
CGImageProperties Reference

Graphics & Animation: 2D Drawing



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CGImageProperties Reference

Framework:	ApplicationServices/ImageIO
Declared in	CGImageProperties.h

Overview

CGImageProperties Reference defines constants that represent characteristics of images used by the Image I/O framework.

Constants

Format-Specific Dictionaries

Properties that have an associated dictionary of file-format or metadata-format specific key-value pairs.

```
CFStringRef kCGImagePropertyTIFFDictionary;  
CFStringRef kCGImagePropertyGIFDictionary;  
CFStringRef kCGImagePropertyJIFDictionary;  
CFStringRef kCGImagePropertyExifDictionary;  
CFStringRef kCGImagePropertyPNGDictionary;  
CFStringRef kCGImagePropertyIPTCDictionary;  
CFStringRef kCGImagePropertyGPSDictionary;  
CFStringRef kCGImagePropertyRawDictionary;  
CFStringRef kCGImagePropertyCIFFDictionary;  
CFStringRef kCGImageProperty8BIMDictionary;  
CFStringRef kCGImagePropertyDNGDictionary;  
CFStringRef kCGImagePropertyExifAuxDictionary;
```

Constants

`kCGImagePropertyTIFFDictionary`

A dictionary of key-value pairs for an image that uses Tagged Image File Format (TIFF). See [“TIFF Dictionary Keys”](#) (page 34).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGIFDictionary`

A dictionary of key-value pairs for an image that uses Graphics Interchange Format (GIF). See [“GIF Dictionary Keys”](#) (page 22).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyJFIFDictionary`

A dictionary of key-value pairs for an image that uses JPEG File Interchange Format (JFIF). See [“JFIF Dictionary Keys”](#) (page 32).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifDictionary`

A dictionary of key-value pairs for an image that uses Exchangeable Image File Format (EXIF). See [“EXIF Dictionary Keys”](#) (page 13).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyPNGDictionary`

A dictionary of key-value pairs for an image that uses Portable Network Graphics (PNG) format. See [“PNG Dictionary Keys”](#) (page 33).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCDictionary`

A dictionary of key-value pairs for an image that uses International Press Telecommunications Council (IPTC) metadata. See [“IPTC Dictionary Keys”](#) (page 26).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDictionary`

A dictionary of key-value pairs for an image that has Global Positioning System (GPS) information. See [“GPS Dictionary Keys”](#) (page 22).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyRawDictionary`

A dictionary of key-value pairs for an image that contains minimally processed, or raw, data.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyCIFFDictionary`

A dictionary of key-value pairs for an image that uses Camera Image File Format (CIFF). See [“CIFF Dictionary Keys”](#) (page 38).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImageProperty8BIMDictionary`

A dictionary of key-value pairs for an Adobe Photoshop image. See [“8BIM Dictionary Keys”](#) (page 38).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyDNGDictionary`

A dictionary of key-value pairs for an image that uses the Digital Negative (DNG) archival format. See [“DNG Dictionary Keys”](#) (page 37).

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxDictionary`

An auxiliary dictionary of key-value pairs for an image that uses Exchangeable Image File Format (EXIF).

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

Discussion

If any of these constants are returned by the functions `CGImageSourceCopyProperties` or `CGImageSourceCopyPropertiesAtIndex` the associated value is a dictionary of file-format or metadata-format specific key-value pairs.

Declared In

`CGImageProperties.h`

Camera Maker Dictionaries

Properties that have an associated dictionary of key-value pairs for a specific camera manufacturer.

`CFStringRef kCGImagePropertyMakerCanonDictionary;`

`CFStringRef kCGImagePropertyMakerNikonDictionary;`

`CFStringRef kCGImagePropertyMakerMinoltaDictionary;`

`CFStringRef kCGImagePropertyMakerFujiDictionary;`

`CFStringRef kCGImagePropertyMakerOlympusDictionary;`

`CFStringRef kCGImagePropertyMakerPentaxDictionary;`

Constants

`kCGImagePropertyMakerCanonDictionary`

A dictionary of key-value pairs for an image from a Canon camera. See [“Canon Camera Dictionary Keys”](#) (page 43).

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerNikonDictionary`

A dictionary of key-value pairs for an image from a Nikon camera. See [“Nikon Camera Dictionary Keys”](#) (page 40).

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerMinoltaDictionary`

A dictionary of key-value pairs for an image from a Minolta camera.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerFujiDictionary`

A dictionary of key-value pairs for an image from a Fuji camera.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerOlympusDictionary`

A dictionary of key-value pairs for an image from a Olympus camera.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerPentaxDictionary`

A dictionary of key-value pairs for an image from a Pentax camera.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

Image Source Container Properties

Properties that apply to the container in general but not necessarily to any individual image in the container.

`CFStringRef kCGImagePropertyFileSize;`

Constants

`kCGImagePropertyFileSize`

The size of the image file in bytes, if known. If present, this key is a `CFNumber` value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

Discussion

These properties can be returned by the function `CGImageSourceCopyProperties`.

