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# CATiledLayer Class Reference

[Graphics & Imaging](#) > Quartz





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# CATiledLayer Class Reference

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<b>Inherits from</b>	CALayer : NSObject
<b>Conforms to</b>	NSCoding (CALayer) CAMediaTiming (CALayer) NSObject (NSObject)
<b>Framework</b>	/System/Library/Frameworks/QuartzCore.framework
<b>Availability</b>	Available in Mac OS X v10.5 and later.
<b>Declared in</b>	CATiledLayer.h
<b>Companion guides</b>	Core Animation Programming Guide Core Animation Cookbook
<b>Related sample code</b>	CALayerEssentials

## Overview

`CATiledLayer` is a subclass of `CALayer` providing a way to asynchronously provide tiles of the layer's content, potentially cached at multiple levels of detail.

As more data is required by the renderer, the layer's `drawLayer:inContext:` method is called on one or more background threads to supply the drawing operations to fill in one tile of data. The clip bounds and CTM of the drawing context can be used to determine the bounds and resolution of the tile being requested.

Regions of the layer may be invalidated using the `setNeedsDisplayInRect:` method however the update will be asynchronous. While the next display update will most likely not contain the updated content, a future update will.

## Tasks

### Visual Fade

+ [fadeDuration](#) (page 7)

The time, in seconds, that newly added images take to "fade-in" to the rendered representation of the tiled layer.

## Levels of Detail

[levelsOfDetail](#) (page 6) *property*

The number of levels of detail maintained by this layer.

[levelsOfDetailBias](#) (page 6) *property*

The number of magnified levels of detail for this layer.

## Layer Tile Size

[tileSize](#) (page 7) *property*

The maximum size of each tile used to create the layer's content.

## Properties

For more about Objective-C properties, see “Properties” in *The Objective-C 2.0 Programming Language*.

### levelsOfDetail

The number of levels of detail maintained by this layer.

```
@property size_t levelsOfDetail
```

#### Discussion

Defaults to 1. Each level of detail is half the resolution of the previous level. If too many levels are specified for the current size of the layer, then the number of levels is clamped to the maximum value (the bottom most level of detail must contain at least a single pixel in each dimension.)

#### Availability

Available in Mac OS X v10.5 and later.

#### Related Sample Code

CALayerEssentials

#### Declared In

CATiledLayer.h

### levelsOfDetailBias

The number of magnified levels of detail for this layer.

```
@property size_t levelsOfDetailBias
```

#### Discussion

Defaults to 0. Each previous level of detail is twice the resolution of the later. For example, specifying a value of 2 means that the layer has two extra levels of detail: 2x and 4x.

#### Availability

Available in Mac OS X v10.5 and later.

### Related Sample Code

CALayerEssentials

### Declared In

CATiledLayer.h

## tileSize

The maximum size of each tile used to create the layer's content.

```
@property CGSize tileSize
```

### Discussion

Defaults to (256.0, 256.0).

### Availability

Available in Mac OS X v10.5 and later.

### Declared In

CATiledLayer.h

## Class Methods

### fadeDuration

The time, in seconds, that newly added images take to "fade-in" to the rendered representation of the tiled layer.

```
+(CFTimeInterval)fadeDuration
```

### Discussion

The default implementation returns 0.25 seconds.

### Availability

Available in Mac OS X v10.5 and later.

### Declared In

CATiledLayer.h





# Document Revision History

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This table describes the changes to *CA tiledLayer Class Reference*.

Date	Notes
2007-07-24	New document that describes the class that simplifies rendering large image layers.

## REVISION HISTORY

### Document Revision History

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