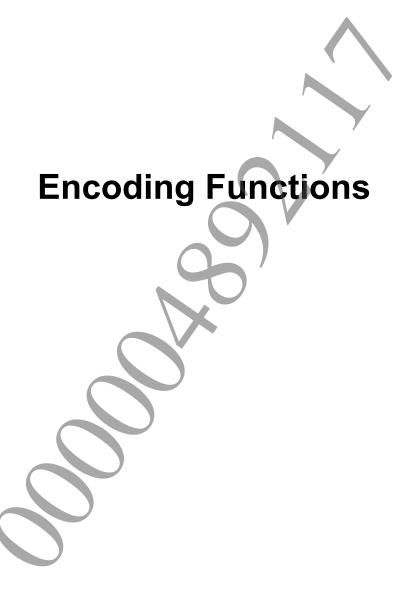


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sceJpegEncoderGetContextSize

Get context size of encoder

Definition

Arguments

None

Return Values

Returns the memory size required for the context of the encoder.

Description

This function is multithread safe.

Be sure to use this function to obtain the context size.



sceJpegEncoderInit

Initialize encoder

Definition

Arguments

context Encoder context

iFrameWidth Width of frame buffer storing image to be encodediFrameHeight Height of frame buffer storing image to be encoded

pixelFormat Format of image to be encoded

pJpeg Pointer to buffer for storing encoding results oJpegbufSize Size of buffer for storing encoding results

Return Values

Returns SCE OK (0) for success.

Returns one of the following error codes (negative value) for errors.

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR	0x80650200	Invalid frame buffer size storing image to be encoded
_IMAGE_SIZE		
SCE_JPEGENC_ERROR	0x80650203	Invalid format of image to be encoded
_INVALID_PIXELFORMAT		
SCE_JPEGENC_ERROR	0x80650205	Invalid encoder context address or invalid address of
_INVALID_POINTER		buffer storing encoder results or invalid size of buffer
		storing encoder results

Description

This function initializes the encoder.

To <code>context</code>, specify the work area to be used as the encoder context. Specify the pointer to an area with more bytes than the value returned with the <code>sceJpegEncoderGetContextSize()</code> function. Use a multiple of four for the starting address of the area. Retain the area without direct access until JPEG encoding is completed.

To iFrameWidth and iFrameHeight, specify the size of the frame buffer storing the image to be encoded. They are sizes (pixels) in the x and y directions respectively. For encoded images in YCbCr420, specify both in multiples of 16. When the image is YCbCr422, specify the width in multiples of 16 and the height in multiples of 8. If the input image is RGBA and the <code>sceJpegEncoderCsc()</code> function will be used to convert color space to YCbCr422/420, specify the image size between 64 x 64 pixels and 2032 x 1088 pixels.

To pixelFormat, specify the format of the image to be encoded. When the image is YCbCr420, specify SCE_JPEGENC_PIXEL_YCBCR420, and when the image is YCbCr422, specify SCE_JPEGENC_PIXEL_YCBCR422. If the input image is RGBA and the sceJpegEncoderCsc() function will be used to convert color space to YCbCr422/420, add SCE_JPEGENC_PITCH_HW_CSC to these values.

To pJpeg, specify the pointer to the buffer for storing the encoding results, and to oJpegbufSize, specify the buffer size in bytes. Specify the buffer size in multiples of 256.

This function is initialized to access only the video memory as input/output buffer region to pass data to encoder. In order to use the main memory, use <code>sceJpegEncoderInitWithParam()</code> instead of this function.

Notes

When this function uses a separate encoder context for each thread, it is multithread safe.

The buffer (pJpeg) for storing the encoding results has several restrictions. Refer to "Buffer Restrictions for Positioning I/O Data" in "Precautions" under the "JPEG Encoder Overview" document for details.



sceJpegEncoderInitWithParam

Initialize encoder (parameter-specified version)

Definition

Arguments

context Encoder context pInitParam parameter to be used at initialization

Return Values

Returns SCE OK (0) for success.

Returns one of the following error codes (negative value) for errors.

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR _IMAGE_SIZE	0x80650200	Invalid frame buffer size storing image to be encoded
SCE_JPEGENC_ERROR	0x80650203	Invalid format of image to be encoded
INVALID_PIXELFORMAT		
SCE_JPEGENC_ERROR	0x80650205	Invalid encoder context address or invalid address of
_INVALID_POINTER		buffer storing encoder results or invalid size of buffer
		storing encoder results
SCE_JPEGENC_ERROR	0x80650207	Value contained in the initialization parameter is
_INVALID_INIT_PARAM		invalid

Description

This function initializes the encoder.

