float.

- NppStatus nppsDotProdGetBufferSize_16sc32fc (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16sc32fc.

- NppStatus nppsDotProd_16sc32fc (const Npp16sc ∗pSrc1, const Npp16sc ∗pSrc2, int nLength, Npp32fc ∗pDp, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer complex dot product method, return value is 32-bit float complex.

- NppStatus nppsDotProdGetBufferSize_16s16sc32fc (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s16sc32fc.

- NppStatus nppsDotProd_16s16sc32fc (const Npp16s ∗pSrc1, const Npp16sc ∗pSrc2, int nLength, Npp32fc ∗pDp, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer and 16-bit signed short integer complex dot product method, return value is 32-bit float complex.

- NppStatus nppsDotProdGetBufferSize_16s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s_Sfs.

- NppStatus nppsDotProd_16s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp16s ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer dot product method, return value is 16-bit signed short integer.

- NppStatus nppsDotProdGetBufferSize_16sc_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16sc_Sfs.

- NppStatus nppsDotProd_16sc_Sfs (const Npp16sc ∗pSrc1, const Npp16sc ∗pSrc2, int nLength, Npp16sc ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer complex dot product method, return value is 16-bit signed short integer complex.

- NppStatus nppsDotProdGetBufferSize_32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_32s_Sfs.

- NppStatus nppsDotProd_32s_Sfs (const Npp32s ∗pSrc1, const Npp32s ∗pSrc2, int nLength, Npp32s ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  32-bit signed integer dot product method, return value is 32-bit signed integer.

- NppStatus nppsDotProdGetBufferSize_32sc_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_32sc_Sfs.

- NppStatus nppsDotProd_32sc_Sfs (const Npp32sc ∗pSrc1, const Npp32sc ∗pSrc2, int nLength, Npp32sc ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  32-bit signed integer complex dot product method, return value is 32-bit signed integer complex.

- NppStatus nppsDotProdGetBufferSize_16s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s32s_Sfs.

- NppStatus nppsDotProd_16s32s_Sfs (const Npp16s ∗pSrc1, const Npp16s ∗pSrc2, int nLength, Npp32s ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer dot product method, return value is 32-bit signed integer.

- NppStatus nppsDotProdGetBufferSize_16s16sc32sc_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s16sc32sc_Sfs.

- NppStatus nppsDotProd_16s16sc32sc_Sfs (const Npp16s ∗pSrc1, const Npp16sc ∗pSrc2, int nLength, Npp32sc ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer and 16-bit signed short integer complex dot product method, return value is 32-bit signed integer complex.

- NppStatus nppsDotProdGetBufferSize_16s32s32s_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s32s32s_Sfs.

- NppStatus nppsDotProd_16s32s32s_Sfs (const Npp16s ∗pSrc1, const Npp32s ∗pSrc2, int nLength, Npp32s ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer and 32-bit signed integer dot product method, return value is 32-bit signed integer.

- NppStatus nppsDotProdGetBufferSize_16s16sc_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16s16sc_Sfs.

- NppStatus nppsDotProd_16s16sc_Sfs (const Npp16s ∗pSrc1, const Npp16sc ∗pSrc2, int nLength, Npp16sc ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer and 16-bit signed short integer complex dot product method, return value is 16-bit signed short integer complex.

- NppStatus nppsDotProdGetBufferSize_16sc32sc_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_16sc32sc_Sfs.

- NppStatus nppsDotProd_16sc32sc_Sfs (const Npp16sc ∗pSrc1, const Npp16sc ∗pSrc2, int nLength, Npp32sc ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer complex dot product method, return value is 32-bit signed integer complex.

- NppStatus nppsDotProdGetBufferSize_32s32sc_Sfs (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsDotProd_32s32sc_Sfs.

- NppStatus nppsDotProd_32s32sc_Sfs (const Npp32s ∗pSrc1, const Npp32sc ∗pSrc2, int nLength, Npp32sc ∗pDp, int nScaleFactor, Npp8u ∗pDeviceBuffer)

  32-bit signed short integer and 32-bit signed short integer complex dot product method, return value is 32-bit signed integer complex.

