Instance Method

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

Multiplies each pixel in a 32-bit planar pixel buffer by the specified factor.

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

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

Available when `Format` is `vImage.PlanarF`.

## Parameters

**`factor`**
The multiplication factor.

**`preBias`**
A value 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:

```
destination = ((source + preBias) * factor) + postBias
```

For example, the following code multiplies each pixel value in a 32-bit planar buffer by 2:

```
let buffer = vImage.PixelBuffer<vImage.PlanarF>(
    pixelValues: [0.1, 0.2, 0.3, 0.4, 0.5],
    size: vImage.Size(width: 5,
                      height: 1))

buffer.multiply(by: 2,
                preBias: 0, postBias: 0,
                destination: buffer)

// Prints "[0.2, 0.4, 0.6, 0.8, 1.0]"
print(buffer.array)
```

# See Also

## Scalar Multiplication

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

Multiplies each pixel in an 8-bit planar pixel buffer by the specified factor.