To context, specify the work area to be used as the encoder context. Specify the pointer to an area with more bytes than the value returned with the sceJpegEncoderGetContextSize() function. Use a multiple of four for the starting address of the area. Retain the area without direct access until JPEG encoding is completed.

For pInitParam, specify parameters to be used at initialization.

Notes

sceJpegEncoderEncode

Execute encoding

Definition

Arguments

context Encoder context

pYCbCr Pointer to frame buffer storing image to be encoded

Return Values

Returns the JPEG size of the encoding result with a positive number for success.

Returns one of the following error codes (negative value) for errors.

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR	0x80650201	Insufficient size of buffer for storing encoding results
_INSUFFICIENT_BUFFER		ů ů
SCE_JPEGENC_ERROR	0x80650205	Invalid encoder context address or frame buffer
_INVALID_POINTER		address storing image to be encoded
SCE_JPEGENC_ERROR	0x80650206	Frame buffer storing image to be encoded or buffer
_NOT_PHY_CONTINUOUS_MEMORY		for storing encoding results is a physical address and
		is not a continuous area

Description

This function performs encoding. The encoding results are stored in pJpeg specified with sceJpegEncoderInit(). The size of the output JPEG is returned as the return value.

To context, specify the context of the encoder initialized with sceJpegEncoderInit().

To pYCbCr, specify the pointer to the frame buffer storing the image to be encoded.

Notes

When this function uses a separate encoder context for each thread, it is multithread safe.

The frame buffer (pYCbCr) storing the image to be encoded has several restrictions. Refer to "Buffer Restrictions for Positioning I/O Data" in "Precautions" under the "JPEG Encoder Overview" document for details.

sceJpegEncoderCsc

Convert color space from RGBA to YCbCr

Definition

Arguments

context Encoder context

pYCbCr Start pointer of buffer for storing conversion results

PRGBA Pointer to input frame buffer

iFrameWidth Width of input frame
inputPixelFormat Format of input frame

Return Values

Returns SCE OK (0) for success.

Returns one of the following error codes (negative value) for errors.

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR _IMAGE_SIZE	0x80650200	Invalid frame buffer size or input frame width
SCE_JPEGENC_ERROR	0x80650205	Invalid encoder context address or frame buffer
_INVALID_POINTER		address of I/O image
SCE_JPEGENC_ERROR	0x80650206	Frame buffer of I/O image is a physical address
_NOT_PHY_CONTINUOUS_MEMORY		and is not continuous

Description

This function converts color space of image data from RGBA to YCbCr. The format of the conversion results is set to <code>pixelFormat</code> as specified with <code>sceJpegEncoderInit()</code>, so call the <code>sceJpegEncoderEncode()</code> function to encode an image in RGBA to JPEG.

To context, specify the context of the encoder initialized with sceJpegEncoderInit().

To pYCbCr, specify the start pointer of the buffer for storing the conversion results. The output buffer size will not be checked, so specify sufficient memory area to store the converted image. Note that when the number of bytes per line for both Cb and Cr are not multiples of 16, the buffer must allow for the addition of a pitch difference.

To probe the start pointer of the buffer storing the image to be performed color space conversion.

To *iFrameWidth*, specify in pixels the width of the image specified with *pRGBA*. Specify the values in multiples of 4, ranging from the width of the frame buffer specified with <code>sceJpegEncoderInit()</code> to 2032.

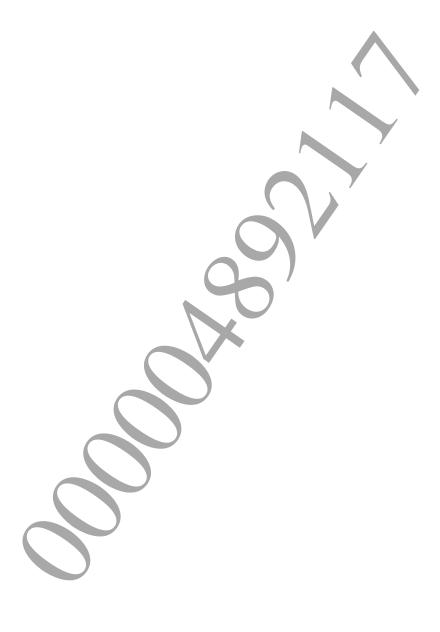
To inputPixelFormat, specify the format of input frame, SCE_JPEGENC_PIXEL_RGBA8888 or SCE_JPEGENC_PIXEL_BGRA8888.

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Notes

When this function uses a separate encoder context for each thread, it is multithread safe.

