
UIImageView Class Reference

Graphics & Animation: 2D Drawing



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UIImageView Class Reference

Inherits from	NSView : NSResponder : NSObject
Conforms to	NSAnimatablePropertyContainer (NSView) NSCoding (NSResponder) NSObject (NSObject)
Framework	System/Library/Frameworks/Quartz.framework/ImageKit.framework
Availability	Available in Mac OS X v10.5 and later.
Declared in	UIImageView.h
Related sample code	ImageKitDemo

Overview

The `UIImageView` class provides an efficient way to display images in a view while at the same time supporting a number of image editing operations such as rotating, zooming, and cropping. It supports drag and drop, so that the user can drag an image to the view. If possible, image rendering uses hardware acceleration to achieve optimal performance. The `UIImageView` class is implemented as a subclass of `NSView`. Similar to `NSImageView`, the `UIImageView` class is used to display a single image.

You can provide an images for the view in any of these formats:

- File reference (NSURL, CFURLRef, or a path)
- `CGImageSourceRef`
- Data (NSData or CFDataRef)
- Image (NSImage, CGImageRef, or CIImage)

Providing a file reference is the preferred way to set the the image for a view because in addition to the actual image data, `UIImageView` also handles the image metadata embedded in the file. The image view automatically fetches the metadata from a file reference, whereas for the other sources (except for a `CGImageSourceRef` source), it cannot. For images set from other sources, you need to set the metadata separately.

`UIImageView` supports multi-frame images (TIFF, GIF, and so forth) and animated images.

Tasks

Getting and Setting Image View Characteristics

- [delegate](#) (page 9) *property*
Specifies the delegate object of the receiver.
- [zoomFactor](#) (page 11) *property*
Specifies the zoom factor for the image view.
- [rotationAngle](#) (page 10) *property*
Specifies the rotation angle for the image view.
- [currentToolMode](#) (page 8) *property*
Specifies the current tool mode for the image view.
- [autoresizes](#) (page 8) *property*
Specifies the automatic resizing state for the image view.
- [hasHorizontalScroller](#) (page 9) *property*
Specifies the horizontal scroll bar state for the image view.
- [hasVerticalScroller](#) (page 10) *property*
Specifies the vertical scroll bar state for the image view.
- [autohidesScrollers](#) (page 8) *property*
Specifies the automatic-hiding scroll bar state for the image view.
- [supportsDragAndDrop](#) (page 10) *property*
Specifies the drag-and-drop support state for the image view.
- [editable](#) (page 9) *property*
Specifies the editable state for the image view.
- [doubleClickOpensImageEditPanel](#) (page 9) *property*
Specifies the image-opening state of the editing pane in the image view.
- [imageCorrection](#) (page 10) *property*
Specifies a Core Image filter for image correction.
- [backgroundColor](#) (page 8) *property*
Specifies the background color for the image view.
- [imageSize](#) (page 14)
Returns the size of the image in the image view.
- [imageProperties](#) (page 14)
Returns the metadata for the image in the view.

Getting and Setting Images

- [image](#) (page 13)
Returns the image associated with the view, after any image corrections.
- [setImage:imageProperties:](#) (page 16)
Sets the image to display in an image view.

- [setImageWithURL:](#) (page 16)
Initializes an image view with the image specified by a URL.

Manipulating the Image in a View

- [setRotationAngle:centerPoint:](#) (page 17)
Sets the rotation angle at the provided origin.
- [setImageZoomFactor:centerPoint:](#) (page 16)
Sets the zoom factor at the provided origin.
- [zoomImageToFit:](#) (page 18)
Zooms the image so that it fits in the image view.
- [zoomImageToActualSize:](#) (page 18)
Zooms the image so that it is displayed using its true size.
- [zoomImageToRect:](#) (page 18)
Zooms the image so that it fits in the specified rectangle.
- [flipImageHorizontal:](#) (page 13)
Flips an image along the horizontal axis.
- [flipImageVertical:](#) (page 13)
Flips an image along the vertical axis.

Working With Core Animation

- [setOverlay:forType:](#) (page 17)
Sets an overlay type for a Core Animation layer.
- [overlayForType:](#) (page 14)
Returns the Core Animation layer associated with a layer type.

Scrolling

- [scrollToPoint:](#) (page 15)
Scrolls the view to the specified point.
- [scrollToRect:](#) (page 15)
Scrolls the view so that it includes the provided rectangular area.

Converting Points and Rectangles

- [convertViewPointToImagePoint:](#) (page 12)
Converts an image view coordinate to an image coordinate.
- [convertViewRectToImageRect:](#) (page 12)
Converts an image view rectangle to an image rectangle.
- [convertImagePointToViewPoint:](#) (page 11)
Converts an image coordinate to an image view coordinate.

- [convertImageRectToViewRect:](#) (page 11)
Converts an image rectangle to an image view rectangle.