Declared In

`CGImageProperties.h`

Individual Image Properties

Properties that apply to an individual image in an image source.

```
CFStringRef kCGImagePropertyDPIHeight;
CFStringRef kCGImagePropertyDPIWidth;
CFStringRef kCGImagePropertyPixelWidth;
CFStringRef kCGImagePropertyPixelHeight;
CFStringRef kCGImagePropertyDepth;
CFStringRef kCGImagePropertyOrientation;
CFStringRef kCGImagePropertyIsFloat;
CFStringRef kCGImagePropertyIsIndexed;
CFStringRef kCGImagePropertyHasAlpha;
CFStringRef kCGImagePropertyColorModel;
CFStringRef kCGImagePropertyProfileName;
```

Constants

`kCGImagePropertyDPIHeight`

The resolution, in dots per inch, in the x dimension. If present, this key is a `CFNumber` value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyDPIWidth`

The resolution, in dots per inch, in the y dimension. If present, this key is a `CFNumber` value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyPixelWidth`

The number of pixels in the x dimension. If present, this key is a `CFNumber` value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyPixelHeight`

The number of pixels in the y dimension. If present, this key is a `CFNumber` value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyDepth`

The number of bits in each color sample of each pixel. If present, this key is a `CFNumber` value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyOrientation`

The intended display orientation of the image. If present, this key is a `CFNumber` value with the same value as defined by the TIFF and EXIF specifications. The value specifies where the origin (0, 0) of the image is located, as shown in Table 1. If not present, a value of 1 is assumed.

Table 1

Value	Location of the origin of the image
1	Top, left
2	Top, right
3	Bottom, right
4	Bottom, left
5	Left, top
6	Right, top
7	Right, bottom
8	Left, bottom

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIsFloat`

Whether or not the image contains floating-point pixel samples. The value of this key is `kCFBooleanTrue` if the image contains them.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIsIndexed`

Whether or not the image contains indexed pixel samples (sometimes called paletted samples). The value of this key is `kCFBooleanTrue` if the image contains them.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyHasAlpha`

Whether or not the image has an alpha channel. The value of this key is `kCFBooleanTrue` if the image contains an alpha channel.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyColorModel`

The color model of the image such as, "RGB", "CMYK", "Gray", or "Lab". The value of this key is `CFStringRef`.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyProfileName`

The name of the optional ICC profile embedded in the image, if known. If present, the value of this key is a `CFStringRef`.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

Discussion

These properties can be returned by the function `CGImageSourceCopyPropertiesAtIndex`.

Declared In

`CGImageProperties.h`

Color Model Values

Values for the color model property.

```
const CFStringRef kCGImagePropertyColorModelRGB;
const CFStringRef kCGImagePropertyColorModelGray;
const CFStringRef kCGImagePropertyColorModelCMYK;
const CFStringRef kCGImagePropertyColorModelLab;
```

Constants

`kCGImagePropertyColorModelRGB`

An RGB color model.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyColorModelGray`

A Gray color model.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyColorModelCMYK`

A CMYK color model.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyColorModelLab`

A Lab color model.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

Discussion

A color model describes how color values are represented mathematically. A color space is a color model combined with a definition of how to interpret values within the model.

Declared In

`CGImageProperties.h`

EXIF Dictionary Keys

Keys for for an image that uses Exchangeable Image File Format (EXIF).

```

const CFStringRef kCGImagePropertyExifExposureTime;
const CFStringRef kCGImagePropertyExifFNumber;
const CFStringRef kCGImagePropertyExifExposureProgram;
const CFStringRef kCGImagePropertyExifSpectralSensitivity;
const CFStringRef kCGImagePropertyExifISOSpeedRatings;
const CFStringRef kCGImagePropertyExifOECF;
const CFStringRef kCGImagePropertyExifVersion;
const CFStringRef kCGImagePropertyExifDateTimeOriginal;
const CFStringRef kCGImagePropertyExifDateTimeDigitized;
const CFStringRef kCGImagePropertyExifComponentsConfiguration;
const CFStringRef kCGImagePropertyExifCompressedBitsPerPixel;
const CFStringRef kCGImagePropertyExifShutterSpeedValue;
const CFStringRef kCGImagePropertyExifApertureValue;
const CFStringRef kCGImagePropertyExifBrightnessValue;
const CFStringRef kCGImagePropertyExifExposureBiasValue;
const CFStringRef kCGImagePropertyExifMaxApertureValue;
const CFStringRef kCGImagePropertyExifSubjectDistance;
const CFStringRef kCGImagePropertyExifMeteringMode;
const CFStringRef kCGImagePropertyExifLightSource;
const CFStringRef kCGImagePropertyExifFlash;
const CFStringRef kCGImagePropertyExifFocalLength;
const CFStringRef kCGImagePropertyExifSubjectArea;
const CFStringRef kCGImagePropertyExifMakerNote;
const CFStringRef kCGImagePropertyExifUserComment;
const CFStringRef kCGImagePropertyExifSubsecTime;
const CFStringRef kCGImagePropertyExifSubsecTimeOrginal;
const CFStringRef kCGImagePropertyExifSubsecTimeDigitized;
const CFStringRef kCGImagePropertyExifFlashPixVersion;
const CFStringRef kCGImagePropertyExifColorSpace;
const CFStringRef kCGImagePropertyExifPixelXDimension;
const CFStringRef kCGImagePropertyExifPixelYDimension;
const CFStringRef kCGImagePropertyExifRelatedSoundFile;
const CFStringRef kCGImagePropertyExifFlashEnergy;
const CFStringRef kCGImagePropertyExifSpatialFrequencyResponse;
const CFStringRef kCGImagePropertyExifFocalPlaneXResolution;
const CFStringRef kCGImagePropertyExifFocalPlaneYResolution;
const CFStringRef kCGImagePropertyExifFocalPlaneResolutionUnit;
const CFStringRef kCGImagePropertyExifSubjectLocation;
const CFStringRef kCGImagePropertyExifExposureIndex;
const CFStringRef kCGImagePropertyExifSensingMethod;
const CFStringRef kCGImagePropertyExifFileSource;
const CFStringRef kCGImagePropertyExifSceneType;
const CFStringRef kCGImagePropertyExifCFAPattern;
const CFStringRef kCGImagePropertyExifCustomRendered;
const CFStringRef kCGImagePropertyExifExposureMode;
const CFStringRef kCGImagePropertyExifWhiteBalance;
const CFStringRef kCGImagePropertyExifDigitalZoomRatio;
const CFStringRef kCGImagePropertyExifFocalLenIn35mmFilm;
const CFStringRef kCGImagePropertyExifSceneCaptureType;
const CFStringRef kCGImagePropertyExifGainControl;
const CFStringRef kCGImagePropertyExifContrast;
const CFStringRef kCGImagePropertyExifSaturation;
const CFStringRef kCGImagePropertyExifSharpness;
const CFStringRef kCGImagePropertyExifDeviceSettingDescription;
const CFStringRef kCGImagePropertyExifSubjectDistRange;
const CFStringRef kCGImagePropertyExifImageUniqueID;
const CFStringRef kCGImagePropertyExifGamma;

