Documentation

Accelerate / ··· / vImage Operations / Alpha compositing

API Collection

Alpha compositing

Composite images together.

Topics

Performing nonpremultiplied alpha compositing

```
func vImageAlphaBlend_Planar8(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs nonpremultiplied alpha compositing of two 8-bit planar buffers.

```
func vImageAlphaBlend_PlanarF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs nonpremultiplied alpha compositing of two 8-bit planar buffers.

```
func vImageAlphaBlend_ARGB8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs nonpremultiplied alpha compositing of two 8-bit-per-channel, 4-channel ARGB buffers.

```
func vImageAlphaBlend_ARGBFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs nonpremultiplied alpha compositing of two 32-bit-per-channel, 4-channel ARGB buffers.

Performing premultiplied alpha compositing

```
func vImagePremultipliedAlphaBlend_Planar8(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 8-bit planar buffers.

```
func vImagePremultipliedAlphaBlend_PlanarF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 32-bit planar buffers.

```
func vImagePremultipliedAlphaBlend_ARGB8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 8-bit-per-channel, 4-channel ARGB buffers.

```
func vImagePremultipliedAlphaBlend_ARGBFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 32-bit-per-channel, 4-channel ARGB buffers.

```
func vImagePremultipliedAlphaBlend_BGRA8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 8-bit-per-channel, 4-channel BGRA buffers.

```
vImagePremultipliedAlphaBlend_RGBA8888
```

Performs premultiplied alpha compositing of two 8-bit-per-channel, 4-channel RGBA buffers.

```
func vImagePremultipliedAlphaBlend_BGRAFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 32-bit-per-channel, 4-channel BGRA buffers.

```
vImagePremultipliedAlphaBlend_RGBAFFFF
```

Performs premultiplied alpha compositing of two 32-bit-per-channel, 4-channel RGBA buffers.

Performing premultiplied alpha compositing with blend modes

```
func vImagePremultipliedAlphaBlendLighten_RGBA8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs alpha compositing of two 8-bit-per-channel, 4-channel BGRA buffers using the lighten blend mode.

```
func vImagePremultipliedAlphaBlendDarken_RGBA8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs alpha compositing of two 8-bit-per-channel, 4-channel BGRA buffers using the darken blend mode.

```
func vImagePremultipliedAlphaBlendScreen_RGBA8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs alpha compositing of two 8-bit-per-channel, 4-channel BGRA buffers using the screen blend mode.

```
func vImagePremultipliedAlphaBlendMultiply_RGBA8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs alpha compositing of two 8-bit-per-channel, 4-channel BGRA buffers using the multiply blend mode.

Performing premultiplied alpha compositing with a permute

```
func vImagePremultipliedAlphaBlendWithPermute_ARGB8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<UInt8>, Bool, vImage_Flags) -> vImage_Error
```

Permutes the top 8-bit, 4-channel premultiplied buffer, and composites with the bottom buffer.

```
func vImagePremultipliedAlphaBlendWithPermute_RGBA8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<UInt8>, Bool, vImage_Flags) -> vImage_Error
```

Permutes the top 8-bit, 4-channel premultiplied buffer, and composites with the bottom buffer.

Performing premultiplied alpha compositing with a single alpha value

```
func vImagePremultipliedConstAlphaBlend_Planar8(UnsafePointer<vImage_Buffer>, Pixel_8, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 8-bit planar buffers and applies an extra alpha value to the top buffer.

```
func vImagePremultipliedConstAlphaBlend_PlanarF(UnsafePointer<vImage_Buffer>, Pixel_F, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 32-bit planar buffers and applies an extra alpha value to the top buffer.

```
func vImagePremultipliedConstAlphaBlend_ARGB8888(UnsafePointer<vImage_Buffer>, Pixel_8, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 8-bit-per-channel, 4-channel interleaved buffers and applies an extra alpha value to the top buffer.

```
func vImagePremultipliedConstAlphaBlend_ARGBFFFF(UnsafePointer<vImage_Buffer>, Pixel_F, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Performs premultiplied alpha compositing of two 32-bit-per-channel, 4-channel interleaved buffers and applies an extra alpha value to the top buffer.

Performing nonpremultiplied to premultiplied alpha compositing

```
func vImageAlphaBlend_NonpremultipliedToPremultiplied_Planar8(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Composites a nonpremultiplied 8-bit planar buffer over a premultiplied 8-bit planar buffer and generates a premultiplied result.

```
func vImageAlphaBlend_NonpremultipliedToPremultiplied_PlanarF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Composites a nonpremultiplied 32-bit planar buffer over a premultiplied 32-bit planar buffer and generates a premultiplied result.

```
func vImageAlphaBlend_NonpremultipliedToPremultiplied_ARGB8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Composites a nonpremultiplied 8-bit-per-channel, ARGB buffer over a premultiplied ARGB buffer and generates a premultiplied result.

