

What's the Difference Between PNG, JPEG, GIF, and TIFF?

by Nate Holmes, May 18, 2018

File type comparison of PNG, JPEG, GIF, and TIFF

	Use	Example Uses	Don't Use
PNG	Graphics, small images that maintain original quality, transparency	Charts, diagrams, logos, photos	Sharing high-resolution photos on the web
JPEG	Photos on the web	Photos in a slide deck, blog, or social media	Editing images, line graphics, or print
GIF	Small, simple graphics with limited color	Ad banners, simple charts, buttons, animation	Photographs, detailed imagery
TIFF	Editing and storage	Storing photos that will be edited, print	Images on the web

The quality of your images on social media, websites, blogs, and presentations influences the perception of your personal and corporate brand. Not all image formats are the same. Some are meant for charts and diagrams, while others are intended for eye-catching photographs. Knowing which file format to use when will keep your images looking their best.

PNG files

Choose PNG when you need a small file that maintains its original quality. PNG files support millions of colors, plus varying degrees of transparency — so they're perfect for graphic image files, like logos, charts, and infographics.

PNGs maintain their original quality when compressed. When you need to make a PNG smaller, it will look as clear as the original file. Note that PNGs are typically larger files than JPEGs and GIFs, and the larger the file size, the longer it takes to load on the web.

JPEG files

JPEG is the go-to format for online photos. It supports a full spectrum of colors, and almost all devices and programs can open and save to the JPEG format — making it the most universal of the four. JPEG files are ideal when you want to keep file size down and don't mind giving up a little quality to create a very small file. That said, JPEG quality drops when images are edited and saved. If you plan to continually edit your files, JPEG is not the format for the job. But if you need to display photos online, JPEGs are just right.

In addition to losing quality in compression, JPEGs don't support transparency. So, don't use JPEGs for line-based graphics, especially over another image or background color.

GIF files

Use GIF for simple web graphics with limited colors. GIF files are the smallest of the four because they are always reduced to 256 colors, making for fast-loading visuals. That said, GIF files aren't recommended for files with a large range of colors, like photographs or other detailed imagery. But if you're working with small graphics, like banners, charts, and buttons, GIF is the best format for the job.

TIFF files

TIFF is best for any bitmap images that you intend to edit. TIFF files don't compress to make for smaller files, because they are meant to preserve quality. They offer options to use tags, layers, and transparency and are compatible with photo manipulation programs like Photoshop. If you're looking for a small file or a web-friendly format, TIFF isn't recommended. But if you plan to edit digital images in a working storage format, consider TIFF your go-to.

PNG, JPEG, GIF, and TIFF files are designed for different graphic needs. Chances are, you won't settle on just one but will use a combination of all of these formats, depending on the task at hand.

If you're using a digital asset management (DAM) system, store the original file. Let the DAM system convert the file to the appropriate format.

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