```

Constants

`kCGImagePropertyExifExposureTime`

The exposure time.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFNumber`

The F number.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifExposureProgram`

The exposure program.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSpectralSensitivity`

The spectral sensitivity of each channel.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifISOSpeedRatings`

ISO speed ratings.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifOECF`

The opto-electrical conversion function (OECF), which defines the relationship between the optical input of the camera and the image values.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifVersion`

The version.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifDateTimeOriginal`

The original date and time.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifDateTimeDigitized`

The digitized date and time.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifComponentsConfiguration`

The components configuration. For compressed data, specifies that the channels of each component are arranged in increasing numeric order (from first component to the fourth).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifCompressedBitsPerPixel`
The compressed bits per pixel.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifShutterSpeedValue`
The shutter speed value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifApertureValue`
The aperture value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifBrightnessValue`
The brightness value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifExposureBiasValue`
The exposure bias value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifMaxApertureValue`
The maximum aperture value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSubjectDistance`
The distance to the subject, in meters.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifMeteringMode`
The metering mode.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifLightSource`
The light source.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFlash`
The flash status when the image was shot.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFocalLength`

The focal length.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSubjectArea`

The subject area.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifMakerNote`

A maker note.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifUserComment`

A user comment.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSubsecTime`

The fraction of seconds for the date and time tag.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSubsecTimeOriginal`

The fraction of seconds for the original date and time tag.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSubsecTimeDigitized`

The fraction of seconds for the digitized time tag.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFlashPixVersion`

The FlashPix version supported by an FPXR file. FlashPix is a format for multi-resolution, tiled images, that facilitates fast onscreen viewing.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifColorSpace`

The color space.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifPixelXDimension`

The pixel x dimension.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifPixelYDimension`

The pixel y dimension.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifRelatedSoundFile`

A related sound file.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFlashEnergy`

The strobe energy when the image was captures, in beam candle power seconds.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSpatialFrequencyResponse`

The spatial frequency table and spatial frequency response values in the direction of image width, image height, and diagonal directions. See ISO 12233..

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFocalPlaneXResolution`

The number of image-width pixels (x) per focal plane resolution unit.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFocalPlaneYResolution`

The number of image-height pixels (y)per focal plane resolution unit.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFocalPlaneResolutionUnit`

The unit of measurement for the focal plane x and y tags.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSubjectLocation`

The location of the scene's primary subject.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifExposureIndex`

The selected exposure index.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSensingMethod`

The sensor type of the camera or input device.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFileSource`

The image source.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSceneType`

The scene type.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifCFAPattern`

The color filter array (CFA) pattern, which is the geometric pattern of the image sensor for a 1-chip color sensor area.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifCustomRendered`

Special rendering performed on the image data.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifExposureMode`

The exposure mode setting.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifWhiteBalance`

The white balance mode.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifDigitalZoomRatio`

The digital zoom ratio.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifFocalLenIn35mmFilm`

The equivalent focal length in 35 mm film.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifSceneCaptureType`

The scene capture type (standard, landscape, portrait, night).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifGainControl`

The gain adjustment applied to the image.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyExifContrast

The contrast applied to the image.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyExifSaturation

The saturation applied to the image.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyExifSharpness

The sharpness applied to the image.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyExifDeviceSettingDescription

For a particular camera mode, indicates the conditions for taking the picture.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyExifSubjectDistRange

The subject distance range.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyExifImageUniqueID

The unique ID of the image.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyExifGamma

The gamma setting.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

EXIF Auxiliary Dictionary Keys

Auxiliary keys for for an image that uses Exchangeable Image File Format (EXIF).

```
const CFStringRef kCGImagePropertyExifAuxLensInfo;  
const CFStringRef kCGImagePropertyExifAuxLensModel;  
const CFStringRef kCGImagePropertyExifAuxSerialNumber;  
const CFStringRef kCGImagePropertyExifAuxLensID;  
const CFStringRef kCGImagePropertyExifAuxLensSerialNumber;  
const CFStringRef kCGImagePropertyExifAuxImageNumber;  
const CFStringRef kCGImagePropertyExifAuxFlashCompensation;  
const CFStringRef kCGImagePropertyExifAuxOwnerName;  
const CFStringRef kCGImagePropertyExifAuxFirmware;
```

Constants

`kCGImagePropertyExifAuxLensInfo`

Lens information.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxLensModel`

The lens model.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxSerialNumber`

The serial number.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxLensID`

The lens ID.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxLensSerialNumber`

The lens serial number.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxImageNumber`

The image number.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxFlashCompensation`

Flash compensation.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxOwnerName`

The owner name.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyExifAuxFirmware`
Firmware information.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.

Declared In
`CGImageProperties.h`

GIF Dictionary Keys

Keys for an image that uses Graphics Interchange Format (GIF).

```
const CFStringRef kCGImagePropertyGIFLoopCount;  
const CFStringRef kCGImagePropertyGIFDelayTime;  
const CFStringRef kCGImagePropertyGIFImageColorMap;  
const CFStringRef kCGImagePropertyGIFHasGlobalColorMap;
```

Constants

`kCGImagePropertyGIFLoopCount`
The loop count.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.