Properties

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

autohidesScrollers

Specifies the automatic-hiding scroll bar state for the image view.

```
@property BOOL autohidesScrollers;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

autoresizes

Specifies the automatic resizing state for the image view.

```
@property BOOL autoresizes;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

backgroundColor

Specifies the background color for the image view.

```
@property NSColor * backgroundColor;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

currentToolMode

Specifies the current tool mode for the image view.

```
@property NSString* currentToolMode;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

IKImageView.h

delegate

Specifies the delegate object of the receiver.

```
@property id delegate;
```

Discussion

An IKImageView object's delegate is inserted in the responder chain after the image view itself and is informed of various actions by the image view through delegation messages.

Availability

Available in Mac OS X v10.5 and later.

Declared In

IKImageView.h

doubleClickOpensImageEditPanel

Specifies the image-opening state of the editing pane in the image view.

```
@property BOOL doubleClickOpensImageEditPanel;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

IKImageView.h

editable

Specifies the editable state for the image view.

```
@property BOOL editable;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

IKImageView.h

hasHorizontalScroller

Specifies the horizontal scroll bar state for the image view.

```
@property BOOL hasHorizontalScroller;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

hasVerticalScroller

Specifies the vertical scroll bar state for the image view.

```
@property BOOL hasVerticalScroller;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

imageCorrection

Specifies a Core Image filter for image correction.

```
@property CIFilter * imageCorrection;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

rotationAngle

Specifies the rotation angle for the image view.

```
@property CGFloat rotationAngle;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

supportsDragAndDrop

Specifies the drag-and-drop support state for the image view.

@property BOOL supportsDragAndDrop;

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

zoomFactor

Specifies the zoom factor for the image view.

@property CGFloat zoomFactor;

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

Instance Methods

convertImagePointToViewPoint:

Converts an image coordinate to an image view coordinate.

- (NSPoint)convertImagePointToViewPoint: (NSPoint)imagePoint;

Parameters

imagePoint

A point specified in coordinates relative to the image.

Return Value

A point specified in coordinates relative to the image view.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [convertViewPointToImagePoint:](#) (page 12)

Declared In

UIImageView.h

convertImageRectToViewRect:

Converts an image rectangle to an image view rectangle.

- (NSRect)convertImageRectToViewRect: (NSRect)imageRect;

Parameters

imageRect

An rectangle specified in coordinates relative to the image.

Return Value

An rectangle specified in coordinates relative to the image view.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [convertViewRectToImageRect](#): (page 12)

Declared In

UIImageView.h

convertViewPointToImagePoint:

Converts an image view coordinate to an image coordinate.

- (NSPoint)convertViewPointToImagePoint: (NSPoint)viewPoint;

Parameters

viewPoint

A point specified in coordinates relative to the image view.

Return Value

The point specified in coordinates relative to the image.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [convertImagePointToViewPoint](#): (page 11)

Declared In

UIImageView.h

convertViewRectToImageRect:

Converts an image view rectangle to an image rectangle.

- (NSRect)convertViewRectToImageRect: (NSRect)viewRect;

Parameters

viewRect

An rectangle specified in coordinates relative to the image view.

Return Value

The rectangle specified in coordinates relative to the image.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [convertImageRectToViewRect:](#) (page 11)

Declared In

UIImageView.h

flipImageHorizontal:

Flips an image along the horizontal axis.

```
- (void)flipImageHorizontal: (id)sender;
```

Parameters

sender

The object initiating the action.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [flipImageVertical:](#) (page 13)

Declared In

UIImageView.h

flipImageVertical:

Flips an image along the vertical axis.

```
- (void)flipImageVertical: (id)sender;
```

Parameters

sender

The object initiating the action.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [flipImageHorizontal:](#) (page 13)

Declared In

UIImageView.h

image

Returns the image associated with the view, after any image corrections.

```
- (CGImageRef)image;
```

Return Value

The image.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [setImage:imageProperties:](#) (page 16)
- [setImageWithURL:](#) (page 16)

Declared In

UIImageView.h

imageProperties

Returns the metadata for the image in the view.

```
- (NSDictionary*)imageProperties;
```

Return Value

A dictionary of metadata that specifies the image properties.

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

imageSize

Returns the size of the image in the image view.

```
- (NSSize)imageSize;
```

Return Value

The size of the image.

Discussion

The image size changes whenever an image is rotates or cropped.

Availability

Available in Mac OS X v10.5 and later.

Declared In

UIImageView.h

overlayForType:

Returns the Core Animation layer associated with a layer type.

```
- (CALayer*)overlayForType: (NSString*)layerType;
```

Parameters

layerType

A layer type. See “[Overlay Types](#)” (page 20).

