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
```