7.193.1 Function Documentation

7.193.1.1 NppStatus nppsDotProd_16s16sc32fc (const Npp16s ∗ *pSrc1*, const Npp16sc ∗ *pSrc2*, int *nLength*, Npp32fc ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer and 16-bit signed short integer complex dot product method, return value is 32-bit float complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s16sc32fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.2 NppStatus nppsDotProd_16s16sc32sc_Sfs (const Npp16s ∗ *pSrc1*, const Npp16sc ∗ *pSrc2*, int *nLength*, Npp32sc ∗ *pDp*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer and 16-bit signed short integer complex dot product method, return value is 32-bit signed integer complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s16sc32sc_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.3 NppStatus nppsDotProd_16s16sc64sc (const Npp16s ∗ *pSrc1*, const Npp16sc ∗ *pSrc2*, int *nLength*, Npp64sc ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer and 16-bit signed short integer short dot product method, return value is 64-bit signed integer complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s16sc64sc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.4 NppStatus nppsDotProd_16s16sc_Sfs (const Npp16s * *pSrc1*, const Npp16sc * *pSrc2*, int *nLength*, Npp16sc * *pDp*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer and 16-bit signed short integer complex dot product method, return value is 16-bit signed short integer complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s16sc_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.5 NppStatus nppsDotProd_16s32f (const Npp16s * *pSrc1*, const Npp16s * *pSrc2*, int *nLength*, Npp32f * *pDp*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer dot product method, return value is 32-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.6 NppStatus nppsDotProd_16s32s32s_Sfs (const Npp16s * *pSrc1*, const Npp32s * *pSrc2*, int *nLength*, Npp32s * *pDp*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer and 32-bit signed integer dot product method, return value is 32-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s32s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.7 NppStatus nppsDotProd_16s32s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, int *nLength*, Npp32s ∗ *pDp*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer dot product method, return value is 32-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.8 NppStatus nppsDotProd_16s64s (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, int *nLength*, Npp64s ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer dot product method, return value is 64-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s64s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.9 NppStatus nppsDotProd_16s_Sfs (const Npp16s ∗ *pSrc1*, const Npp16s ∗ *pSrc2*, int *nLength*, Npp16s ∗ *pDp*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer dot product method, return value is 16-bit signed short integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.10 NppStatus nppsDotProd_16sc32fc (const Npp16sc ∗ *pSrc1*, const Npp16sc ∗ *pSrc2*, int *nLength*, Npp32fc ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer complex dot product method, return value is 32-bit float complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16sc32fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.11 NppStatus nppsDotProd_16sc32sc_Sfs (const Npp16sc ∗ *pSrc1*, const Npp16sc ∗ *pSrc2*, int *nLength*, Npp32sc ∗ *pDp*, int *nScaleFactor*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer complex dot product method, return value is 32-bit signed integer complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16sc32sc_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.12 NppStatus nppsDotProd_16sc64sc (const Npp16sc * *pSrc1*, const Npp16sc * *pSrc2*, int *nLength*, Npp64sc * *pDp*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer complex dot product method, return value is 64-bit signed integer complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16sc64sc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.13 NppStatus nppsDotProd_16sc_Sfs (const Npp16sc * *pSrc1*, const Npp16sc * *pSrc2*, int *nLength*, Npp16sc * *pDp*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

16-bit signed short integer complex dot product method, return value is 16-bit signed short integer complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_16sc_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.14 NppStatus nppsDotProd_32f (const Npp32f * *pSrc1*, const Npp32f * *pSrc2*, int *nLength*, Npp32f * *pDp*, Npp8u * *pDeviceBuffer*)

32-bit float dot product method, return value is 32-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.15 NppStatus nppsDotProd_32f32fc (const Npp32f * *pSrc1*, const Npp32fc * *pSrc2*, int *nLength*, Npp32fc * *pDp*, Npp8u * *pDeviceBuffer*)

32-bit float and 32-bit float complex dot product method, return value is 32-bit float complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32f32fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.16 NppStatus nppsDotProd_32f32fc64fc (const Npp32f * *pSrc1*, const Npp32fc * *pSrc2*, int *nLength*, Npp64fc * *pDp*, Npp8u * *pDeviceBuffer*)