Return Value

The Core Animation layer.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [setOverlay:forType:](#) (page 17)

Declared In

UIImageView.h

scrollToPoint:

Scrolls the view to the specified point.

```
- (void)scrollToPoint:(NSPoint)point;
```

Parameters

point

The point to scroll to.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [scrollToRect:](#) (page 15)

Declared In

UIImageView.h

scrollToRect:

Scrolls the view so that it includes the provided rectangular area.

```
- (void)scrollToRect:(NSRect)rect;
```

Parameters

rect

The rectangular area to include in the view.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [scrollToPoint:](#) (page 15)

Declared In

UIImageView.h

setImage:imageProperties:

Sets the image to display in an image view.

```
- (void)setImage: (CGImageRef)image imageProperties: (NSDictionary*)metaData;
```

Parameters

image

The image to set.

metaData

A dictionary that contains metadata that describes the image.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [image](#) (page 13)
- [imageProperties](#) (page 14)
- [setImageWithURL:](#) (page 16)

Declared In

IKImageView.h

setImageWithURL:

Initializes an image view with the image specified by a URL.

```
- (void)setImageWithURL: (NSURL*)url;
```

Parameters

url

The URL that specifies the location of the image.

Discussion

This method is the preferred initializer for RAW images. If you use this method for a TIFF file that contains multiple images, only the first image is displayed.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [setImage:imageProperties:](#) (page 16)

Declared In

IKImageView.h

setImageZoomFactor:centerPoint:

Sets the zoom factor at the provided origin.

```
- (void)setImageZoomFactor: (CGFloat)zoomFactor centerPoint: (NSPoint)centerPoint;
```

Parameters

zoomFactor

The zoom factor to apply to the image.

centerPoint

The point that specifies the origin of the zoom factor.

Availability

Available in Mac OS X v10.5 and later.

See Also

[@property zoomFactor](#) (page 11)

Declared In

UIImageView.h

setOverlay:forType:

Sets an overlay type for a Core Animation layer.

```
- (void)setOverlay: (CALayer*)layer forType: (NSString*)layerType;
```

Parameters

layer

A Core Animation layer object.

layerType

A layer type. See “[Overlay Types](#)” (page 20).

Availability

Available in Mac OS X v10.5 and later.

See Also

- [overlayForType:](#) (page 14)

Declared In

UIImageView.h

setRotationAngle:centerPoint:

Sets the rotation angle at the provided origin.

```
- (void)setRotationAngle: (CGFloat)rotationAngle centerPoint: (NSPoint)centerPoint;
```

Parameters

rotationAngle

The rotation angle to apply to the image.

centerPoint

The point that specifies the origin of the rotation angle.

Availability

Available in Mac OS X v10.5 and later.

See Also

[@property rotationAngle](#) (page 10)

Declared In

UIImageView.h

zoomImageToActualSize:

Zooms the image so that it is displayed using its true size.

```
- (void)zoomImageToActualSize: (id)sender;
```

Parameters

sender

The object initiating the action.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [zoomImageToFit:](#) (page 18)

- [zoomImageToRect:](#) (page 18)

Declared In

UIImageView.h

zoomImageToFit:

Zooms the image so that it fits in the image view.

```
- (void)zoomImageToFit: (id)sender;
```

Parameters

sender

The object initiating the action.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [zoomImageToActualSize:](#) (page 18)

- [zoomImageToRect:](#) (page 18)

Declared In

UIImageView.h

zoomImageToRect:

Zooms the image so that it fits in the specified rectangle.

```
- (void)zoomImageToRect: (NSRect)rect;
```

Parameters

rect

The rectangle to fit the image in.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [zoomImageToFit:](#) (page 18)
- [zoomImageToActualSize:](#) (page 18)

Declared In

UIImageView.h

Constants

Tool Modes

Image Kit tools modes.

```
NSString *const IKToolModeMove;
NSString *const IKToolModeSelect;
NSString *const IKToolModeCrop;
NSString *const IKToolModeRotate;
NSString *const IKToolModeAnnotate;
```

Constants

IKToolModeMove

The move tool.

Available in Mac OS X v10.5 and later.

Declared in UIImageView.h.

IKToolModeSelect

The selection tool.

Available in Mac OS X v10.5 and later.

Declared in UIImageView.h.

IKToolModeCrop

The crop tool.

Available in Mac OS X v10.5 and later.

Declared in UIImageView.h.

IKToolModeRotate

The rotation tool.

Available in Mac OS X v10.5 and later.

Declared in UIImageView.h.

IKToolModeAnnotate

The annotation tool.

Available in Mac OS X v10.5 and later.

Declared in UIImageView.h.

Declared In

UIImageView.h

Overlay Types

A layer level.

```
NSString *const IKOverlayTypeBackground;  
NSString *const IKOverlayTypeImage;
```

Constants

IKOverlayTypeBackground

A background.

Available in Mac OS X v10.5 and later.

Declared in UIImageView.h.

IKOverlayTypeImage

An image.

Available in Mac OS X v10.5 and later.

Declared in UIImageView.h.

Declared In

UIImageView.h

Document Revision History

This table describes the changes to *UIImageView Class Reference*.

Date	Notes
2008-04-08	Added information to the delegate property.
2006-12-06	New document that describes the class used to display images efficiently at the same time it supports image editing.

REVISION HISTORY

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