Class

vImageConverter

A description of a conversion from one image format to another.

iOS | iPadOS | Mac Catalyst | macOS | tvOS | visionOS | watchOS

```
class vImageConverter
```

Mentioned in

- Applying color transforms to images with a multidimensional lookup table
- Building a basic image conversion workflow
- Converting chroma-subsampled images

Overview

The `vImageConverter` class is an opaque type that contains information needed to do a rapid conversion from one image type to another.

You use the converter creation functions, for example, `vImageConverter_CreateWithCGImageFormat(_:_:_:_:_:)`, to create instances of converters. Sometimes, there can be an overhead when creating a converter, so create them in advance and reuse them. Converters are thread safe; that is, you can use the same object concurrently in multiple threads.

Topics

Instance Properties

```
var destinationBufferCount: Int
```

The number of destination buffers written to by the converter.

```
var sourceBufferCount: Int
```

The number of source buffers written to by the converter.

Instance Methods

```
func convert(source: vImage_Buffer, destination: inout vImage_Buffer, flags: vImage.Options) throws
```

Converts the pixels in a vImage buffer to another format.

```
func mustOperateOutOfPlace(source: vImage_Buffer, destination: vImage_Buffer, flags: vImage.Options) throws -> Bool
```

Determines whether a converter is capable of operating in place.

```
func destinationBuffers(colorSpace: CGColorSpace) -> [vImage.BufferType?]
```

Returns a list of vImage destination buffer types, specifying the order of planes.

```
func sourceBuffers(colorSpace: CGColorSpace) -> [vImage.BufferType?]
```

Returns a list of vImage source buffer types, specifying the order of planes.

```
func convert<Src, Dest>(from: vImage.PixelBuffer<Src>, to: vImage.PixelBuffer<Dest>) throws
```

```
func convert<F1, F2>(from: [vImage.PixelBuffer<F1>], to: [vImage.PixelBuffer<F2>]) throws
```

```
func makeCGToCVPixelBuffers(referencing: CVPixelBuffer) throws -> [vImage.PixelBuffer<vImage.DynamicPixelFormat>]
```

```
func makeCVToCGPixelBuffers(referencing: CVPixelBuffer) throws -> [vImage.PixelBuffer<vImage.DynamicPixelFormat>]
```

Type Methods

```
static func make(sourceFormat: vImageCVImageFormat, destinationFormat: vImage_CGImageFormat, flags: vImage.Options) throws -> vImageConverter
```

Creates a vImage converter that converts a Core Video-formatted image to a Core Graphics-formatted image.

```
static func make(sourceFormat: vImage_CGImageFormat, destinationFormat:
vImage_CGImageFormat, flags: vImage.Options) throws -> vImageConverter
```

Creates a vImage converter that converts from one vImage Core Graphics image format to another.

```
static func make(sourceFormat: vImage_CGImageFormat, destinationFormat:
vImageCVImageFormat, flags: vImage.Options) throws -> vImageConverter
```

Creates a vImage converter that converts a Core Graphics-formatted image to a Core Video-formatted image.

```
static func make(sourceFormat: vImage_CGImageFormat, destinationFormat:
vImage_CGImageFormat, colorConversionInfo: CGColorConversionInfo)
throws -> vImageConverter
```

Relationships

Conforms To

`Equatable`, `Hashable`

See Also

Creating a converter

```
func vImageConverter_CreateWithCGImageFormat(UnsafePointer<vImage
_CGImageFormat>, UnsafePointer<vImage_CGImageFormat>, UnsafePointer<
CGFloat>!, vImage_Flags, UnsafeMutablePointer<vImage_Error>!) ->
Unmanaged<vImageConverter>!
```

Creates a vImage converter that converts from one vImage Core Graphics image format to another.

```
func vImageConverter_CreateWithCGColorConversionInfo(CGColorConversion
Info, UnsafePointer<vImage_CGImageFormat>, UnsafePointer<vImage_CGImage
Format>, UnsafePointer<CGFloat>!, vImage_Flags, UnsafeMutablePointer<v
Image_Error>!) -> Unmanaged<vImageConverter>!
```

Creates an any-to-any converter that uses a color conversion information object to convert from one image format to another.

```
func vImageConverter_CreateForCGToCVImageFormat(UnsafePointer<vImage_CGImageFormat>, vImageCVImageFormat, UnsafePointer<CGFloat>!, vImage_Flags, UnsafeMutablePointer<vImage_Error>!) -> Unmanaged<vImageConverter>!
```

Creates a vImage converter that converts a Core Graphics-formatted image to a Core Video-formatted image.

```
func vImageConverter_CreateForCVToCGImageFormat(vImageCVImageFormat, UnsafePointer<vImage_CGImageFormat>, UnsafePointer<CGFloat>!, vImage_Flags, UnsafeMutablePointer<vImage_Error>!) -> Unmanaged<vImageConverter>!
```

Creates a vImage converter that converts a Core Video-formatted image to a Core Graphics-formatted image.

```
func vImageConverter_CreateWithColorSyncCodeFragment(CFTypeRef, UnsafePointer<vImage_CGImageFormat>, UnsafePointer<vImage_CGImageFormat>!, UnsafePointer<CGFloat>!, vImage_Flags, UnsafeMutablePointer<vImage_Error>!) -> Unmanaged<vImageConverter>!
```

Creates a vImage converter to convert from one vImage Core Graphics image format to another, using custom ColorSync transform.