

Overview

[Overview](#) / [Color and Grayscale Printing](#) / [AFP Color Management](#) / [Data Objects](#) / Types of Data Objects

Types of Data Objects

Image data objects can be stored in a number of different formats, including AFPC JPEG Subset, EPS, GIF, IOCA, PDF, PNG, and TIFF. These image types are device-independent so they can be used by different systems and still be interpreted consistently.

- **AFPC JPEG Subset (JPEG)**
AFPC (AFP Consortium) JPEG Subset files, formerly called JPEG File Interchange Format (JFIF) files, are bitmap image files that are compressed by using Joint Photographic Experts Group (JPEG) compression. As a result, AFPC JPEG Subset files are most commonly referred to as JPEG files. JPEG files most commonly use the file extension .jpg, but can also use .jpeg, .jpe, .jfif, and .jif. JPEG compression deletes information that it considers unnecessary from images when it converts them. JPEG files vary from having small amounts of compression to having large amounts of compression. The more an image is compressed, the more information is lost. If the image is compressed only once, there usually is no noticeable effect on the image. However, if the image is compressed and decompressed repeatedly, the effects of deleting information become more noticeable. JPEG compression is commonly used for photographs, especially photographs that are transmitted or displayed on webpages. The compression makes the files small enough to transmit on a network efficiently, but leaves enough information that the image is still visually appealing.
- **Encapsulated PostScript (EPS)**
EPS is a PostScript graphics file format that follows conventions that Adobe Systems defined. EPS files support embedded ICC profiles.
- **Graphics Interchange Format (GIF)**
GIF files are bitmap image files that are limited to a palette of 256 RGB colors. Because of the limited color range that it can contain, GIF is not a good format for reproducing photographs, but it is generally adequate for logos or charts. GIF images are widely used on the Internet because they are usually smaller than other image formats. GIF files use the file extension .gif.
- **Image Object Content Architecture (IOCA)**
IOCA is an architecture that provides a consistent way to represent images, including conventions and directions for processing and exchanging image information. The architecture defines image information independently of all data objects and environments in which it might exist and uses self-identifying terms; each field contains a description of itself along with its contents.
- **Portable Document Format (PDF)**
PDF is a standard file format that Adobe Systems developed. PDF files can be used and stored on various operating systems and contain all the required image and font data. Design attributes in a PDF are kept in a single compressed package.

⬇ Note:

- Single-page and multiple-page PDF files can be used as data objects in AFP print jobs.

- **Portable Network Graphics (PNG)**
PNG files are bitmap image files that support indexed colors, palette-based images with 24-bit RGB or 32-bit RGBA colors, grayscale images, an optional alpha channel, and lossless compression. PNG is used for transferring images on the Internet, but not for print graphics. PNG files use the file extension .png.
- **Tagged Image File Format (TIFF)**
TIFF files are bitmap image files that include headers to provide more information about the image. TIFF files use the file extensions .tif or .tiff. TIFF files support embedded ICC profiles. If an ICC profile is embedded in a file, the characteristics of the input color space are known whenever the file is used; however, the profiles increase the file size. When you save a file in the TIFF format, you can use various compression algorithms.

⬇ Note:

- Single-image and multiple-image TIFF files can be used as data objects in AFP print jobs.

Not all printers support all types of data objects.

The embedded ICC profiles in EPS, JPEG, and TIFF files contain the information that a printer uses to convert colors in the image from an input color space into the profile connection space (PCS). The input color space is either an industry-standard space or a custom space that describes the color reproduction capabilities of a device, such as a scanner, digital camera, monitor, or printer.

Parent topic: [Data Objects](#)