```
func vImageAlphaBlend_NonpremultipliedToPremultiplied_ARGBFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Composites a nonpremultiplied 32-bit-per-channel, ARGB buffer over a premultiplied ARGB buffer and generates a premultiplied result.

Converting from unpremultiplied to premultiplied format

```
func vImagePremultiplyData_Planar8(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an 8-bit planar buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_PlanarF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a 32-bit planar buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_ARGB8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an 8-bit-per-channel, 4-channel ARGB buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_RGBA8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an 8-bit-per-channel, 4-channel RGBA buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
vImagePremultiplyData_BGRA8888
```

Transforms an 8-bit-per-channel, 4-channel BGRA buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_ARGB16U(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an unsigned 16-bit-per-channel, 4-channel ARGB buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_RGBA16U(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an unsigned 16-bit-per-channel, 4-channel RGBA buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_RGBA16F(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a floating-point 16-bit-per-channel, 4-channel RGBA buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_ARGB16Q12(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a fixed-point 16-bit-per-channel, 4-channel ARGB buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_RGBA16Q12(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a fixed-point 16-bit-per-channel, 4-channel RGBA buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_ARGBFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a floating-point 32-bit-per-channel, 4-channel ARGB buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
func vImagePremultiplyData_RGBAFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a floating-point 32-bit-per-channel, 4-channel ARGB buffer from nonpremultiplied alpha format to premultiplied alpha format.

```
vImagePremultiplyData_BGRAFFFF
```

Transforms a floating-point 32-bit-per-channel, 4-channel BGRA buffer from nonpremultiplied alpha format to premultiplied alpha format.

Converting from premultiplied to unpremultiplied format

```
func vImageUnpremultiplyData_Planar8(UnsafePointer<vImage_Buffer>,
UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage
_Flags) -> vImage_Error
```

Transforms an 8-bit planar buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_PlanarF(UnsafePointer<vImage_Buffer>,
UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage
_Flags) -> vImage_Error
```

Transforms a 32-bit planar buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_ARGB8888(UnsafePointer<vImage_Buffer>,
UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an 8-bit-per-channel, 4-channel ARGB buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_RGBA8888(UnsafePointer<vImage_Buffer>,
UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an 8-bit-per-channel, 4-channel RGBA buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
vImageUnpremultiplyData_BGRA8888
```

Transforms an 8-bit-per-channel, 4-channel BGRA buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_ARGB16U(UnsafePointer<vImage_Buffer>,
UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an unsigned 16-bit-per-channel, 4-channel ARGB buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_RGBA16U(UnsafePointer<vImage_Buffer>,
UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms an unsigned 16-bit-per-channel, 4-channel RGBA buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_RGBA16F(UnsafePointer<vImage_Buffer>,
UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a floating-point 16-bit-per-channel, 4-channel RGBA buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_ARGB16Q12(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a fixed-point 16-bit-per-channel, 4-channel ARGB buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_RGBA16Q12(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a fixed-point 16-bit-per-channel, 4-channel RGBA buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_ARGBFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a 32-bit-per-channel, 4-channel ARGB buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
func vImageUnpremultiplyData_RGBAFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Transforms a 32-bit-per-channel, 4-channel RGBA buffer from premultiplied alpha format to nonpremultiplied alpha format.

```
vImageUnpremultiplyData_BGRAFFFF
```

Transforms a 32-bit-per-channel, 4-channel BGRA buffer from premultiplied alpha format to nonpremultiplied alpha format.

Clipping color values to alpha

```
func vImageClipToAlpha_Planar8(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Clamps the values of an 8-bit planar buffer to the corresponding alpha values.

```
func vImageClipToAlpha_PlanarF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Clamps the values of a 32-bit planar buffer to the corresponding alpha values.

```
func vImageClipToAlpha_ARGB8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Clamps the values of an 8-bit-per-channel, 4-channel ARGB buffer to the corresponding alpha values.

```
func vImageClipToAlpha_RGBA8888(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Clamps the values of an 8-bit-per-channel, 4-channel RGBA buffer to the corresponding alpha values.

```
func vImageClipToAlpha_ARGBFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Clamps the values of a 32-bit-per-channel, 4-channel ARGB buffer to the corresponding alpha values.

```
func vImageClipToAlpha_RGBAFFFF(UnsafePointer<vImage_Buffer>, UnsafePointer<vImage_Buffer>, vImage_Flags) -> vImage_Error
```

Clamps the values of a 32-bit-per-channel, 4-channel RGBA buffer to the corresponding alpha values.

See Also

Related Documentation

- Compositing images with alpha blending

  Combine two images by using alpha blending to create a single output.

- Compositing images with vImage blend modes

  Combine two images by using blend modes to create a single output.