

[Core Video](#) / CVIDisplayLink

API Collection

# CVIDisplayLink

A high-priority thread that notifies your app when a given display will need each frame.

## Overview

A Core Video display link provides a separate high-priority thread to notify your application when a given display will need each frame. You can use a display link to easily synchronize with the refresh rate of a display. The display link API uses the Core Foundation class system internally to provide reference counting behavior and other useful properties.

## Topics

### Creating Display Links

```
func CVIDisplayLinkCreateWithCGDisplay(CGDirectDisplayID, UnsafeMutablePointer<CVIDisplayLink?>) -> CVReturn
```

Creates a display link for a single display.

**Deprecated**

```
func CVIDisplayLinkCreateWithCGDisplays(UnsafeMutablePointer<CGDirectDisplayID>, CFIndex, UnsafeMutablePointer<CVIDisplayLink?>) -> CVReturn
```

Creates a display link for an array of displays.

**Deprecated**

```
func CVIDisplayLinkCreateWithActiveCGDisplays(UnsafeMutablePointer<CVIDisplayLink?>) -> CVReturn
```

Creates a display link capable of being used with all active displays.

Deprecated

```
func CVDisplayLinkCreateWithOpenGLDisplayMask(CGOpenGLDisplayMask, UnsafeMutablePointer<CVDisplayLink?>) -> CVReturn
```

Creates a display link from an OpenGL display mask.

Deprecated

## Configuring Display Links

```
func CVDisplayLinkSetCurrentCGDisplay(CVDisplayLink, CGDirectDisplayID) -> CVReturn
```

Sets the current display of a display link.

Deprecated

```
func CVDisplayLinkSetCurrentCGDisplayFromOpenGLContext(CVDisplayLink, CGLContextObj, CGLPixelFormatObj) -> CVReturn
```

Selects the display link most optimal for the current renderer of an OpenGL context.

Deprecated

```
func CVDisplayLinkSetOutputCallback(CVDisplayLink, CVDisplayLinkOutputCallback?, UnsafeMutableRawPointer?) -> CVReturn
```

Sets the renderer output callback function.

Deprecated

```
func CVDisplayLinkSetOutputHandler(CVDisplayLink, CVDisplayLinkOutputHandler) -> CVReturn
```

Deprecated

```
typealias CVDisplayLinkOutputHandler
```

## Inspecting Display Links

```
func CVDisplayLinkGetCurrentCGDisplay(CVDisplayLink) -> CGDirectDisplayID
```

Gets the current display associated with a display link.

Deprecated

```
func CVDisplayLinkGetCurrentTime(CVDisplayLink, UnsafeMutablePointer<CVTimeStamp>) -> CVReturn
```

Retrieves the current ("now") time of a given display link.

Deprecated

```
func CVDisplayLinkTranslateTime(CVDisplayLink, UnsafePointer<CVTimeStamp>, UnsafeMutablePointer<CVTimeStamp>) -> CVReturn
```

Translates the time in the display link's time base from one representation to another.

Deprecated

```
func CVDisplayLinkGetActualOutputVideoRefreshPeriod(CVDisplayLink) -> Double
```

Retrieves the actual output refresh period of a display as measured by the system time.

Deprecated

```
func CVDisplayLinkGetNominalOutputVideoRefreshPeriod(CVDisplayLink) -> CVTime
```

Retrieves the nominal refresh period of a display link.

Deprecated

```
func CVDisplayLinkGetOutputVideoLatency(CVDisplayLink) -> CVTime
```

Retrieves the nominal latency of a display link.

Deprecated

```
func CVDisplayLinkIsRunning(CVDisplayLink) -> Bool
```

Indicates whether a given display link is running.

Deprecated

```
func CVDisplayLinkGetTypeID() -> CFTypeID
```

Obtains the Core Foundation ID for the display link data type.

Deprecated

## Managing Display Links

```
func CVDisplayLinkStart(CVDisplayLink) -> CVReturn
```

Activates a display link.

Deprecated

```
func CVDisplayLinkStop(CVDisplayLink) -> CVReturn
```

Stops a display link.

Deprecated

## Data Types

`class CVDisplayLink`

A reference to a display link object.

`typedef CVOptionFlags`

The flags to be used for the display link output callback function.

## Callbacks

`typedef CVDisplayLinkOutputCallback`

A type for a display link callback function that the system invokes when it's time for the app to output a video frame.

`typedef CVDisplayLinkOutputHandler`

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## See Also

### Time Management

⌵ CVTime

A structure used for storing Core Video time values.