`kCGImagePropertyGIFDelayTime`
The delay time.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.

`kCGImagePropertyGIFImageColorMap`
The image color map.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.

`kCGImagePropertyGIFHasGlobalColorMap`
Whether or not the GIF has a global color map.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.

Declared In
`CGImageProperties.h`

GPS Dictionary Keys

Keys for an image that has Global Positioning System (GPS) information.

```

const CFStringRef kCGImagePropertyGPSVersion;
const CFStringRef kCGImagePropertyGPSLatitudeRef;
const CFStringRef kCGImagePropertyGPSLatitude;
const CFStringRef kCGImagePropertyGPSLongitudeRef;
const CFStringRef kCGImagePropertyGPSLongitude;
const CFStringRef kCGImagePropertyGPSAltitudeRef;
const CFStringRef kCGImagePropertyGPSAltitude;
const CFStringRef kCGImagePropertyGPSTimeStamp;
const CFStringRef kCGImagePropertyGPSSatellites;
const CFStringRef kCGImagePropertyGPSStatus;
const CFStringRef kCGImagePropertyGPSMeasureMode;
const CFStringRef kCGImagePropertyGPSDOP;
const CFStringRef kCGImagePropertyGPSSpeedRef;
const CFStringRef kCGImagePropertyGPSSpeed;
const CFStringRef kCGImagePropertyGPSTrackRef;
const CFStringRef kCGImagePropertyGPSTrack;
const CFStringRef kCGImagePropertyGPSImgDirectionRef;
const CFStringRef kCGImagePropertyGPSImgDirection;
const CFStringRef kCGImagePropertyGPSMapDatum;
const CFStringRef kCGImagePropertyGPSDestLatitudeRef;
const CFStringRef kCGImagePropertyGPSDestLatitude;
const CFStringRef kCGImagePropertyGPSDestLongitudeRef;
const CFStringRef kCGImagePropertyGPSDestLongitude;
const CFStringRef kCGImagePropertyGPSDestBearingRef;
const CFStringRef kCGImagePropertyGPSDestBearing;
const CFStringRef kCGImagePropertyGPSDestDistanceRef;
const CFStringRef kCGImagePropertyGPSDestDistance;
const CFStringRef kCGImagePropertyGPSProcessingMethod;
const CFStringRef kCGImagePropertyGPSAreaInformation;
const CFStringRef kCGImagePropertyGPSDateStamp;
const CFStringRef kCGImagePropertyGPSDifferential;

```

Constants

`kCGImagePropertyGPSVersion`

The version.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSLatitudeRef`

Whether the latitude is northern or southern.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSLatitude`

The latitude.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSLongitudeRef`

Whether the longitude is east or west.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

- `kCGImagePropertyGPSLongitude`
The longitude.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSAltitudeRef`
The reference altitude.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSAltitude`
The altitude.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSTimeStamp`
The time as UTC (Coordinated Universal Time).
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSSatellites`
The satellites used for GPS measurements.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSStatus`
The status of the GPS receiver.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSMeasureMode`
The measurement mode.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSDOP`
The data degree of precision (DOP).
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSSpeedRef`
The unit for expressing the GPS receiver speed of movement.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyGPSSpeed`
The GPS receiver speed of movement.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSTrackRef`

The reference for the direction of GPS receiver movement.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSTrack`

The direction of GPS receiver movement.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSImgDirectionRef`

The reference for the direction of the image.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSImgDirection`

The direction of the image.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSMapDatum`

The geodetic survey data used by the GPS receiver.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDestLatitudeRef`

Whether the latitude of the destination point is northern or southern.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDestLatitude`

The latitude of the destination point.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDestLongitudeRef`

Whether the longitude of the destination point is east or west.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDestLongitude`

The longitude of the destination point.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDestBearingRef`

The reference for giving the bearing to the destination point.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDestBearing`

The bearing to the destination point.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDestDistanceRef`

The units for expressing the distance to the destination point.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDestDistance`

The distance to the destination point.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSProcessingMethod`

The name of the method used for finding a location.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSAreaInformation`

The name of the GPS area.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDateStamp`

The data and time information relative to Coordinated Universal Time (UTC).

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyGPSDifferential`

Whether differential correction is applied to the GPS receiver.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