32-bit float and 32-bit float complex dot product method, return value is 64-bit float complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32f32fc64fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.17 NppStatus nppsDotProd_32f64f (const Npp32f ∗ *pSrc1*, const Npp32f ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

32-bit float dot product method, return value is 64-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32f64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.18 NppStatus nppsDotProd_32fc (const Npp32fc ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, int *nLength*, Npp32fc ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex dot product method, return value is 32-bit float complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.19 NppStatus nppsDotProd_32fc64fc (const Npp32fc ∗ *pSrc1*, const Npp32fc ∗ *pSrc2*, int *nLength*, Npp64fc ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

32-bit float complex dot product method, return value is 64-bit float complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32fc64fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.20 NppStatus nppsDotProd_32s32sc_Sfs (const Npp32s * *pSrc1*, const Npp32sc * *pSrc2*, int *nLength*, Npp32sc * *pDp*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

32-bit signed short integer and 32-bit signed short integer complex dot product method, return value is 32-bit signed integer complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32s32sc_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.21 NppStatus nppsDotProd_32s_Sfs (const Npp32s * *pSrc1*, const Npp32s * *pSrc2*, int *nLength*, Npp32s * *pDp*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

32-bit signed integer dot product method, return value is 32-bit signed integer.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32s_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.22 NppStatus nppsDotProd_32sc_Sfs (const Npp32sc * *pSrc1*, const Npp32sc * *pSrc2*, int *nLength*, Npp32sc * *pDp*, int *nScaleFactor*, Npp8u * *pDeviceBuffer*)

32-bit signed integer complex dot product method, return value is 32-bit signed integer complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

nScaleFactor Integer Result Scaling.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_32sc_Sfs to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.23 NppStatus nppsDotProd_64f (const Npp64f ∗ *pSrc1*, const Npp64f ∗ *pSrc2*, int *nLength*, Npp64f ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

64-bit float dot product method, return value is 64-bit float.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_64f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.24 NppStatus nppsDotProd_64f64fc (const Npp64f ∗ *pSrc1*, const Npp64fc ∗ *pSrc2*, int *nLength*, Npp64fc ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

64-bit float and 64-bit float complex dot product method, return value is 64-bit float complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_64f64fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.25 NppStatus nppsDotProd_64fc (const Npp64fc ∗ *pSrc1*, const Npp64fc ∗ *pSrc2*, int *nLength*, Npp64fc ∗ *pDp*, Npp8u ∗ *pDeviceBuffer*)

64-bit float complex dot product method, return value is 64-bit float complex.

Parameters:

pSrc1 Source Signal Pointer.

pSrc2 Source Signal Pointer.

nLength Signal Length.

pDp Pointer to the dot product result.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsDotProdGetBufferSize_64fc to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.193.1.26 NppStatus nppsDotProdGetBufferSize_16s16sc32fc (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s16sc32fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.27 NppStatus nppsDotProdGetBufferSize_16s16sc32sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s16sc32sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.28 NppStatus nppsDotProdGetBufferSize_16s16sc64sc (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s16sc64sc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.29 NppStatus nppsDotProdGetBufferSize_16s16sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s16sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.30 NppStatus nppsDotProdGetBufferSize_16s32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.31 NppStatus nppsDotProdGetBufferSize_16s32s32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s32s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.32 NppStatus nppsDotProdGetBufferSize_16s32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.33 NppStatus nppsDotProdGetBufferSize_16s64s (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s64s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.34 NppStatus nppsDotProdGetBufferSize_16s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.35 NppStatus nppsDotProdGetBufferSize_16sc32fc (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16sc32fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.36 NppStatus nppsDotProdGetBufferSize_16sc32sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16sc32sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.37 NppStatus nppsDotProdGetBufferSize_16sc64sc (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16sc64sc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.38 NppStatus nppsDotProdGetBufferSize_16sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_16sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.39 NppStatus nppsDotProdGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.40 NppStatus nppsDotProdGetBufferSize_32f32fc (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32f32fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.41 NppStatus nppsDotProdGetBufferSize_32f32fc64fc (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32f32fc64fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.42 NppStatus nppsDotProdGetBufferSize_32f64f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32f64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.43 NppStatus nppsDotProdGetBufferSize_32fc (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.44 NppStatus nppsDotProdGetBufferSize_32fc64fc (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32fc64fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.45 NppStatus nppsDotProdGetBufferSize_32s32sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32s32sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.46 NppStatus nppsDotProdGetBufferSize_32s_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32s_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.47 NppStatus nppsDotProdGetBufferSize_32sc_Sfs (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_32sc_Sfs.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.48 NppStatus nppsDotProdGetBufferSize_64f (int *nLength*, int * *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_64f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.49 NppStatus nppsDotProdGetBufferSize_64f64fc (int *nLength*, int * *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_64f64fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.193.1.50 NppStatus nppsDotProdGetBufferSize_64fc (int *nLength*, int * *hpBufferSize*)