The frame buffer (pYCbCr, pRGBA) of the I/O image has several restrictions. Refer to "Buffer Restrictions for Positioning I/O Data" in "Precautions" under the "JPEG Encoder Overview" document for details.



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sceJpegEncoderEnd

End encoder

Definition

```
#include <scejpegenc.h>
int sceJpegEncoderEnd(
        SceJpegEncoderContext context
);
```

Arguments

context Encoder context

Return Values

Returns $SCE_OK(0)$ for success.

Returns the following error code (negative value) for errors.

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR_INVALID_POINTER	0x80650205	Invalid encoder context address

Description

This function ends the encoder.

To context, specify the context of the encoder initialized with sceJpegEncoderInit().

Notes

sceJpegEncoderSetValidRegion

Specify encoding area

Definition

Arguments

context Encoder context

iFrameWidth Width of encoding image frame buffer to be encoded *iFrameHeight* Height of encoding image frame buffer to be encoded

Return Values

Returns SCE OK (0) for success.

Returns one of the following error codes (negative value) for errors.

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR_IMAGE_SIZE	0x80650200	Specified area size is invalid
SCE_JPEGENC_ERROR_INVALID_POINTER	0x80650205	Invalid encoder context address

Description

This function specifies the area to be encoded.

To specify only one part of the frame buffer as a valid area, you can specify the size of the valid area and prevent unneeded areas from being encoded.

To context, specify the context of the encoder initialized with sceJpegEncoderInit().

To *iFrameWidth* and *iFrameHeight*, specify the size of the area to be encoded. They are sizes (pixels) in the x and y directions respectively. Specify these so as not to exceed the frame buffer size.

Notes

sceJpegEncoderSetCompressionRatio

Set compression ratio

Definition

```
#include <scejpegenc.h>
int sceJpegEncoderSetCompressionRatio(
        SceJpegEncoderContext context,
        int compratio
)
```

Arguments

context Encoder context compratio Compression ratio

Return Values

Returns SCE OK (0) for success.

Returns one of the following error codes (negative value) for errors.

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR_INVALID_COMPRATIO	0x80650202	Invalid compression ratio
SCE_JPEGENC_ERROR_INVALID_POINTER	0x80650205	Invalid encoder context address

Description

This function sets the JPEG compression ratio.

To context, specify the context of the encoder initialized with sceJpegEncoderInit().

To compratio, specify the compression ratio. Specify a value between 0 (SCE JPEGENC COMPRATIO NONE) and 255 (SCE JPEGENC COMPRATIO HIGH). A value of 0 represents the lowest compression ratio (higher quality), and a value of 255 represents the highest compression ratio (lower quality).

After the encoder is initialized, 64 (SCE JPEGENC COMPRATIO DEFAULT) is specified by default.

Notes

sceJpegEncoderSetHeaderMode

Specify header format

Definition

Arguments

context Encoder context

headerMode Format of output data header

Return Values

Returns SCE OK (0) for success.

Returns one of the following error codes (negative value) for errors.

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR_INVALID_HEADER_MODE	0x80650204	Invalid header format
SCE_JPEGENC_ERROR_INVALID_POINTER	0×80650205	Invalid encoder context address

Description

This function specifies the format of output data header.

To context, specify the context of the encoder initialized with sceJpegEncoderInit().

To headerMode, specify the value representing the header format. To output the data as a normal JPEG file, specify SCE_JPEGENC_MODE_JPEG. To output the data as Motion JPEG, specify SCE_JPEGENC_MODE_MJPEG.

After the encoder is initialized, SCE JPEGENC MODE JPEG is specified by default.

Notes

When this function uses a separate encoder context for each thread, it is multithread safe.

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sceJpegEncoderSetOutputAddr

Reuse encoding context (Change only output destination)

Definition

Arguments

context Encoder context

pJpeg Pointer to buffer for storing encoding results oJpegbufSize Size of buffer for storing encoding results

Return Values

Returns SCE OK (0) for success.

Returns the following error code (negative value) for errors

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR	0x80650205	Invalid encoder context address or invalid address of buffer
_INVALID_POINTER		storing encoder results

Description

This function specifies the buffer for storing the encoding results, again.

To context, specify the context of the encoder initialized with sceJpegEncoderInit().

To pJpeg, specify the pointer to the buffer for storing the encoding results, and to oJpegbufSize, specify the buffer size in bytes. Specify the buffer size in multiples of 256.

Notes

When this function uses a separate encoder context for each thread, it is multithread safe.

The buffer (pJpeg) for storing the encoding results has several restrictions. Refer to "Buffer Restrictions for Positioning I/O Data" in "Precautions" under the "JPEG Encoder Overview" document for details.