IPTC Dictionary Keys

Keys for an image that uses International Press Telecommunications Council (IPTC) metadata.

```

const CFStringRef kCGImagePropertyIPTCObjectTypeReference;
const CFStringRef kCGImagePropertyIPTCObjectAttributeReference;
const CFStringRef kCGImagePropertyIPTCObjectName;
const CFStringRef kCGImagePropertyIPTCEditStatus;
const CFStringRef kCGImagePropertyIPTCEditorialUpdate;
const CFStringRef kCGImagePropertyIPTCUrgency;
const CFStringRef kCGImagePropertyIPTCSubjectReference;
const CFStringRef kCGImagePropertyIPTCCategory;
const CFStringRef kCGImagePropertyIPTCSupplementalCategory;
const CFStringRef kCGImagePropertyIPTCFixtureIdentifier;
const CFStringRef kCGImagePropertyIPTCKeywords;
const CFStringRef kCGImagePropertyIPTCContentLocationCode;
const CFStringRef kCGImagePropertyIPTCContentLocationName;
const CFStringRef kCGImagePropertyIPTCReleaseDate;
const CFStringRef kCGImagePropertyIPTCReleaseTime;
const CFStringRef kCGImagePropertyIPTCExpirationDate;
const CFStringRef kCGImagePropertyIPTCExpirationTime;
const CFStringRef kCGImagePropertyIPTCSpecialInstructions;
const CFStringRef kCGImagePropertyIPTCActionAdvised;
const CFStringRef kCGImagePropertyIPTCReferenceService;
const CFStringRef kCGImagePropertyIPTCReferenceDate;
const CFStringRef kCGImagePropertyIPTCReferenceNumber;
const CFStringRef kCGImagePropertyIPTCDateCreated;
const CFStringRef kCGImagePropertyIPTCTimeCreated;
const CFStringRef kCGImagePropertyIPTCDigitalCreationDate;
const CFStringRef kCGImagePropertyIPTCDigitalCreationTime;
const CFStringRef kCGImagePropertyIPTCOriginatingProgram;
const CFStringRef kCGImagePropertyIPTCProgramVersion;
const CFStringRef kCGImagePropertyIPTCObjectCycle;
const CFStringRef kCGImagePropertyIPTCByline;
const CFStringRef kCGImagePropertyIPTCBylineTitle;
const CFStringRef kCGImagePropertyIPTCCity;
const CFStringRef kCGImagePropertyIPTCSubLocation;
const CFStringRef kCGImagePropertyIPTCProvinceState;
const CFStringRef kCGImagePropertyIPTCCountryPrimaryLocationCode;
const CFStringRef kCGImagePropertyIPTCCountryPrimaryLocationName;
const CFStringRef kCGImagePropertyIPTCOriginalTransmissionReference;
const CFStringRef kCGImagePropertyIPTCHeadline;
const CFStringRef kCGImagePropertyIPTCCredit;
const CFStringRef kCGImagePropertyIPTCSource;
const CFStringRef kCGImagePropertyIPTCCopyrightNotice;
const CFStringRef kCGImagePropertyIPTCContact;
const CFStringRef kCGImagePropertyIPTCCaptionAbstract;
const CFStringRef kCGImagePropertyIPTCWriterEditor;
const CFStringRef kCGImagePropertyIPTCImageType;
const CFStringRef kCGImagePropertyIPTCImageOrientation;
const CFStringRef kCGImagePropertyIPTCLanguageIdentifier;
const CFStringRef kCGImagePropertyIPTCStarRating;

```

Constants

`kCGImagePropertyIPTCObjectTypeReference`

The object type.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCObjectAttributeReference

The object attribute.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCObjectName

The object name.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCEditStatus

The edit status.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCEditorialUpdate

An editorial update.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCUrgency

The urgency level.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCSubjectReference

The subject.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCCategory

The category.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCSupplementalCategory

A supplemental category.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCFixtureIdentifier

A fixture identifier.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCKeywords

Keywords.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCContentLocationCode`
The content location code.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCContentLocationName`
The content location name.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCReleaseDate`
The release date.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCReleaseTime`
The release time.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCExpirationDate`
The expiration date.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCExpirationTime`
The expiration time.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCSpecialInstructions`
Special instructions.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCActionAdvised`
The advised action.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCReferenceService`
The reference service.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyIPTCReferenceDate`
The reference date.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

- `kCGImagePropertyIPTCReferenceNumber`
The reference number.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCDateCreated`
The date created.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCTimeCreated`
The time created.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCDigitalCreationDate`
The digital creation date.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCDigitalCreationTime`
The digital creation time.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCOriginatingProgram`
The originating program.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCProgramVersion`
The program version.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCObjectCycle`
The object cycle.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCByline`
The byline.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyIPTCBylineTitle`
The byline title.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCCity

The city.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCSubLocation

The sublocation.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCProvinceState

The province or state.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCCountryPrimaryLocationCode

The country primary location code.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCCountryPrimaryLocationName

The country primary location name.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCOriginalTransmissionReference

The original transmission reference.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCHeadline

The headline.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCCredit

Credit information.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCSource

The source.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCCopyrightNotice

The copyright notice.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCContact

Contact information.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCCaptionAbstract

The caption abstract.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCWriterEditor

The writer or editor.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCImageType

The image type.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCImageOrientation

The image orientation.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCLanguageIdentifier

The language identifier.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyIPTCStarRating

The star rating.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

Discussion

IPTC constants are metadata elements of the Information Interchange Model (IIM) used to provide information about images. The IIM was developed by the Newspaper Association of America (NAA) and the International Press Telecommunications Council (IPTC).

Declared In

`CGImageProperties.h`

JFIF Dictionary Keys

Keys for an image that uses JPEG File Interchange Format (JFIF).

```
const CFStringRef kCGImagePropertyJFIFVersion;  
const CFStringRef kCGImagePropertyJFIFXDensity;  
const CFStringRef kCGImagePropertyJFIFYDensity;  
const CFStringRef kCGImagePropertyJFIFDensityUnit;  
const CFStringRef kCGImagePropertyJFIFIsProgressive;
```

Constants

kCGImagePropertyJFIFVersion

The version.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyJFIFXDensity

The x density.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyJFIFYDensity

The y density.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyJFIFDensityUnit

The density unit.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyJFIFIsProgressive

Whether or not the image is progressive.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

PNG Dictionary Keys

Keys for an image that uses Portable Network Graphics (PNG) format.

```
const CFStringRef kCGImagePropertyPNGGamma;  
const CFStringRef kCGImagePropertyPNGInterlaceType;  
const CFStringRef kCGImagePropertyPNGXPixelsPerMeter;  
const CFStringRef kCGImagePropertyPNGYPixelsPerMeter;  
const CFStringRef kCGImagePropertyPNGsRGBIntent;  
const CFStringRef kCGImagePropertyPNGChromaticities;
```

Constants

kCGImagePropertyPNGGamma

The gamma value.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

- `kCGImagePropertyPNGInterlaceType`
The interlace type.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyPNGXPixelsPerMeter`
The number of x pixels per meter.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyPNGYPixelsPerMeter`
The number of y pixels per meter.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyPNGsRGBIntent`
The sRGB intent.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyPNGChromaticities`
The chromaticities.
Available in Mac OS X v10.4 and later.
Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