Device-buffer size (in bytes) for nppsDotProd_64fc.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.194 Count In Range

Functions

- NppStatus nppsCountInRangeGetBufferSize_32s (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsCountInRange_32s.

- NppStatus nppsCountInRange_32s (const Npp32s ∗pSrc, int nLength, int ∗pCounts, Npp32s nLowerBound, Npp32s nUpperBound, Npp8u ∗pDeviceBuffer)

  Computes the number of elements whose values fall into the specified range on a 32-bit signed integer array.

7.194.1 Function Documentation

7.194.1.1 NppStatus nppsCountInRange_32s (const Npp32s ∗ *pSrc*, int *nLength*, int ∗ *pCounts*, Npp32s *nLowerBound*, Npp32s *nUpperBound*, Npp8u ∗ *pDeviceBuffer*)

Computes the number of elements whose values fall into the specified range on a 32-bit signed integer array.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pCounts Pointer to the number of elements.

nLowerBound Lower bound of the specified range.

nUpperBound Upper bound of the specified range.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsCountInRangeGetBufferSize_32s to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.194.1.2 NppStatus nppsCountInRangeGetBufferSize_32s (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsCountInRange_32s.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.195 Count Zero Crossings

Functions

- NppStatus nppsZeroCrossingGetBufferSize_16s32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsZeroCrossing_16s32f.

- NppStatus nppsZeroCrossing_16s32f (const Npp16s ∗pSrc, int nLength, Npp32f ∗pValZC, NppsZCType tZCType, Npp8u ∗pDeviceBuffer)

  16-bit signed short integer zero crossing method, return value is 32-bit floating point.

- NppStatus nppsZeroCrossingGetBufferSize_32f (int nLength, int ∗hpBufferSize)

  Device-buffer size (in bytes) for nppsZeroCrossing_32f.

- NppStatus nppsZeroCrossing_32f (const Npp32f ∗pSrc, int nLength, Npp32f ∗pValZC, NppsZCType tZCType, Npp8u ∗pDeviceBuffer)

  32-bit floating-point zero crossing method, return value is 32-bit floating point.

7.195.1 Function Documentation

7.195.1.1 NppStatus nppsZeroCrossing_16s32f (const Npp16s ∗ *pSrc*, int *nLength*, Npp32f ∗ *pValZC*, NppsZCType *tZCType*, Npp8u ∗ *pDeviceBuffer*)

16-bit signed short integer zero crossing method, return value is 32-bit floating point.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pValZC Pointer to the output result.

tZCType Type of the zero crossing measure: nppZCR, nppZCXor or nppZCC.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsZeroCrossingGetBufferSize_16s32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.195.1.2 NppStatus nppsZeroCrossing_32f (const Npp32f ∗ *pSrc*, int *nLength*, Npp32f ∗ *pValZC*, NppsZCType *tZCType*, Npp8u ∗ *pDeviceBuffer*)

32-bit floating-point zero crossing method, return value is 32-bit floating point.

Parameters:

pSrc Source Signal Pointer.

nLength Signal Length.

pValZC Pointer to the output result.

tZCType Type of the zero crossing measure: nppZCR, nppZCXor or nppZCC.

pDeviceBuffer Pointer to the required device memory allocation, Scratch Buffer and Host Pointer. Use nppsZeroCrossingGetBufferSize_32f to determine the minium number of bytes required.

