ImageMagick

Use ImageMagick® to create, edit, compose, or convert digital images. It can read and write images in a variety of formats (over 200) including PNG, JPEG, GIF, WebP, HEIC, SVG, PDF, DPX, EXR and TIFF. ImageMagick can resize, flip, mirror, rotate, distort, shear and transform images, adjust image colors, apply various special effects, or draw text, lines, polygons, ellipses and Bézier curves.

ImageMagick is free software delivered as a ready-to-run binary distribution or as source code that you may use, copy, modify, and distribute in both open and proprietary applications. It is distributed under a derived Apache 2.0 license.

ImageMagick utilizes multiple computational threads to increase performance and can read, process, or write mega-, giga-, or tera-pixel image sizes.

The current release is ImageMagick 7.1.0-10. It runs on Linux, Windows, Mac Os X, iOS, Android OS, and others.

The authoritative ImageMagick web site is https://imagemagick.org. The authoritative source code repository is https://github.com/ImageMagick/ImageMagick. We continue to maintain the legacy release of ImageMagick, version 6, at https://legacy.imagemagick.org.

Features and Capabilities

Here are just a few examples of what ImageMagick can do for you:

Animation	create a GIF animation sequence from a group of images.
Bilateral blur	non-linear, edge-preserving, and noise-reducing smoothing filter.
Color management	accurate color management with color profiles or in lieu of-- built-in gamma compression or expansion as demanded by the colorspace.
Color thresholding	force all pixels in the color range to white otherwise black.
Command-line processing	utilize ImageMagick from the command-line.

Composite	overlap one image over another.
Connected component labeling	uniquely label connected regions in an image.
Convex hull	smallest area convex polygon containing the image foreground objects. In addition, the minimum bounding box and unrotate angle are also generated.
Decorate	add a border or frame to an image.
Delineate image features	Canny edge detection, Hough lines.
Discrete Fourier transform	implements the forward and inverse DFT.
Distributed pixel cache	offload intermediate pixel storage to one or more remote servers.
Draw	add shapes or text to an image.
Encipher or decipher an image	convert ordinary images into unintelligible gibberish and back again.
Format conversion	convert an image from one format to another (e.g. PNG to JPEG).
Generalized pixel distortion	correct for, or induce image distortions including perspective.
Heterogeneous distributed processing	certain algorithms are OpenCL-enabled to take advantage of speed-ups offered by executing in concert across heterogeneous platforms consisting of CPUs, GPUs, and other processors.
High dynamic-range images	accurately represent the wide range of intensity levels found in real scenes ranging from the brightest direct sunlight to the deepest darkest shadows.
Histogram equalization	use adaptive histogram equalization to improve contrast in images.
Image cache	secure methods and tools to cache images, image sequences, video, audio or metadata in a local folder..
Image calculator	apply a mathematical expression to an image, image sequence, or image channels.
Image gradients	create a gradual blend of two colors whose shape is horizontal, vertical, circular, or elliptical.
Image identification	describe the format and attributes of an image.
ImageMagick on the iPhone	convert, edit, or compose images on your iOS device such as the iPhone or iPad.
Large image support	read, process, or write mega-, giga-, or tera-pixel image sizes.
Montage	juxtapose image thumbnails on an image canvas.
Morphology of shapes	extract features, describe shapes, and recognize patterns in images.

Noise and color reduction	Kuwahara Filter, Mean-Shift.
Perceptual hash	map visually identical images to the same or similar hash-- useful in image retrieval, authentication, indexing, or copy detection as well as digital watermarking.
Special effects	blur, sharpen, threshold, or tint an image.
Text & comments	insert descriptive or artistic text in an image.
Threads of execution support	ImageMagick is thread safe and most internal algorithms execute in parallel to take advantage of speed-ups offered by multicore processor chips.
Transform	resize, rotate, deskew, crop, flip or trim an image.
Transparency	render portions of an image invisible.
Virtual pixel support	convenient access to pixels outside the image boundaries.

Examples of ImageMagick Usage shows how to use ImageMagick from the command-line to accomplish any of these tasks and much more. Also, see Fred's ImageMagick Scripts: a plethora of command-line scripts that perform geometric transforms, blurs, sharpens, edging, noise removal, and color manipulations. With Magick.NET, use ImageMagick without having to install ImageMagick on your server or desktop. Finally, see Snibgo's ImageMagick Cookbook for Windows-based ImageMagick scripting.