

**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**

**convert** [*input-option*] *input-file* [*output-option*] *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-6/www/convert.html> or <http://www.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
- channel type      apply option to select image channels
- 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
- colors value      preferred number of colors in the image
- 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 value        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  
 -mask filename    associate a mask with the image  
 -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  
 -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  
 -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
- view FlashPix viewing transforms
- virtual-pixel method  
virtual pixel access method
- weight type render text with this font weight
- white-point point chromaticity white point

#### 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
- bench iterations measure performance
- 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
- charcoal radius simulate a charcoal drawing
- chop geometry remove pixels from the image interior
- 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
- 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
- interpolative-resize geometry
  - resize image using 'point sampled' interpolation
- 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
- magnify          double the size of the image with pixel art scaling
- 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  
 -region geometry    apply options to a portion of the image  
 -render             render vector graphics  
 -repage geometry    size and location of an image canvas  
 -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  
 -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

- white-threshold value  
force all pixels above the threshold into white

#### 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
- 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
- separate separate an image channel into a grayscale image
- 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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