Returns:

Signal Data Related Error Codes, Length Related Error Codes.

7.195.1.3 NppStatus nppsZeroCrossingGetBufferSize_16s32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsZeroCrossing_16s32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.195.1.4 NppStatus nppsZeroCrossingGetBufferSize_32f (int *nLength*, int ∗ *hpBufferSize*)

Device-buffer size (in bytes) for nppsZeroCrossing_32f.

Parameters:

nLength Signal Length.

hpBufferSize Required buffer size. Important: hpBufferSize is a *host pointer.*

Returns:

NPP_SUCCESS

7.196 Memory Management

Modules

- Malloc

  Signal-allocator methods for allocating 1D arrays of data in device memory.

- Free

  Free signal memory.

7.197 Malloc

Signal-allocator methods for allocating 1D arrays of data in device memory.

Functions

- Npp8u ∗ nppsMalloc_8u (int nSize)

  8-bit unsigned signal allocator.

- Npp8s ∗ nppsMalloc_8s (int nSize)

  8-bit signed signal allocator.

- Npp16u ∗ nppsMalloc_16u (int nSize)

  16-bit unsigned signal allocator.

- Npp16s ∗ nppsMalloc_16s (int nSize)

  16-bit signal allocator.

- Npp16sc ∗ nppsMalloc_16sc (int nSize)

  16-bit complex-value signal allocator.

- Npp32u ∗ nppsMalloc_32u (int nSize)

  32-bit unsigned signal allocator.

- Npp32s ∗ nppsMalloc_32s (int nSize)

  32-bit integer signal allocator.

- Npp32sc ∗ nppsMalloc_32sc (int nSize)

  32-bit complex integer signal allocator.

- Npp32f ∗ nppsMalloc_32f (int nSize)

  32-bit float signal allocator.

- Npp32fc ∗ nppsMalloc_32fc (int nSize)

  32-bit complex float signal allocator.

- Npp64s ∗ nppsMalloc_64s (int nSize)

  64-bit long integer signal allocator.

- Npp64sc ∗ nppsMalloc_64sc (int nSize)

  64-bit complex long integer signal allocator.

- Npp64f ∗ nppsMalloc_64f (int nSize)

  64-bit float (double) signal allocator.

- Npp64fc ∗ nppsMalloc_64fc (int nSize)

  64-bit complex complex signal allocator.

7.197.1 Detailed Description

Signal-allocator methods for allocating 1D arrays of data in device memory.

All allocators have size parameters to specify the size of the signal (1D array) being allocated.

The allocator methods return a pointer to the newly allocated memory of appropriate type. If device-memory allocation is not possible due to resource constaints the allocators return 0 (i.e. NULL pointer).

All signal allocators allocate memory aligned such that it is beneficial to the performance of the majority of the signal-processing primitives. It is no mandatory however to use these allocators. Any valid CUDA device-memory pointers can be passed to NPP primitives.

7.197.2 Function Documentation

7.197.2.1 Npp16s∗ nppsMalloc_16s (int *nSize*)

16-bit signal allocator.

Parameters:

nSize Number of shorts in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.2 Npp16sc∗ nppsMalloc_16sc (int *nSize*)

16-bit complex-value signal allocator.

Parameters:

nSize Number of 16-bit complex numbers in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.3 Npp16u∗ nppsMalloc_16u (int *nSize*)

16-bit unsigned signal allocator.

Parameters:

nSize Number of unsigned shorts in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.4 Npp32f∗ nppsMalloc_32f (int *nSize*)

32-bit float signal allocator.

Parameters:

nSize Number of floats in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.5 Npp32fc∗ nppsMalloc_32fc (int *nSize*)

32-bit complex float signal allocator.

Parameters:

nSize Number of complex float values in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.6 Npp32s∗ nppsMalloc_32s (int *nSize*)

32-bit integer signal allocator.

Parameters:

nSize Number of ints in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.7 Npp32sc∗ nppsMalloc_32sc (int *nSize*)

32-bit complex integer signal allocator.

Parameters:

nSize Number of complex integner values in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.8 Npp32u∗ nppsMalloc_32u (int *nSize*)

32-bit unsigned signal allocator.