TIFF Dictionary Keys

Keys for an image that uses Tagged Image File Format (TIFF).

```

const CFStringRef kCGImagePropertyTIFFCompression;
const CFStringRef kCGImagePropertyTIFFPhotometricInterpretation;
const CFStringRef kCGImagePropertyTIFFDocumentName;
const CFStringRef kCGImagePropertyTIFFImageDescription;
const CFStringRef kCGImagePropertyTIFFMake;
const CFStringRef kCGImagePropertyTIFFModel;
const CFStringRef kCGImagePropertyTIFFOrientation;
const CFStringRef kCGImagePropertyTIFFXResolution;
const CFStringRef kCGImagePropertyTIFFYResolution;
const CFStringRef kCGImagePropertyTIFFResolutionUnit;
const CFStringRef kCGImagePropertyTIFFSoftware;
const CFStringRef kCGImagePropertyTIFFTransferFunction;
const CFStringRef kCGImagePropertyTIFFDateTime;
const CFStringRef kCGImagePropertyTIFFArtist;
const CFStringRef kCGImagePropertyTIFFHostComputer;
const CFStringRef kCGImagePropertyTIFFCopyright;
const CFStringRef kCGImagePropertyTIFFWhitePoint;
const CFStringRef kCGImagePropertyTIFFPrimaryChromaticities;

```

Constants

- `kCGImagePropertyTIFFCompression`
The compression scheme used on the image data.
 Available in Mac OS X v10.4 and later.
 Declared in `CGImageProperties.h`.
- `kCGImagePropertyTIFFPhotometricInterpretation`
The color space of the image data.
 Available in Mac OS X v10.4 and later.
 Declared in `CGImageProperties.h`.
- `kCGImagePropertyTIFFDocumentName`
The document name.
 Available in Mac OS X v10.4 and later.
 Declared in `CGImageProperties.h`.
- `kCGImagePropertyTIFFImageDescription`
The image description.
 Available in Mac OS X v10.4 and later.
 Declared in `CGImageProperties.h`.
- `kCGImagePropertyTIFFMake`
The camera or input device make.
 Available in Mac OS X v10.4 and later.
 Declared in `CGImageProperties.h`.
- `kCGImagePropertyTIFFModel`
A camera or input device model.
 Available in Mac OS X v10.4 and later.
 Declared in `CGImageProperties.h`.
- `kCGImagePropertyTIFFOrientation`
The image orientation.
 Available in Mac OS X v10.4 and later.
 Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFXResolution`

The number of pixels per resolution unit in the image width direction.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFYResolution`

The number of pixels per resolution unit in the image height direction.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFResolutionUnit`

The units of resolution.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFSoftware`

The name and version of the software used for image creation.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFTransferFunction`

The transfer function, in tabular format, used to map pixel components from a nonlinear form into a linear form.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFDateTime`

The date and time.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFArtist`

The artist.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFHostComputer`

The computer or operation system used when the image was created.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFCopyright`

Copyright information.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFWhitePoint`

The white point.

Available in Mac OS X v10.4 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyTIFFPrimaryChromaticities`
 The chromaticities of the primaries of the image.
 Available in Mac OS X v10.4 and later.
 Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

DNG Dictionary Keys

Keys for an image that uses the Digital Negative (DNG) archival format.

```
CFStringRef kCGImagePropertyDNGVersion;
CFStringRef kCGImagePropertyDNGBackwardVersion;
CFStringRef kCGImagePropertyDNGUniqueCameraModel;
CFStringRef kCGImagePropertyDNGLocalizedCameraModel;
CFStringRef kCGImagePropertyDNGCameraSerialNumber;
CFStringRef kCGImagePropertyDNGLensInfo;
```

Constants

`kCGImagePropertyDNGVersion`
 An encoding of the four-tier version number.
 Available in Mac OS X v10.5 and later.
 Declared in `CGImageProperties.h`.

`kCGImagePropertyDNGBackwardVersion`
 The oldest version for which a file is compatible.
 Available in Mac OS X v10.5 and later.
 Declared in `CGImageProperties.h`.

`kCGImagePropertyDNGUniqueCameraModel`
 A unique, nonlocalized name for the camera mode.
 Available in Mac OS X v10.5 and later.
 Declared in `CGImageProperties.h`.

`kCGImagePropertyDNGLocalizedCameraModel`
 The localized camera model name.
 Available in Mac OS X v10.5 and later.
 Declared in `CGImageProperties.h`.

`kCGImagePropertyDNGCameraSerialNumber`
 The camera serial number.
 Available in Mac OS X v10.5 and later.
 Declared in `CGImageProperties.h`.

`kCGImagePropertyDNGLensInfo`
 Information about the lens used for the image.
 Available in Mac OS X v10.5 and later.
 Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

8BIM Dictionary Keys

A key for an Adobe Photoshop image.

```
CFStringRef kCGImageProperty8BIMLayerNames;
```

Constants

```
kCGImageProperty8BIMLayerNames
```

The layer names for an Adobe Photoshop file.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