SceJpegEncoderContext

JPEG encoder context

Definition

#include <scejpegenc.h>
typedef void *SceJpegEncoderContext;

Description

This is the context of the JPEG encoder.

Use this function after initializing the JPEG encoder with <code>sceJpegEncoderInit()</code>. Thereafter, the context is set to argument <code>context</code> when <code>sceJpegEncoderEncode()</code> or another function is called.

See Also

sceJpegEncoderInit()

SceJpegEncoderInitParam

Initialization parameter of encoder

Definition

Arguments

size Number of bytes of this structure (size of (SceJpegEncoderInitParam))

iFrameWidth Width of frame buffer storing image to be encodediFrameHeight Height of frame buffer storing image to be encoded

pixelFormat Format of image to be encoded

pJpeg Pointer to buffer for storing encoding results oJpegbufSize Size of buffer for storing encoding results

option Option

Description

This structure is used to store parameters to pass when initializing encoder with sceJpegEncoderInitWithParam().

For size, specify the size of this structure in bytes.

To iFrameWidth and iFrameHeight, specify the size of the frame buffer storing the image to be encoded. They are sizes (pixels) in the x and y directions respectively. For encoded images in YCbCr420, specify both in multiples of 16. When the image is YCbCr422, specify the width in multiples of 16 and the height in multiples of 8. If the input image is RGBA and the sceJpegEncoderCsc() function will be used to convert color space to YCbCr422/420, specify the image size between 64 x 64 pixels and 2032 x 1088 pixels.

To pixelFormat, specify the format of the image to be encoded. When the image is YCbCr420, specify SCE_JPEGENC_PIXEL_YCBCR420, and when the image is YCbCr422, specify SCE_JPEGENC_PIXEL_YCBCR422. If the input image is RGBA and the sceJpegEncoderCsc() function will be used to convert color space to YCbCr422/420, add SCE_JPEGENC_PITCH_HW_CSC to these values.

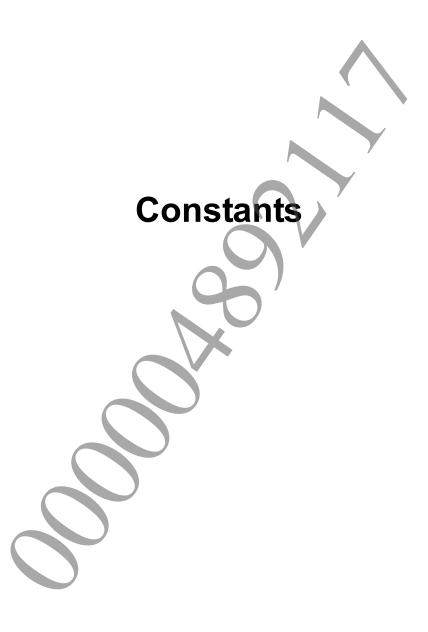
To pJpeg, specify the pointer to the buffer for storing the encoding results, and to oJpegbufSize, specify the buffer size in bytes. Specify the buffer size in multiples of 256.

To <code>option</code>, specify an initialization option. Specify <code>SCE_JPEGENC_INIT_OPTION_NONE</code> to utilize video memory as an input/output buffer region to pass on to the encoder. If you wish to use only the main memory, or both video/main memory, use <code>SCE_JPEGENC_INIT_OPTION_LPDDR2_MEMORY</code> instead.

Notes

The buffer (pJpeg) for storing the encoding results has several restrictions. Refer to "Buffer Restrictions for Positioning I/O Data" in "Precautions" under the "JPEG Encoder Overview" document for details.





Return Codes

List of JPEG encoder return codes

Definition

Value	Hexadecimal	Description
SCE_JPEGENC_ERROR_IMAGE_SIZE	0x80650200	Invalid image size
SCE_JPEGENC_ERROR_INSUFFICIENT_BUFFER	0x80650201	Insufficient output buffer size
SCE_JPEGENC_ERROR_INVALID_COMPRATIO	0x80650202	Invalid compression ratio
SCE_JPEGENC_ERROR_INVALID_PIXELFORMAT	0x80650203	Invalid image format
SCE_JPEGENC_ERROR_INVALID_HEADER_MODE	0x80650204	Invalid header output mode
SCE_JPEGENC_ERROR_INVALID_POINTER	0x80650205	Invalid buffer pointer or size
SCE_JPEGENC_ERROR_NOT_PHY_CONTINUOUS_MEMORY	0x80650206	Physical address of specified
		memory area is not continuous
SCE_JPEGENC_ERROR_INVALID_INIT_PARAM	0x80650207	Value contained in the
		initialization parameter is
		invalid

