

[Core Image](#) / [CIImageProcessorKernel](#) / `process(with:arguments:output:)`

Type Method

process(with:arguments:output:)

Override this class method to implement your Core Image Processor Kernel subclass.

iOS 10.0+ | iPadOS 10.0+ | Mac Catalyst 13.1+ | macOS 10.12+ | tvOS 10.0+ | visionOS 1.0+

```
class func process(  
    with inputs: [any CIImageProcessorInput]?,  
    arguments: [String : Any]?,  
    output: any CIImageProcessorOutput  
) throws
```

Parameters

inputs

An array of `id<CIImageProcessorInput>` that the class consumes to produce its output. The `input.region` may be larger than the `rect` returned by [`roi\(forInput:arguments:outputRect:\)`](#).

arguments

The arguments dictionary that was passed to [`apply\(withExtent:inputs:arguments:\)`](#).

output

The `id<CIImageProcessorOutput>` that the `CIImageProcessorKernel` must provide results to.

Discussion

When a `CIImage` containing your `CIImageProcessorKernel` class is rendered, your class' implementation of this method will be called as needed for that render. The method may be called more than once if Core Image needs to tile to limit memory usage.

When your implementation of this class method is called, use the provided `inputs` and `arguments` objects to return processed pixel data to Core Image via `output`.

Important

This is a class method so that you cannot use or capture any state by accident. All the parameters that affect the output results must be passed to `apply(withExtent:inputs:arguments:)`.

See Also

Type Methods

```
class func apply(withExtent: CGRect, inputs: [CIImage]?, arguments: [String : Any]?) throws -> CIImage
```

Call this method on your Core Image Processor Kernel subclass to create a new image of the specified extent.

```
class func formatForInput(at: Int32) -> CIFormat
```

Override this class method if you want any of the inputs to be in a specific pixel format.

```
class func roi(forInput: Int32, arguments: [String : Any]?, outputRect: CGRect) -> CGRect
```

Override this class method to implement your processor's ROI callback.

```
class func roiTileArray(forInput: Int32, arguments: [String : Any]?, outputRect: CGRect) -> [CIVector]
```

Override this class method to implement your processor's tiled ROI callback.