

[AVFoundation](#) / [AVCaptureOutput](#)

Class

AVCaptureOutput

An abstract superclass for objects that provide media output destinations for a capture session.

iOS 4.0+ | iPadOS 4.0+ | Mac Catalyst 14.0+ | macOS 10.7+ | tvOS 17.0+ | visionOS 1.0+

```
class AVCaptureOutput
```

Mentioned in

 Setting up a capture session

Overview

This class provides an abstract interface to connect capture output destinations, such as files and streams, to a capture session.

A capture output can have multiple connections, one for each stream of media that it receives from a capture input. A capture output doesn't have any connections when you create it. When you add it to a capture session, the session automatically forms connections between compatible inputs and outputs.

Topics

[Accessing connections](#)

```
var connections: [AVCaptureConnection]
```

The capture output object's connections.

```
func connection(with: AVMediaType) -> AVCaptureConnection?
```

Returns the first connection with an input port of a specified media type.

```
enum DataDroppedReason
```

Constants that define reasons for why the system dropped a frame.

Managing deferred start

```
var isDeferredStartEnabled: Bool
```

A Boolean value that indicates whether to defer starting this capture output.

```
var isDeferredStartSupported: Bool
```

A BOOL value that indicates whether the output supports deferred start.

Converting between coordinate systems

```
func transformedMetadataObject(for: AVMetadataObject, connection: AVCaptureConnection) -> AVMetadataObject?
```

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

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

Converts a rectangle in the capture output object's coordinate system to one in the coordinate system used for metadata outputs.

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

Converts a rectangle in the coordinate system used for metadata outputs to one in the capture output object's coordinate system.

Relationships

Inherits From

NSObject

Inherited By

AVCaptureAudioDataOutput
AVCaptureAudioPreviewOutput
AVCaptureDepthDataOutput
AVCaptureFileOutput
AVCaptureMetadataOutput
AVCapturePhotoOutput
AVCaptureStillImageOutput
AVCaptureVideoDataOutput

Conforms To

CVarArg
CustomDebugStringConvertible
CustomStringConvertible
Equatable
Hashable
NSObjectProtocol

See Also

Capture sessions

- 📄 Setting up a capture session
 - Configure input devices, output media, preview views, and basic settings before capturing photos or video.
- 📄 Accessing the camera while multitasking on iPad
 - Operate the camera in Split View, Slide Over, Picture in Picture, and Stage Manager modes.
- { } AVCam: Building a camera app
 - Capture photos and record video using the front and rear iPhone and iPad cameras.
- { } Capturing Cinematic video
 - Capture video with an adjustable depth of field and focus points.
- { } AVMultiCamPiP: Capturing from Multiple Cameras

Simultaneously record the output from the front and back cameras into a single movie file by using a multi-camera capture session.

{ } **AVCamBarcode**: detecting barcodes and faces

Identify machine readable codes or faces by using the camera.

class AVCaptureSession

An object that configures capture behavior and coordinates the flow of data from input devices to capture outputs.

class AVCaptureMultiCamSession

A capture session that supports simultaneous capture from multiple inputs of the same media type.

class AVCaptureInput

An abstract superclass for objects that provide input data to a capture session.

class AVCaptureConnection

An object that represents a connection from a capture input to a capture output.