Parameters:

nSize Number of unsigned ints in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.9 Npp64f∗ nppsMalloc_64f (int *nSize*)

64-bit float (double) signal allocator.

Parameters:

nSize Number of doubles in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.10 Npp64fc∗ nppsMalloc_64fc (int *nSize*)

64-bit complex complex signal allocator.

Parameters:

nSize Number of complex double valuess in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.11 Npp64s∗ nppsMalloc_64s (int *nSize*)

64-bit long integer signal allocator.

Parameters:

nSize Number of long ints in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.12 Npp64sc∗ nppsMalloc_64sc (int *nSize*)

64-bit complex long integer signal allocator.

Parameters:

nSize Number of complex long int values in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.13 Npp8s∗ nppsMalloc_8s (int *nSize*)

8-bit signed signal allocator.

Parameters:

nSize Number of (signed) chars in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.197.2.14 Npp8u∗ nppsMalloc_8u (int *nSize*)

8-bit unsigned signal allocator.

Parameters:

nSize Number of unsigned chars in the new signal.

Returns:

A pointer to the new signal. 0 (NULL-pointer) indicates that an error occurred during allocation.

7.198 Free

Free signal memory.

Functions

- void nppsFree (void ∗pValues)

  Free method for any signal memory.

7.198.1 Detailed Description

Free signal memory.

7.198.2 Function Documentation

7.198.2.1 void nppsFree (void ∗ *pValues*)

Free method for any signal memory.

Parameters:

pValues A pointer to memory allocated using nppiMalloc_<modifier>.

Chapter 8

Data Structure Documentation

8.1 NPP_ALIGN_16 Struct Reference

Complex Number This struct represents a long long complex number.

```
#include <nppdefs.h>
```

Data Fields

- Npp64s re

  Real part.

- Npp64s im

  Imaginary part.

- Npp64f re

  Real part.

- Npp64f im

  Imaginary part.

8.1.1 Detailed Description

Complex Number This struct represents a long long complex number.

Complex Number This struct represents a double floating-point complex number.

8.1.2 Field Documentation

8.1.2.1 Npp64f NPP_ALIGN_16::im

Imaginary part.

8.1.2.2 Npp64s NPP_ALIGN_16::im

Imaginary part.

8.1.2.3 Npp64f NPP_ALIGN_16::re

Real part.

8.1.2.4 Npp64s NPP_ALIGN_16::re

Real part.

The documentation for this struct was generated from the following file:

- C:/Perforce/sw/rel/gpgpu/toolkit/r5.5/NPP/npp/include/nppdefs.h

8.2 NPP_ALIGN_8 Struct Reference

Complex Number This struct represents an unsigned int complex number.

```
#include <nppdefs.h>
```

Data Fields

- Npp32u re

  Real part.

- Npp32u im

  Imaginary part.

- Npp32s re

  Real part.

- Npp32s im

  Imaginary part.

- Npp32f re

  Real part.

- Npp32f im

  Imaginary part.

8.2.1 Detailed Description

Complex Number This struct represents an unsigned int complex number.

Complex Number This struct represents a single floating-point complex number.

Complex Number This struct represents a signed int complex number.

8.2.2 Field Documentation

8.2.2.1 Npp32f NPP_ALIGN_8::im

Imaginary part.

8.2.2.2 Npp32s NPP_ALIGN_8::im

Imaginary part.

8.2.2.3 Npp32u NPP_ALIGN_8::im

Imaginary part.

8.2.2.4 Npp32f NPP_ALIGN_8::re

Real part.

8.2.2.5 Npp32s NPP_ALIGN_8::re

Real part.

8.2.2.6 Npp32u NPP_ALIGN_8::re

Real part.

