

NAME

convert – convert between image formats as well as resize an image, blur, crop, despeckle, dither, draw on, flip, join, re-sample, and much more.

SYNOPSIS

magick convert [*input-options*] *input-file* [*output-options*] *output-file*

OVERVIEW

The **convert** program is a member of the ImageMagick(1) suite of tools. Use it to convert between image formats as well as resize an image, blur, crop, despeckle, dither, draw on, flip, join, re-sample, and much more.

For more information about the convert command, point your browser to <file:///usr/share/doc/ImageMagick-7/www/convert.html> or <https://imagemagick.org/script/convert.php>.

DESCRIPTION

Image Settings:

- adjoin join images into a single multi-image file
- affine matrix affine transform matrix
- alpha option activate, deactivate, reset, or set the alpha channel
- antialias remove pixel-aliasing
- authenticate value decrypt image with this password
- attenuate value lessen (or intensify) when adding noise to an image
- background color background color
- bias value add bias when convolving an image
- black-point-compensation use black point compensation
- blue-primary point chromaticity blue primary point
- bordercolor color border color
- caption string assign a caption to an image
- cdl filename color correct with a color decision list
- clip clip along the first path from the 8BIM profile
- clip-mask filename associate a clip mask with the image
- clip-path id clip along a named path from the 8BIM profile
- colorspace type alternate image colorspace
- comment string annotate image with comment
- compose operator set image composite operator
- compress type type of pixel compression when writing the image
- decipher filename convert cipher pixels to plain pixels
- define format:option define one or more image format options
- delay centiseconds display the next image after pausing
- density geometry horizontal and vertical density of the image
- depth value image depth
- direction type render text right-to-left or left-to-right
- display server get image or font from this X server
- dispose method layer disposal method
- dither method apply error diffusion to image
- encipher filename convert plain pixels to cipher pixels
- encoding type text encoding type
- endian type endianness (MSB or LSB) of the image
- family name render text with this font family
- features distance analyze image features (e.g. contrast, correlation)
- fill color color to use when filling a graphic primitive
- filter type use this filter when resizing an image
- flatten flatten a sequence of images

- font name render text with this font
- format "string" output formatted image characteristics
- fuzz distance colors within this distance are considered equal
- gravity type horizontal and vertical text placement
- green-primary point chromaticity green primary point
- intensity method method to generate intensity value from pixel
- intent type type of rendering intent when managing the image color
- interlace type type of image interlacing scheme
- interline-spacing value
 - set the space between two text lines
- interpolate method pixel color interpolation method
- interword-spacing value
 - set the space between two words
- kerning value set the space between two letters
- label string assign a label to an image
- limit type value pixel cache resource limit
- loop iterations add Netscape loop extension to your GIF animation
- matte store matte channel if the image has one
- mattecolor color frame color
- metric type measure differences between images with this metric
- moments report image moments
- monitor monitor progress
- orient type image orientation
- page geometry size and location of an image canvas (setting)
- ping efficiently determine image attributes
- pointsize value font point size
- precision value maximum number of significant digits to print
- preview type image preview type
- quality value JPEG/MIFF/PNG compression level
- quiet suppress all warning messages
- read-mask filename associate a read mask with the image
- red-primary point chromaticity red primary point
- regard-warnings pay attention to warning messages
- remap filename transform image colors to match this set of colors
- repage geometry size and location of an image canvas
- respect-parentheses settings remain in effect until parenthesis boundary
- sampling-factor geometry
 - horizontal and vertical sampling factor
- scene value image scene number
- seed value seed a new sequence of pseudo-random numbers
- size geometry width and height of image
- statistic type geometry
 - replace each pixel with corresponding statistic from the neighborhood
- stretch type render text with this font stretch
- stroke color graphic primitive stroke color
- strokewidth value graphic primitive stroke width
- style type render text with this font style
- support factor resize support: > 1.0 is blurry, < 1.0 is sharp
- synchronize synchronize image to storage device
- taint declare the image as modified
- texture filename name of texture to tile onto the image background
- tile-offset geometry
 - tile offset
- treedepth value color tree depth

- transparent-color color
transparent color
- undercolor color annotation bounding box color
- units type the units of image resolution
- verbose print detailed information about the image
- virtual-pixel method
virtual pixel access method
- weight type render text with this font weight
- white-point point chromaticity white point
- write-mask filename associate a write mask with the image