CIFF Dictionary Keys

Keys for an image that uses Camera Image File Format (CIFF).

```
CFStringRef kCGImagePropertyCIFFDescription;
CFStringRef kCGImagePropertyCIFFFirmware;
CFStringRef kCGImagePropertyCIFFOwnerName;
CFStringRef kCGImagePropertyCIFFImageName;
CFStringRef kCGImagePropertyCIFFImageFileName;
CFStringRef kCGImagePropertyCIFFReleaseMethod;
CFStringRef kCGImagePropertyCIFFReleaseTiming;
CFStringRef kCGImagePropertyCIFFRecordID;
CFStringRef kCGImagePropertyCIFFSelfTimingTime;
CFStringRef kCGImagePropertyCIFFCameraSerialNumber;
CFStringRef kCGImagePropertyCIFFImageSerialNumber;
CFStringRef kCGImagePropertyCIFFContinuousDrive;
CFStringRef kCGImagePropertyCIFFFocusMode;
CFStringRef kCGImagePropertyCIFFMeteringMode;
CFStringRef kCGImagePropertyCIFFShootingMode;
CFStringRef kCGImagePropertyCIFFLensMaxMM;
CFStringRef kCGImagePropertyCIFFLensMinMM;
CFStringRef kCGImagePropertyCIFFLensModel;
CFStringRef kCGImagePropertyCIFFWhiteBalanceIndex;
CFStringRef kCGImagePropertyCIFFFlashExposureComp;
CFStringRef kCGImagePropertyCIFFMeasuredEV;
```

Constants

```
kCGImagePropertyCIFFDescription
```

The camera description..

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

```
kCGImagePropertyCIFFFirmware
```

The firmware version.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

- `kCGImagePropertyCIFFOwnerName`
The owner name.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFImageName`
The image name.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFImageFileName`
The image file name.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFReleaseMethod`
The release method.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFReleaseTiming`
The release timing.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFRecordID`
The record ID>
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFSelfTimingTime`
The self timing time.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFCameraSerialNumber`
The camera serial number.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFImageSerialNumber`
The image serial number.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyCIFFContinuousDrive`
The continuous drive mode.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFFocusMode

The focus mode.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFMeteringMode

The metering mode.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFShootingMode

The shooting mode.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFLensMaxMM

The maximum lens length.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFLensMinMM

The minimum lens length.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFLensModel

The lens model.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFWhiteBalanceIndex

The white balance index.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFFlashExposureComp

The flash exposure compensation.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyCIFFMeasuredEV

The measured EV.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

Nikon Camera Dictionary Keys

Keys for an image from a Nikon camera.

```

CFStringRef kCGImagePropertyMakerNikonISOSetting;
CFStringRef kCGImagePropertyMakerNikonColorMode;
CFStringRef kCGImagePropertyMakerNikonQuality;
CFStringRef kCGImagePropertyMakerNikonWhiteBalanceMode;
CFStringRef kCGImagePropertyMakerNikonSharpenMode;
CFStringRef kCGImagePropertyMakerNikonFocusMode;
CFStringRef kCGImagePropertyMakerNikonFlashSetting;
CFStringRef kCGImagePropertyMakerNikonISOSelection;
CFStringRef kCGImagePropertyMakerNikonFlashExposureComp;
CFStringRef kCGImagePropertyMakerNikonImageAdjustment;
CFStringRef kCGImagePropertyMakerNikonLensAdapter;
CFStringRef kCGImagePropertyMakerNikonLensType;
CFStringRef kCGImagePropertyMakerNikonLensInfo;
CFStringRef kCGImagePropertyMakerNikonFocusDistance;
CFStringRef kCGImagePropertyMakerNikonDigitalZoom;
CFStringRef kCGImagePropertyMakerNikonShootingMode;
CFStringRef kCGImagePropertyMakerNikonShutterCount;
CFStringRef kCGImagePropertyMakerNikonCameraSerialNumber;

```

Constants

`kCGImagePropertyMakerNikonISOSetting`
The ISO setting.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerNikonColorMode`
The color mode.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerNikonQuality`
The quality setting.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerNikonWhiteBalanceMode`
The white balance mode.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerNikonSharpenMode`
The sharpening mode.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerNikonFocusMode`
The focus mode.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerNikonFlashSetting`
The flash setting.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

- `kCGImagePropertyMakerNikonISOSelection`
The ISO selection.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonFlashExposureComp`
The flash exposure compensation.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonImageAdjustment`
Image adjustment setting.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonLensAdapter`
The lens adapter.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonLensType`
The lens type.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonLensInfo`
Lens information.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonFocusDistance`
The focus distance.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonDigitalZoom`
The digital zoom setting.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonShootingMode`
The shooting mode.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.
- `kCGImagePropertyMakerNikonShutterCount`
The shutter count.
Available in Mac OS X v10.5 and later.
Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerNikonCameraSerialNumber`

The camera serial number.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

Declared In

`CGImageProperties.h`

Canon Camera Dictionary Keys

Keys for an image from a Canon camera.

```
CFStringRef kCGImagePropertyMakerCanonOwnerName;
CFStringRef kCGImagePropertyMakerCanonCameraSerialNumber;
CFStringRef kCGImagePropertyMakerCanonImageSerialNumber;
CFStringRef kCGImagePropertyMakerCanonFlashExposureComp;
CFStringRef kCGImagePropertyMakerCanonContinuousDrive;
CFStringRef kCGImagePropertyMakerCanonLensModel;
CFStringRef kCGImagePropertyMakerCanonFirmware;
CFStringRef kCGImagePropertyMakerCanonAspectRatioInfo;
```

Constants

`kCGImagePropertyMakerCanonOwnerName`

The owner name.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerCanonCameraSerialNumber`

The camera serial number.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerCanonImageSerialNumber`

The image serial number.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerCanonFlashExposureComp`

The flash exposure compensation.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerCanonContinuousDrive`

The presence of a continuous drive.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

`kCGImagePropertyMakerCanonLensModel`

The lens model.

Available in Mac OS X v10.5 and later.

Declared in `CGImageProperties.h`.

kCGImagePropertyMakerCanonFirmware

The firmware version.

Available in Mac OS X v10.5 and later.

Declared in CGImageProperties.h.

kCGImagePropertyMakerCanonAspectRatioInfo

The image aspect ratio.

Available in Mac OS X v10.5 and later.

