

[AudioDriverKit](#) / [IOUserAudioDriver](#)

Class

IOUserAudioDriver

A DriverKit provider object that manages communications with an audio device.

DriverKit 21.0+

```
class IOUserAudioDriver;
```

Overview

For the Core Audio host to match against this driver, add the following keys to `IOKit Personalities`, in the driver's `Info.plist` file:

```
<key>IOUserAudioDriverUserClientProperties</key>
<dict>
    <key>IOClass</key>
    <string>IOUserUserClient</string>
    <key>IOUserClass</key>
    <string>IOUserAudioDriverUserClient</string>
</dict>
```

After matching the host with the driver, the AudioDriverKit framework creates the connection to the Core Audio HAL as soon as the [IOService](#) calls [NewUserClient](#). The driver extension must have the `com.apple.developer.driverkit.allow-any-userclient-access` entitlement.

Topics

Running the Driver Service

`init`

Handles the basic initialization of the service.

`Start`

Starts the current service and associates it with the specified provider.

`Stop`

Stops the service associated with the specified provider.

`free`

Performs any final cleanup for the service.

Getting Information About the Class

`GetClassID`

Gets the audio class identifier of the object.

`GetBaseClassID`

Gets the audio class identifier of the base class object.

`IOUserAudioClassID`

An identifier for the type of audio object.

`GetWorkQueue`

Gets the work queue created by the audio object, as a pointer to a dispatch queue.

`GetName`

Gets the name of the driver.

`SetName`

Sets the name of the driver.

Getting the Driver's Audio Object Identifier

`kIOUserAudioObjectIDDriver`

The audio object ID of the driver.

Starting and Stopping the Driver

StartDevice

Tells the driver to start I/O on an audio device or audio clock device.

StopDevice

Tells the driver to stop I/O on an audio device or audio clock device.

IOUserAudioObjectID

An identifier that provides a handle on a specific audio object.

IOUserAudioStartStopFlags

Values that indicate I/O starts or stops.

Creating a New Client

NewUserClient

Requests the creation of a new user client for the service.

Working with Transport Type

GetTransportType

Gets the transport type of the driver.

SetTransportType

Set the transport type of the driver.

IOUserAudioTransportType

The type of transport to deliver audio.

Working with Audio Objects

AddObject

Adds an audio object to the driver.

RemoveObject

Removes an audio object from the driver.

GetAudioObjectForObjectID

Gets a pointer to an audio object, given the object's identifier.

Communicating with the Host

PropertiesChanged

Notifies the host when the state of an object in the driver changes.

IOUserAudioObjectPropertySelector

A four character code which, along with the scope and element, specific piece of information about an audio object.

Working with Custom Properties

AddCustomProperty

Adds a custom property object to the driver.

RemoveCustomProperty

Removes a previously-added custom property object from the driver.

IOUserAudioCustomProperty

A custom property to associate with audio objects.

Relationships

Inherits From

IOService

See Also

Essentials

IOUserAudioObject

The base class for most classes in the framework.

DriverKit Audio Family

A Boolean value that indicates whether the device supports audio functionality.

{ } Creating an audio device driver

Implement a configurable audio input source as a driver extension that runs in user space in macOS and iPadOS.