ImageMagick

Image converter and editor

Read input files → `settings` → **Settings** -background, -gravity → `operators` → **Operators** -resize, -crop... → `sequence` → **Image list** ( ) stacks, -append → `encode` → **Write** output name sets format

CONCEPTS

Order matters: settings (-background, -gravity, -quality) must come before the operator that uses them, and options apply to the images read so far.

ImageMagick 7 has one entry point, magick. IM6 used convert, mogrify, identify and montage directly; in IM7 those are subcommands (magick mogrify). Plain convert still works as a legacy alias but is deprecated.

Quote geometry with < > ^ ! and filenames with [ ] so the shell leaves them alone. On Linux, escape stack parentheses as \(and \).

CONVERT & INSPECT

`magick <in> <out>`
Convert; format follows the extension

`magick identify <file>`
One-line size, format, depth

`magick identify -format "%wx%h\n" <files>`
Print just the dimensions

CONVERT & INSPECT (cont.)

`magick '<in>[0]' <out>`
Read only the first frame or page

RESIZE & CROP

`-resize <WxH>`
Fit inside the box, keep aspect

`-resize <W>x`
Set width, height follows

`-resize <N>%`
Scale by percentage

`-resize 800x600>`
Shrink only if larger

`-resize 800x600^`
Fill the box (minimum size)

`-thumbnail <WxH>`
Resize and drop metadata, fast

`-crop <WxH>+<x>+<y>`
Cut out a region

`-gravity center -crop <WxH>+0+0`
Crop around a gravity point

`-trim +repage`
Remove uniform border

`-extent <WxH>`
Pad or crop to a canvas size

RESIZE & CROP (cont.)

`-resize <WxH> -gravity center -extent <WxH>`
Letterbox into a fixed size

ROTATE & ORIENT

`-rotate <deg>`
Rotate clockwise, fills with background

`-auto-orient`
Apply the EXIF orientation

`-flip / -flop`
Mirror vertically / horizontally

`-gravity <dir>`
Anchor for crop, extent, annotate, composite

QUALITY & COLOUR

`-quality <N>`
JPEG/WebP quality 1-100 (PNG: compression)

`-strip`
Remove EXIF, profiles and comments

`-colorspace Gray`
Convert to grayscale

`-density <dpi>`
Set resolution metadata or PDF render DPI

TRANSPARENCY & COMPOSE

`-background <color> -flatten`
Merge layers onto a background

`magick <base> <over> -composite <out>`
Overlay one image on another

`magick <base> <over> -gravity <dir> -geometry +<x>+<y> -composite <out>`
Place an overlay at an anchor

`-append / +append`
Stack vertically / side by side

TEXT & DRAWING

`-gravity South -annotate +0+10 "<text>"`
Draw text at an anchor

`-pointsize <N>`
Set the text size

`-fill <color>`
Fill colour for text and shapes

`-size <WxH> xc:<color> <out>`
Create a plain canvas

BATCH & MONTAGE

`magick mogrify -resize <WxH> <files>`
Edit files in place (overwrites)

`magick mogrify -format jpg *.png`
Convert to new files, keep originals

`magick mogrify -path <dir> -resize <WxH> <files>`
Write results to another folder

`magick montage <files> -geometry +4+4 <out>`
Tile images into a contact sheet

`magick <in.pdf> page-%d.png`
One image per PDF page

`magick <files> <out.pdf>`
Combine images into a PDF

RECIPES

Web thumbnails, safe and small

```
# originals stay untouched
mkdir -p out
magick mogrify -path out -auto-orient \
  -thumbnail '400x400>' -strip -quality 82 *.jpg
```