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# Windows API Reference for QuickTime

[QuickTime](#) > [QuickTime for Windows](#)



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# Contents

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## **Windows API Reference for QuickTime 5**

---

Overview	5
Functions	5
QTMLCreateMutex	5
QTMLDestroyMutex	6
QTMLGrabMutex	6
QTMLReturnMutex	7
QTMLTryGrabMutex	7
QTMLYieldCPU	8
QTMLYieldCPUTime	8
Callbacks	9
Data Types	9
QTMLMutex	9
Constants	9
QTMLYieldCPUTime Values	9

---

## **Document Revision History 11**

---

## **Index 13**

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# Windows API Reference for QuickTime

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<b>Framework:</b>	Frameworks/QuickTime.framework
<b>Declared in</b>	QTML.h

## Overview

Apple provides a small set of utility functions that are used for developing QuickTime applications in the Windows environment.

## Functions

### QTMLCreateMutex

Creates a synchronization object to facilitate mutually exclusive access to a Windows data structure.

```
QTMLMutex QTMLCreateMutex (  
    void  
);
```

#### Discussion

This function creates a mutex object for guarded access to data structures and routines that require mutually exclusive access. In a multithreaded preemptive environment, such as Windows NT, you can use the various mutex utility functions such as [QTMLGrabMutex](#) (page 6) to protect a shared resource from simultaneous access by multiple threads or processes. Mutex objects are used throughout QTML to provide such protection.

#### Version Notes

Introduced in QuickTime 3 or earlier.

#### Availability

Available in Mac OS X v10.3 and later.

#### Related Sample Code

audiocodec  
audiocodec.win  
QTCarbonCoreImage101  
WhackedTV

#### Declared In

QTML.h

## QTMLDestroyMutex

Deallocates a synchronization object created by QTMLCreateMutex.

```
void QTMLDestroyMutex (
    QTMLMutex mu
);
```

### Parameters

*mu*  
A mutex object.

### Discussion

Call this function to deallocate the mutex object created by [QTMLCreateMutex](#) (page 5).

### Version Notes

Introduced in QuickTime 3 or earlier.

### Availability

Available in Mac OS X v10.3 and later.

### Related Sample Code

audiocodec  
audiocodec.win  
WhackedTV

### Declared In

QTML.h

## QTMLGrabMutex

Confers ownership of a mutex created by QTMLCreateMutex.

```
void QTMLGrabMutex (
    QTMLMutex mu
);
```

### Parameters

*mu*  
A mutex object.

### Discussion

Call this function when you require exclusive ownership of the resource guarded by a mutex. This function will return when you have gained this ownership. In the case where another thread or process holds the mutex, this function waits until that process or thread relinquishes control. If you need to determine if you can grab the mutex, without actually grabbing it, call [QTMLTryGrabMutex](#) (page 7).

### Version Notes

Introduced in QuickTime 3 or earlier.

### Availability

Available in Mac OS X v10.3 and later.

### Related Sample Code

audiocodec  
audiocodec.win

QTCarbonCoreImage101  
WhackedTV

**Declared In**

QTML.h

**QTMLReturnMutex**

Releases ownership of a QTMLMutex object.

```
void QTMLReturnMutex (
    QTMLMutex mu
);
```

**Parameters**

*mu*

A mutex object.

**Discussion**

Call this function to balance a call to [QTMLGrabMutex](#) (page 6) when you are ready to relinquish control of the mutex and corresponding shared resource. By making this call, you allow other processes or threads waiting for the release of this mutex to gain access.

**Version Notes**

Introduced in QuickTime 3 or earlier.

**Availability**

Available in Mac OS X v10.3 and later.

**Related Sample Code**

audiocodec

audiocodec.win

QTCarbonCoreImage101

WhackedTV

**Declared In**

QTML.h

**QTMLTryGrabMutex**

Determines if you would be able to get immediate ownership of a mutex created by QTMLCreateMutex.

```
Boolean QTMLTryGrabMutex (
    QTMLMutex mu
);
```

**Parameters**

*mu*

A mutex object.

**Return Value**

Returns TRUE if you are able to immediately grab the mutex, via the [QTMLGrabMutex](#) (page 6) call, without having to wait.

**Discussion**

Call this function when you need to preflight a [QTMLGrabMutex](#) (page 6) call.

**Special Considerations**

Under normal circumstances you should not need to make this call.

**Version Notes**

Introduced in QuickTime 4.

**Availability**

Available in Mac OS X v10.3 and later.

**Declared In**

QTML.h

**QTMLYieldCPU**

Yields time to other threads while your code is in a tight loop.

```
void QTMLYieldCPU (
    void
);
```

**Discussion**

Use this function from within tight loops to yield time to other threads. Using this function is similar to calling `SystemTask` from within a Macintosh event loop.

**Version Notes**

Introduced in QuickTime 3 or earlier.

**Availability**

Available in Mac OS X v10.3 and later.

**Declared In**

QTML.h

**QTMLYieldCPUTime**

Yields time to other threads and specifies the sleep time while in a tight loop.

```
void QTMLYieldCPUTime (
    long milliseconds,
    unsigned long flags
);
```

**Parameters**

*milliseconds*

Number of milliseconds to sleep before returning to the caller.

*flags*

A flag (see below) that specifies an option for this function. See these constants:

`kQTMLHandlePortEvents`



**Discussion**

Use this function from within tight loops to yield time to other threads.

**Special Considerations**

This function differs from [QTMLYieldCPU](#) (page 8) in that you can specify the time to sleep as well as optionally have QTML process Win32 messages while waiting for the yield time to expire.

**Version Notes**

Introduced in QuickTime 3 or earlier.

**Availability**

Available in Mac OS X v10.3 and later.

**Declared In**

QTML.h

## Callbacks

## Data Types

**QTMLMutex**

Represents a type used by the Windows API API.

```
typedef long QTMLMutex;
```

**Availability**

Available in Mac OS X v10.3 and later.

**Declared In**

QTML.h

## Constants

**QTMLYieldCPUTime Values**

Constants passed to QTMLYieldCPUTime.

```
enum {
    kQTMLHandlePortEvents    = (1L << 0) /* ask for event handling during the
yield*/
};
```

**Declared In**

QTML.h



# Document Revision History

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This table describes the changes to *Windows API Reference for QuickTime*.

Date	Notes
2006-05-23	New document, based on previously published material, that describes the Windows API for QuickTime.

**REVISION HISTORY**

Document Revision History

# Index

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## Q

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- QTMLCreateMutex **function** [5](#)
- QTMLDestroyMutex **function** [6](#)
- QTMLGrabMutex **function** [6](#)
- QTMLMutex **data type** [9](#)
- QTMLReturnMutex **function** [7](#)
- QTMLTryGrabMutex **function** [7](#)
- QTMLYieldCPU **function** [8](#)
- QTMLYieldCPUTime **function** [8](#)
- QTMLYieldCPUTime Values [9](#)