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Class


AVCaptureVideoPreviewLayer

A Core Animation layer that displays video from a camera device.

iOS 4.0+ | iPadOS 4.0+ | Mac Catalyst 14.0+ | macOS 10.7+ | tvOS 17.0+

```
class AVCaptureVideoPreviewLayer
```

Mentioned in

 [Setting up a capture session](#)

Overview

Use this layer to provide a preview of the content the camera captures. A convenient way to use this class in iOS is to set it as the backing layer for a view as shown below.

```
class PreviewView: UIView {  
    // Use a capture video preview layer as the view's backing layer.  
    override class var layerClass: AnyClass {  
        AVCaptureVideoPreviewLayer.self  
    }  
  
    var previewLayer: AVCaptureVideoPreviewLayer {  
        layer as! AVCaptureVideoPreviewLayer  
    }  
  
    // Connect the layer to a capture session.  
    var session: AVCaptureSession? {  
        get { previewLayer.session }  
    }  
}
```

```
        set { previewLayer.session = newValue }  
    }  
}
```

Topics

Creating a preview layer

`init(session: AVCaptureSession)`

Creates a layer to preview the visual output of a capture session.

`init(sessionWithNoConnection: AVCaptureSession)`

Creates a layer to preview the visual output of a capture session, without making connections to eligible video inputs.

Layer configuration

`var isPreviewing: Bool`

A Boolean value that indicates whether the layer is rendering video frames from its source.

`var videoGravity: AVLayerVideoGravity`

A value that indicates how the layer displays video content within its bounds.

Configuring deferred start

`var isDeferredStartSupported: Bool`

A BOOL value that indicates whether the preview layer supports deferred start.

`var isDeferredStartEnabled: Bool`

A BOOL value that indicates whether to defer starting this preview layer.

Session configuration

`var session: AVCaptureSession?`

A capture session with visual output to preview.

`var connection: AVCaptureConnection?`

An object that describes the connection from the layer to a particular input port.

```
func setSessionWithNoConnection(AVCaptureSession)
```

Associates a session with the layer without automatically forming a connection to an eligible input port.

Converting between coordinate spaces

```
func layerPointConverted(fromCaptureDevicePoint: CGPoint) -> CGPoint
```

Converts a point from the coordinate space of the capture device to the coordinate space of the layer.

```
func captureDevicePointConverted(fromLayerPoint: CGPoint) -> CGPoint
```

Converts a point from layer coordinates to the coordinate space of the capture device.

```
func layerRectConverted(fromMetadataOutputRect: CGRect) -> CGRect
```

Converts a rectangle from metadata output coordinates to the coordinate space of the layer.

```
func metadataOutputRectConverted(fromLayerRect: CGRect) -> CGRect
```

Converts a rectangle from layer coordinates to the coordinate space of the metadata output.

```
func transformedMetadataObject(for: AVMetadataObject) -> AVMetadataObject?
```

Converts a metadata object's visual properties to layer coordinates.

Deprecated

⋮ Deprecated symbols

Review unsupported symbols and their replacements.

Relationships

Inherits From

CALayer

Conforms To

CAMediaTiming

CVarArg

CustomDebugStringConvertible
CustomStringConvertible
Equatable
Hashable
NSCoding
NSObjectProtocol
NSSecureCoding
Sendable
SendableMetatype

See Also

Capture preview

```
class AVCaptureAudioPreviewOutput
```

A capture output that provides a preview of the captured audio.