Image Operators:

- adaptive-blur geometry
adaptively blur pixels; decrease effect near edges
- adaptive-resize geometry
adaptively resize image with data dependent triangulation
- adaptive-sharpen geometry
adaptively sharpen pixels; increase effect near edges
- annotate geometry text
annotate the image with text
- auto-gamma automagically adjust gamma level of image
- auto-level automagically adjust color levels of image
- auto-orient automatically orient image
- auto-threshold method
automatically perform image thresholding
- bench iterations measure performance
- bilateral-blur geometry
non-linear, edge-preserving, and noise-reducing smoothing filter
- black-threshold value
force all pixels below the threshold into black
- blue-shift factor simulate a scene at nighttime in the moonlight
- blur geometry reduce image noise and reduce detail levels
- border geometry surround image with a border of color
- brightness-contrast geometry
improve brightness / contrast of the image
- canny geometry detect edges in the image
- channel mask set the image channel mask
- charcoal radius simulate a charcoal drawing
- chop geometry remove pixels from the image interior
- clahe geometry contrast limited adaptive histogram equalization
- clamp keep pixel values in range (0-QuantumRange)
- clip clip along the first path from the 8BIM profile
- clip-mask filename associate a clip mask with the image
- clip-path id clip along a named path from the 8BIM profile
- colorize value colorize the image with the fill color
- color-matrix matrix apply color correction to the image
- colors value preferred number of colors in the image
- color-threshold start_color-stop_color
force all pixels in the color range to white otherwise black
- connected-component connectivity
connected-components uniquely labeled
- contrast enhance or reduce the image contrast
- contrast-stretch geometry
improve contrast by 'stretching' the intensity range

- convolve coefficients
 apply a convolution kernel to the image
- cycle amount cycle the image colormap
- deskew threshold straighten an image
- despeckle reduce the speckles within an image
- distort method args
 distort images according to given method and args
- draw string annotate the image with a graphic primitive
- edge radius apply a filter to detect edges in the image
- emboss radius emboss an image
- enhance apply a digital filter to enhance a noisy image
- equalize perform histogram equalization to an image
- evaluate operator value
 evaluate an arithmetic, relational, or logical expression
- extent geometry set the image size
- extract geometry extract area from image
- fft implements the discrete Fourier transform (DFT)
- flip flip image vertically
- floodfill geometry color
 floodfill the image with color
- flop flop image horizontally
- frame geometry surround image with an ornamental border
- function name apply a function to the image
- gamma value level of gamma correction
- gaussian-blur geometry
 reduce image noise and reduce detail levels
- geometry geometry preferred size or location of the image
- grayscale method convert image to grayscale
- hough-lines geometry
 identify lines in the image
- identify identify the format and characteristics of the image
- ift implements the inverse discrete Fourier transform (DFT)
- implode amount implode image pixels about the center
- integral calculate the sum of values (pixel values) in the image
- interpolative-resize geometry
 resize image using interpolation
- kmeans geometry K means color reduction
- lat geometry local adaptive thresholding
- layers method optimize or compare image layers
- level value adjust the level of image contrast
- level-colors color,color
 level image with the given colors
- linear-stretch geometry
 improve contrast by 'stretching with saturation' the intensity range
- liquid-rescale geometry
 rescale image with seam-carving
- mean-shift geometry delineate arbitrarily shaped clusters in the image
- median geometry apply a median filter to the image
- mode geometry make each pixel the 'predominant color' of the neighborhood
- modulate value vary the brightness, saturation, and hue
- monochrome transform image to black and white
- morphology method kernel
 apply a morphology method to the image
- motion-blur geometry

