
NSScreen

Inherits From:	NSObject
Conforms To:	NSObject (NSObject)
Declared In:	AppKit/NSScreen.h

Class Description

An NSScreen object describes the attributes of a computer's monitor, or screen. An application may use an NSScreen object to retrieve information about a screen and use this information to decide what to display upon that screen. For example, an application may use the **deepestScreen** method to find out which of the available screens can best represent color and then may choose to display all of its windows on that screen.

The two main attributes of a screen are its depth and its dimensions. The **depth** method describes the screen depth (such as two-bit, eight-bit, or twelve-bit) and tells you if the screen can display color. The **frame** method gives the screen's dimensions and location as an NSRect.

The device description dictionary contains more complete information about the screen. Use NSScreen's **deviceDescription** method to access the dictionary, and use these keys to retrieve information about a screen:

Dictionary Key	Returns
NSDeviceResolution	An NSValue describing the screen's resolution in dots per inch (dpi).
NSDeviceColorSpaceName	The screen's color space name. See NSGraphics.h for a list of possible values.
NSDeviceBitsPerSample	The bit depth of screen images (2-bit, 8-bit, etc.).
NSDeviceIsScreen	YES, indicating the device is a screen.
NSDeviceSize	An NSValue describing the screen's size in points.

The device description dictionary contains information about not only screens, but all other system devices such as printers and windows. There are other keys into the dictionary that you would use to obtain information about these other devices. For a complete list of device dictionary keys, see NSGraphics.h.

The application object should be created before you use the methods in this class, so that the application object can make the necessary connection to the Window System. You can make sure the application object exists by calling NSApplication's **sharedApplication** method, which creates it if necessary. If you created your application with Project Builder, the application object is automatically created for you in **main()**.

Method Types

Getting NSScreens	+ mainScreen + deepestScreen + screens
Reading screen information	– depth – frame – supportedWindowDepths – deviceDescription

Class Methods

deepestScreen

+ (NSScreen *)**deepestScreen**

Returns an NSScreen object representing the screen that can best represent color. This method always returns an object, even if there is only one screen and it is not a color screen.

mainScreen

+ (NSScreen *)**mainScreen**

Returns an NSScreen object representing the main screen. The main screen is the screen with the key window.

screens

+ (NSArray *)**screens**

Returns an array of NSScreen objects representing all of the screens available on the system. Raises `NSWindowServerCommunicationException` if the screens information can't be obtained from the window system.

Instance Methods

depth

– (NSWindowDepth)**depth**

Returns the screen's depth, including whether the screen can display color.

deviceDescription

– (NSDictionary *)**deviceDescription**

Returns the device dictionary as described in the class description.

frame

– (CGRect)**frame**

Returns the dimensions and location of the screen in an CGRect.

supportedWindowDepths

– (const NSWindowDepth *)**supportedWindowDepths**

Returns a zero-terminated array of the window depths supported by the screen.