Class

IOUserAudioClockDevice

An audio clock device object, used to synchronize and perform I/O.

DriverKit 21.0+

```
class IOUserAudioClockDevice;
```

Topics

Creating a Clock Device

`Create`

Allocates and initializes an instance of the audio clock device class.

`init`

Initializes an instance of the audio clock device class.

`IOUserAudioDriver`

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

Freeing a Clock Device

`free`

Frees the clock device.

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.

Performing I/O

`StartIO`

Tells the clock device to start I/O.

`StopIO`

Tells the clock device to stop I/O.

`IOUserAudioStartStopFlags`

Values that indicate I/O starts or stops.

Supporting Device Configuration Changes

`PerformDeviceConfigurationChange`

Tells the clock device to handle a configuration change.

`AbortDeviceConfigurationChange`

Tells the clock device to stop handling a configuration change.

Supporting Sample Rate Changes

`HandleChangeSampleRate`

Tells the clock device the sample rate is changing.

Identifying the Clock Device

`GetUID`

Gets the unique identifier of the clock device.

Working with Clock Domain

`SetClockDomain`

Sets the clock domain value of the clock device.

`GetClockDomain`

Gets the clock domain value of the clock device.

Working with Sample Rates

`SetSampleRate`

Sets the sample rate for the clock device.

`GetSampleRate`

Gets the sample rate of the clock device.

`SetAvailableSampleRates`

Sets the available sample rates for the clock device.

`GetAvailableSampleRates`

Gets the available sample rates of the clock device.

`GetNumberAvailableSampleRates`

Gets the number of available sample rates of the clock device.

Working with Timing and Latency

`GetSupportsPrewarming`

Returns a Boolean value that indicates clock device's support for prewarming.

`SetZeroTimeStampPeriod`

Sets the zero time stamp of the clock device.

`GetZeroTimestampPeriod`

Gets the zero time stamp of the clock device.

`SetOutputLatency`

Sets the output latency of the clock device.

`GetOutputLatency`

Gets the output latency of the clock device.

`SetInputLatency`

Sets the input latency of the clock device.

`GetInputLatency`

Get the input latency of the clock device.

Working with Clock Device State

`GetDeviceIsRunning`

Gets a Boolean value that indicates whether the device is running.

`SetDeviceIsAlive`

Sets a Boolean value to represent whether the device is alive.

`GetDeviceIsAlive`

Gets a Boolean value that represents whether the device is alive.

`SetIsHidden`

Sets a Boolean value to indicate whether the device is hidden.

`GetIsHidden`

Gets a Boolean value that indicates whether the device is hidden.

Working with Clock Device Behavior

`SetClockAlgorithm`

Sets the clock algorithm of the clock device.

`GetClockAlgorithm`

Gets the clock algorithm of the clock device.

`IOUserAudioClockAlgorithm`

Values that describe clock-smoothing algorithms.

`SetClockIsStable`

Sets a Boolean value to represent the clock's stability.

`GetClockIsStable`

Gets a Boolean value that represents the clock's stability.

Working with Transport Type

`SetTransportType`

Sets the transport type of the clock device.

`GetTransportType`

Gets the transport type of the clock device.

`IOUserAudioTransportType`

The type of transport to deliver audio.

Communicating with the Host

`RequestDeviceConfigurationChange`

Instructs the host to initiate a configuration change operation.

Managing Audio Controls

`AddControl`

Adds a control to the clock device.

`RemoveControl`

Removes a control from the clock device.

`IOUserAudioControl`

The base class for audio control objects.

Accessing Timestamps

`UpdateCurrentZeroTimestamp`

Updates the current timestamp value.

`GetCurrentZeroTimestamp`

Gets the current zero timestamp value.

Accessing Client Status Information

`GetCurrentClientSampleTime`

Gets the current sample time in the ring buffer that the client has written to or read from.

Instance Methods

`GetDeviceTransportState`

`SetWantsControlsRestored`

Relationships

Inherits From

`IOUserAudioObject`

Inherited By

`IOUserAudioDevice`

See Also

Working with Audio Devices

`IOUserAudioDevice`

An audio clock device object that handles the configurations for running I/O.