Declared in CGImageProperties.h.

Declared In

CGImageProperties.h

Document Revision History

This table describes the changes to *CGImageProperties Reference*.

Date	Notes
2007-10-31	New document that describes property constants for source and destination images.
	Most of this content was previously published in <i>CGImageSource Reference</i> .
	Added "8BIM Dictionary Keys" (page 38), "DNG Dictionary Keys" (page 37), "CIFF Dictionary Keys" (page 38), "Nikon Camera Dictionary Keys" (page 40), and "Canon Camera Dictionary Keys" (page 43).

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- kCGImagePropertyExifAuxImageNumber **constant 21**
- kCGImagePropertyExifAuxLensID **constant 21**
- kCGImagePropertyExifAuxLensInfo **constant 21**
- kCGImagePropertyExifAuxLensModel **constant 21**
- kCGImagePropertyExifAuxLensSerialNumber **constant 21**
- kCGImagePropertyExifAuxOwnerName **constant 21**
- kCGImagePropertyExifAuxSerialNumber **constant 21**
- kCGImagePropertyExifBrightnessValue **constant 16**
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- kCGImagePropertyExifFocalPlaneResolutionUnit **constant 18**
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- kCGImagePropertyExifSharpness **constant 20**
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- kCGImagePropertyExifSubsecTime **constant** 17
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- kCGImagePropertyExifUserComment **constant** 17
- kCGImagePropertyExifVersion **constant** 15
- kCGImagePropertyExifWhiteBalance **constant** 19
- kCGImagePropertyFileSize **constant** 10
- kCGImagePropertyGIFDelayTime **constant** 22
- kCGImagePropertyGIFDictionary **constant** 7
- kCGImagePropertyGIFHasGlobalColorMap **constant** 22
- kCGImagePropertyGIFImageColorMap **constant** 22
- kCGImagePropertyGIFLoopCount **constant** 22
- kCGImagePropertyGPSAltitude **constant** 24
- kCGImagePropertyGPSAltitudeRef **constant** 24
- kCGImagePropertyGPSAreaInformation **constant** 26
- kCGImagePropertyGPSDateStamp **constant** 26
- kCGImagePropertyGPSDestBearing **constant** 26
- kCGImagePropertyGPSDestBearingRef **constant** 25
- kCGImagePropertyGPSDestDistance **constant** 26
- kCGImagePropertyGPSDestDistanceRef **constant** 26
- kCGImagePropertyGPSDestLatitude **constant** 25
- kCGImagePropertyGPSDestLatitudeRef **constant** 25
- kCGImagePropertyGPSDestLongitude **constant** 25
- kCGImagePropertyGPSDestLongitudeRef **constant** 25
- kCGImagePropertyGPSDictionary **constant** 8
- kCGImagePropertyGPSDifferential **constant** 26
- kCGImagePropertyGPSDOP **constant** 24
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- kCGImagePropertyIPTCActionAdvised **constant** 29
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- kCGImagePropertyIPTCOriginalTransmissionReference **constant** 31
- kCGImagePropertyIPTCOriginatingProgram **constant** 30
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- kCGImagePropertyIPTCUrgency **constant 28**
- kCGImagePropertyIPTCWriterEditor **constant 32**
- kCGImagePropertyIsFloat **constant 11**
- kCGImagePropertyIsIndexed **constant 11**
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- kCGImagePropertyJFIFDictionary **constant 8**
- kCGImagePropertyJFIFIsProgressive **constant 33**
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- kCGImagePropertyMakerCanonDictionary **constant 9**
- kCGImagePropertyMakerCanonFirmware **constant 44**
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- kCGImagePropertyMakerCanonImageSerialNumber **constant 43**
- kCGImagePropertyMakerCanonLensModel **constant 43**
- kCGImagePropertyMakerCanonOwnerName **constant 43**
- kCGImagePropertyMakerFujiDictionary **constant 9**
- kCGImagePropertyMakerMinoltaDictionary **constant 9**
- kCGImagePropertyMakerNikonCameraSerialNumber **constant 43**
- kCGImagePropertyMakerNikonColorMode **constant 41**
- kCGImagePropertyMakerNikonDictionary **constant 9**
- kCGImagePropertyMakerNikonDigitalZoom **constant 42**
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- kCGImagePropertyMakerOlympusDictionary **constant 9**
- kCGImagePropertyMakerPentaxDictionary **constant 10**
- kCGImagePropertyOrientation **constant 11**
- kCGImagePropertyPixelHeight **constant 11**
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- kCGImagePropertyPNGChromaticities **constant 34**
- kCGImagePropertyPNGDictionary **constant 8**
- kCGImagePropertyPNGGamma **constant 33**
- kCGImagePropertyPNGInterlaceType **constant 34**
- kCGImagePropertyPNGsRGBIntent **constant 34**
- kCGImagePropertyPNGXPixelsPerMeter **constant 34**
- kCGImagePropertyPNGYPixelsPerMeter **constant 34**
- kCGImagePropertyProfileName **constant 12**
- kCGImagePropertyRawDictionary **constant 8**
- kCGImagePropertyTIFFArtist **constant 36**
- kCGImagePropertyTIFFCompression **constant 35**
- kCGImagePropertyTIFFCopyright **constant 36**
- kCGImagePropertyTIFFDateTime **constant 36**
- kCGImagePropertyTIFFDictionary **constant 7**
- kCGImagePropertyTIFFDocumentName **constant 35**
- kCGImagePropertyTIFFHostComputer **constant 36**
- kCGImagePropertyTIFFImageDescription **constant 35**
- kCGImagePropertyTIFFMake **constant 35**

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constant [37](#)
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kCGImagePropertyTIFFSoftware **constant** [36](#)
kCGImagePropertyTIFFTransferFunction **constant**
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