simulate motion blur
 -negate replace each pixel with its complementary color
 -noise geometry add or reduce noise in an image
 -normalize transform image to span the full range of colors
 -opaque color change this color to the fill color
 -ordered-dither NxN
 add a noise pattern to the image with specific amplitudes
 -paint radius simulate an oil painting
 -perceptible epsilon
 pixel value less than |epsilon| become epsilon or -epsilon
 -polaroid angle simulate a Polaroid picture
 -posterize levels reduce the image to a limited number of color levels
 -print string interpret string and print to console
 -profile filename add, delete, or apply an image profile
 -quantize colorspace reduce colors in this colorspace
 -radial-blur angle radial blur the image
 -raise value lighten/darken image edges to create a 3-D effect
 -random-threshold low,high
 random threshold the image
 -range-threshold values
 perform either hard or soft thresholding within some range of values in an image
 -region geometry apply options to a portion of the image
 -render render vector graphics
 -resample geometry change the resolution of an image
 -resize geometry resize the image
 -roll geometry roll an image vertically or horizontally
 -rotate degrees apply Paeth rotation to the image
 -sample geometry scale image with pixel sampling
 -scale geometry scale the image
 -segment values segment an image
 -selective-blur geometry
 selectively blur pixels within a contrast threshold
 -sepia-tone threshold
 simulate a sepia-toned photo
 -set property value set an image property
 -shade degrees shade the image using a distant light source
 -shadow geometry simulate an image shadow
 -sharpen geometry sharpen the image
 -shave geometry shave pixels from the image edges
 -shear geometry slide one edge of the image along the X or Y axis
 -sigmoidal-contrast geometry
 lightness rescaling using sigmoidal contrast enhancement
 -sketch geometry simulate a pencil sketch
 -solarize threshold negate all pixels above the threshold level
 -sort-pixels sort each scanline in ascending order of intensity
 -sparse-color method args
 fill in a image based on a few color points
 -splice geometry splice the background color into the image
 -spread amount displace image pixels by a random amount
 -strip strip image of all profiles and comments
 -swirl degrees swirl image pixels about the center
 -threshold value threshold the image
 -thumbnail geometry create a thumbnail of the image
 -tile filename tile image when filling a graphic primitive

- tint value tint the image with the fill color
- transform affine transform image
- transparent color make this color transparent within the image
- transpose flip image vertically and rotate 90 degrees
- transverse flop image horizontally and rotate 270 degrees
- trim trim image edges
- type type image type
- unique-colors discard all but one of any pixel color
- unsharp geometry sharpen the image
- vignette geometry soften the edges of the image in vignette style
- wave geometry alter an image along a sine wave
- wavelet-denoise threshold
 removes noise from the image using a wavelet transform
- white-balance automagically adjust white balance of image
- white-threshold value
 force all pixels above the threshold into white

Image Channel Operators:

- channel-fx expression
 exchange, extract, or transfer one or more image channels
- separate separate an image channel into a grayscale image

Image Sequence Operators:

- append append an image sequence top to bottom (use +append for left to right)
- clut apply a color lookup table to the image
- coalesce merge a sequence of images
- combine combine a sequence of images
- compare mathematically and visually annotate the difference between an image and its reconstruction
- complex operator perform complex mathematics on an image sequence
- composite composite image
- copy geometry offset,
 copy pixels from one area of an image to another
- crop geometry cut out a rectangular region of the image
- deconstruct break down an image sequence into constituent parts
- evaluate-sequence operator
 evaluate an arithmetic, relational, or logical expression
- flatten flatten a sequence of images
- fx expression apply mathematical expression to an image channel(s)
- hald-clut apply a Hald color lookup table to the image
- morph value morph an image sequence
- mosaic create a mosaic from an image sequence
- poly terms build a polynomial from the image sequence and the corresponding terms (coefficients and degree pairs)
- process arguments process the image with a custom image filter
- smush geometry smush an image sequence together
- write filename write images to this file

Image Stack Operators:

- clone indexes clone an image
- delete indexes delete the image from the image sequence
- duplicate count,indexes
 duplicate an image one or more times
- insert index insert last image into the image sequence

- reverse reverse image sequence
- swap indexes swap two images in the image sequence

Miscellaneous Options:

- debug events display copious debugging information
- distribute-cache port
 distributed pixel cache spanning one or more servers
- help print program options
- log format format of debugging information
- list type print a list of supported option arguments
- version print version information

Use any setting or operator as an *output-option*. Only a limited number of setting are *input-option*. They include: -antialias, -caption, -density, -define, -encoding, -font, -pointsize, -size, and -texture as well as any of the miscellaneous options.

By default, the image format of 'file' is determined by its magic number. To specify a particular image format, precede the filename with an image format name and a colon (i.e. ps:image) or specify the image type as the filename suffix (i.e. image.ps). Specify 'file' as '-' for standard input or output.

SEE ALSO

ImageMagick(1)

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