The documentation for this struct was generated from the following file:

- C:/Perforce/sw/rel/gpgpu/toolkit/r5.5/NPP/npp/include/nppdefs.h

8.3 NppiHaarBuffer Struct Reference

```
#include <nppdefs.h>
```

Data Fields

- int haarBufferSize

  size of the buffer

- Npp32s ∗ haarBuffer

  buffer

8.3.1 Field Documentation

8.3.1.1 Npp32s∗ NppiHaarBuffer::haarBuffer

buffer

8.3.1.2 int NppiHaarBuffer::haarBufferSize

size of the buffer

The documentation for this struct was generated from the following file:

- C:/Perforce/sw/rel/gpgpu/toolkit/r5.5/NPP/npp/include/nppdefs.h

8.4 NppiHaarClassifier_32f Struct Reference

```
#include <nppdefs.h>
```

Data Fields

- int numClassifiers

  number of classifiers

- Npp32s ∗ classifiers

  packed classifier data 40 bytes each

- size_t classifierStep
- NppiSize classifierSize
- Npp32s ∗ counterDevice

8.4.1 Field Documentation

8.4.1.1 Npp32s∗ NppiHaarClassifier_32f::classifiers

packed classifier data 40 bytes each

8.4.1.2 NppiSize NppiHaarClassifier_32f::classifierSize

8.4.1.3 size_t NppiHaarClassifier_32f::classifierStep

8.4.1.4 Npp32s∗ NppiHaarClassifier_32f::counterDevice

8.4.1.5 int NppiHaarClassifier_32f::numClassifiers

number of classifiers

The documentation for this struct was generated from the following file:

- C:/Perforce/sw/rel/gpgpu/toolkit/r5.5/NPP/npp/include/nppdefs.h

8.5 NppiPoint Struct Reference

2D Point

```
#include <nppdefs.h>
```

Data Fields

- int x

  x-coordinate.

- int y

  y-coordinate.

8.5.1 Detailed Description

2D Point

8.5.2 Field Documentation

8.5.2.1 int NppiPoint::x

x-coordinate.

8.5.2.2 int NppiPoint::y

y-coordinate.

The documentation for this struct was generated from the following file:

- C:/Perforce/sw/rel/gpgpu/toolkit/r5.5/NPP/npp/include/nppdefs.h

8.6 NppiRect Struct Reference

2D Rectangle This struct contains position and size information of a rectangle in two space.

```
#include <nppdefs.h>
```

Data Fields

- int x

  x-coordinate of upper left corner.

- int y

  y-coordinate of upper left corner.

- int width

  Rectangle width.

- int height

  Rectangle height.

8.6.1 Detailed Description

2D Rectangle This struct contains position and size information of a rectangle in two space.

The rectangle's position is usually signified by the coordinate of its upper-left corner.

8.6.2 Field Documentation

8.6.2.1 int NppiRect::height

Rectangle height.

8.6.2.2 int NppiRect::width

Rectangle width.

8.6.2.3 int NppiRect::x

x-coordinate of upper left corner.

8.6.2.4 int NppiRect::y

y-coordinate of upper left corner.

The documentation for this struct was generated from the following file:

- C:/Perforce/sw/rel/gpgpu/toolkit/r5.5/NPP/npp/include/nppdefs.h

8.7 NppiSize Struct Reference

2D Size This struct typically represents the size of a a rectangular region in two space.

```
#include <nppdefs.h>
```

Data Fields

- int width

  Rectangle width.

- int height

  Rectangle height.

8.7.1 Detailed Description

2D Size This struct typically represents the size of a a rectangular region in two space.

8.7.2 Field Documentation

8.7.2.1 int NppiSize::height

Rectangle height.

8.7.2.2 int NppiSize::width

Rectangle width.

The documentation for this struct was generated from the following file:

- C:/Perforce/sw/rel/gpgpu/toolkit/r5.5/NPP/npp/include/nppdefs.h

8.8 NppLibraryVersion Struct Reference

```
#include <nppdefs.h>
```

Data Fields

- int major

  Major version number.

- int minor

  Minor version number.

- int build

  Build number.

8.8.1 Field Documentation

8.8.1.1 int NppLibraryVersion::build

Build number.

This reflects the nightly build this release was made from.

8.8.1.2 int NppLibraryVersion::major

Major version number.

8.8.1.3 int NppLibraryVersion::minor

Minor version number.

The documentation for this struct was generated from the following file:

- C:/Perforce/sw/rel/gpgpu/toolkit/r5.5/NPP/npp/include/nppdefs.h

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