Application Icons

An **application icon** is an icon users put on their Home screens and tap to start an application. This is a place where branding and strong visual design should come together into a compact, instantly recognizable, attractive package. Every application needs an application icon.

Note: If your app is a game, its app icon is also used in Game Center.

Try to balance eye appeal and clarity of meaning in your icon so that it's rich and beautiful and clearly conveys the essence of your application's purpose. Also, it's a good idea to investigate how your choice of image and color might be interpreted by people from different cultures.

Create different sizes of your application icon for different devices. If you're creating a universal application, you need to supply application icons in all three sizes.

For iPhone and iPod touch both of these sizes are required:

- 57 x 57 pixels
- 114 x 114 pixels (high resolution)

For iPad, this size is required:

- 72 x 72 pixels

When iOS displays your application icon on the Home screen of a device, it automatically adds the following visual effects:

- Rounded corners
- Drop shadow
- Reflective shine (unless you prevent the shine effect)

For example, a simple 57 x 57 pixel iPhone application icon might look like this:

When it's displayed on an iPhone Home screen, iOS adds rounded corners, a drop shadow, and a reflected shine. So the same application icon would look like this:

Note: You can prevent iOS from adding the shine to your application icon. To do this, you need to add the `UIPrerenderedIcon` key to your application's `Info.plist` file (to learn about this file, see "The Information Property List" in iOS Application Programming Guide).

The presence (or absence) of the added shine does not change the dimensions of your application icon.

Ensure your icon is eligible for the visual enhancements iOS provides. You should produce an image that:

- Has 90° corners
- Does not have any shine or gloss (unless you've chosen to prevent the addition of the reflective shine)
- Does not use alpha transparency

Give your application icon a discernible background. Icons with visible backgrounds look best on the Home screen primarily because of the rounded corners iOS adds. This is because uniformly rounded corners ensure that all the icons on a user's Home screen have a consistent appearance that invites tapping. If you create an icon with a background that disappears when it's viewed on the Home screen, users don't see the rounded corners. Such icons often don't look tappable and tend to interfere with the orderly symmetry of the Home screen that users appreciate.

Be sure your image completely fills the required area. If your image boundaries are smaller than the recommended sizes, or you use transparency to create "see-through" areas within them, your icon can appear to float on a black background with rounded corners.

For example, an application might supply an icon on a transparent background, like the blue star on the far left. When iOS displays this icon on a Home screen, it looks like the image in the middle (if no shine is added) or it looks like the image on the right (if shine is added).

An icon that appears to float on a visible black background looks especially unattractive on a Home screen that displays a custom picture.

Create a 512 x 512 pixel version of your application icon for display in the App Store. Although it's important that this version be instantly recognizable as your application icon, it can be subtly richer and more detailed. There are no visual effects added to this version of your application icon.

If you're developing an application for ad-hoc distribution (that is, to be distributed in-house only, not through the App Store), you must also provide a 512 x 512 pixel version of your application icon. This icon identifies your application in iTunes.

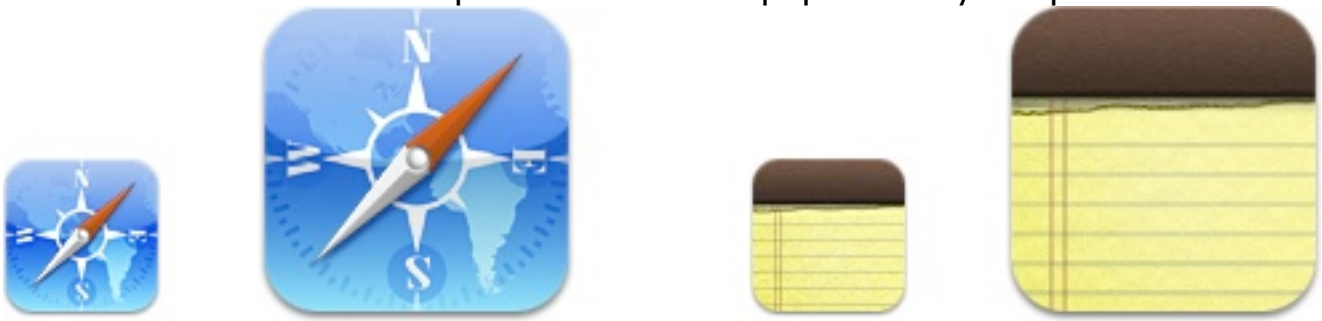
iOS might also use this large image in other ways. In an iPad application, for example, iOS uses the 512 x 512 pixel image to generate the large document icon, if a custom document icon is not supplied.

Tips for Creating Great Artwork for the Retina Display

The Retina display allows you to display high-resolution versions of your art and icons. If you merely scale up your existing artwork, you miss out on the opportunity to provide the beautiful, captivating images users expect. Instead, you should rework your existing image resources to create large, higher quality versions that are:

- **Richer in texture**. For example, in the high-resolution versions of the Settings and Contacts icons, the metal and paper textures are clearly visible.

- **More detailed**. For example, in the high-resolution versions of the Safari and Notes icons, you can see details such as the accurate contours of the continents behind the compass and the torn paper left by the previous note.



- **More realistic**. For example, the high-resolution versions of the Compass and Photos icons combine rich texture and fine details to create realistic portrayals of a compass and a photograph.

Even though bar icons are simpler than application or document icons, you should consider adding details as you create high-resolution versions of them. For example, the artists tab bar icon in the iPod application is a streamlined silhouette of a singer. The high-resolution version of this icon is recognizably the same icon, but includes greater detail.

The following techniques can help you get great results as you create a high-resolution version of your artwork.

Scale up your original artwork to 200% using the “nearest neighbor” scaling algorithm. This works well if the original artwork was not created with vector shapes and does not include layer effects. The result is a large, pixelated image on top of which you can draw matching high-resolution art. This is a good way to begin because it allows you to preserve the original layout of your design.

If the original artwork was created with vector shapes, or it includes layer effects, you can use the default scaling algorithm instead of the nearest neighbor algorithm.

Add detail and depth. Don’t hesitate to draw very small elements, because the high-resolution version of your artwork allows much more room for fine details. For example, a 1-pixel dot in your original image becomes a 4-pixel dot (that is, 2 x 2 pixels) in the larger version.

Consider softening scaled-up elements. If, for example, you have a sharp, 1-pixel dividing line in your original artwork, it might have the boldness you want when you leave it scaled up to a 2-pixel line. But for some lines and elements, you might want to soften the scaled results by feathering or even leaving the element at the smaller size.

Consider adding blur for better results in effects such as engravings and drop shadows. For example, text engraving is typically done by shifting a duplicate image of the text by 1 pixel. Scaled up, this shift would result in an engraving width of 2 pixels, which is likely to look very sharp and unrealistic at a higher resolution. To improve this, you can leave the shift as-is (that is, at 1 pixel), but add a 1-pixel blur to soften the engraving. This still results in a 2-pixel wide engraving effect, but the outer pixel now looks more like it is only half a pixel wide, which results in a better sense of dimensionality.