Instance Method

multiply(by:divisor:preBias:postBias:destination:)

Multiplies each four channel pixel in an 8-bit-per channel, 4-channel pixel buffer by a four element matrix to produce a single channel result.

iOS 16.0+ | iPadOS 16.0+ | Mac Catalyst | macOS 13.0+ | tvOS 16.0+ | visionOS | watchOS 9.0+

```
func multiply(
    by matrix: (Int, Int, Int, Int),
    divisor: Int,
    preBias: (Int, Int, Int, Int),
    postBias: Int,
    destination: vImage.PixelBuffer<vImage.Planar8>
)
```

Available when `Format` is `vImage.Interleaved8x4`.

Parameters

`matrix`
The 4 x 4 multiplication matrix values in row-major order.

`divisor`
A value that the function divides the result by.

`preBias`
Values that the function adds to the source before multiplication.

`postBias`

A value that the function adds to the result after multiplication.

`destination`

The destination pixel buffer.

Discussion

This function applies the following operation to each pixel:

```
p = (source.0 + preBias.0) * matrix.0 +
    (source.1 + preBias.1) * matrix.1 +
    (source.2 + preBias.2) * matrix.2 +
    (source.3 + preBias.3) * matrix.3
destination = (p + postBias) / divisor
```

The operation clamps the destination pixel to `0...255`.

See Also

Pixel Multiplication

`func multiply(by: (Float, Float, Float, Float), preBias: (Float, Float, Float, Float), postBias: Float, destination: vImage.PixelBuffer<vImage.PlanarF>)`

Multiplies each four channel pixel in a 32-bit-per channel, 4-channel pixel buffer by a four element matrix to produce a single channel result.