Audion Image Tools

Русский · User Guide

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A portable toolkit for images: conversion, colour, sizing, cropping, watermarks, tiling, contact sheets - and PDF pages and the pictures inside DOCX, PPTX and PDF.

Why It Exists

Working with images splits into two different jobs, and confusing them is expensive.

The first is **accept whatever you were given**. A shoot arrives as camera RAW, a scan as a multi-frame TIFF, a layout as PSD, a phone photo as HEIC. The program has to open all of it without asking where it came from.

The second is **deliver predictably**. Here the opposite matters: a narrow set of formats where behaviour is worked out in detail — what happens to transparency, how the colour profile is written, whether pixels change at all.

Hence the central decision: **wide on the way in, narrow on the way out**. On input, everything that can be opened. The deep, predictable processing is concentrated around JPG and PNG.

Principles

Three levels of format support are named aloud. Not "supported", but how well.

level	what it means	formats
stable core	worked out, always works	BMP, GIF, JPG, PNG, TGA, TIFF, WebP, AVIF
via adapter	needs an extra layer	HEIC and HEIF, camera RAW — CR2, CR3, DNG
best effort	does not always open	WMF, IFF, XIF; PSD as far as it goes

What is available on a particular machine, the program says itself:

```
python system_core\main.py formats
```

Colour is chosen, not guessed. sRGB for screens, CMYK for print — and in each case explicitly: the built-in path with no external file, or a specific profile from disk. The program will not decide which of the two CMYK profiles you need, because that depends on the print shop, not on the file.

Operations that leave pixels alone are kept apart from those that don't. Writing resolution changes only the tag in the file; fitting to a roll recalculates resolution from a size in millimetres while leaving the pixels as they are. This is stated at each such operation, so you don't later hunt for where the quality loss came from.

Compatibility beats compactness. WebP, AVIF, and HEIF are there for light delivery, but JPG remains the one that opens everywhere, and the program will not replace it with them by default.

What It Can Do

area	about
Conversion	to JPG, PNG, TIFF, WebP, AVIF, HEIF, HEIC; quality by preset or exact value
Colour	normalisation with an explicit profile, greyscale, safe transparency handling for JPG
Sizing	to 1080p, 1440p, 2160p screens; to 16:9, A4, A3; to a roll by a side in millimetres

area	about
Resolution	writing a chosen resolution without touching pixels
Cropping	a solid border, smart white-background crop, a safety margin in millimetres
PDF assembly	straight after cropping, with embedded PNG or JPG
Watermark	a caption in the corner or a diagonal protective line, with adjustable opacity and colour
Tiling	one image across A5, A4, A3, or a roll — for stickers, with margins and gaps in millimetres
Contact sheet	a grid of thumbnails: standard sizes or your own
Frames	a multi-frame picture (TIFF, GIF, WebP, APNG) into numbered PNG frames with their pauses; frames back into GIF, WebP or APNG
Rotation	fixing by the orientation tag; a JPEG turned by 90, 180, 270 degrees without loss (jpegtran)
Exact size	fit, pad, crop or stretch to a size in pixels; a scale of 0.1 to 1000 %
Correction	levels, brightness, contrast, gamma, saturation, grey, sepia, a tint, inverse, white to transparent; PNG of 256 colours
Metadata	EXIF and GPS taken out without writing the picture again, its pixels checked
ICO	every size Windows asks for, in one file
PDF pages	turn chosen pages, merge, split by ranges, clear the metadata; every copy checked before it is called done
Pictures in documents	DOCX, PPTX, PDF: check their DPI, raise them, shrink them, fit a document under a size in MB, sRGB or CMYK, take them out; a small PNG - a coat of arms, a sign - stays PNG
Preview	before, after, side by side - for the operations that are hard to set blind

PDF files and the pictures inside documents are read and written by the PyMuPDF library, which is distributed under the GNU AGPL 3.0. The program's own code stays under Apache 2.0, but the build as a whole — the program together with PyMuPDF — is offered under the terms of the GNU AGPL 3.0; see the `NOTICE` file.

Next

- User Guide — step by step.

- `install\README_INSTALL.md` — building the environment and the window.

Technical Reference

Running

```
Start.exe                the window
image_cli.cmd describe   every section, operation and field as JSON
image_cli.cmd run --operation downscale_percent --set scale_mode=custom --set
custom_percent=75
```

The window is a native Windows window (`App\`). A button of the window does nothing the console cannot: it runs `image_cli.cmd` with the same settings, and the journal writes that line at every start. Exit codes: `0` done, `1` failed, `130` stopped, `2` a wrong call - and then nothing is run.

The journal shows a batch of many files as one live line: the share done, how many are done and how many there are, the speed, the time left and the file - each in its own colour. A file that went wrong stays in the journal as a line; every line of every file is in the log of the operation in `logs\`.

Defaults

what	value
JPG quality	83; presets 60, 75, 90; exact values 1 to 100
PNG compression	one preset in the window, a parameter on the command line
contact sheet quality	75 or 92
diagonal caption	about 60 % of the diagonal

Choosing a Colour Profile

task	what to pick
screen, website, ordinary delivery	sRGB
print	CMYK
built-in path without an external file	Pillow sRGB

task	what to pick
an explicit external reference	the color.org profile
broad classic print scenario	`Photoshop5DefaultCMYK.icc`
coated print to a specific standard	`CoatedFOGRA39.icc`

Folders

```
App\          the window and the PowerShell the program carries
Start.exe     opens the window
input\        quick source folder
output\       results
logs\         the log of every operation, run reports
report\       the reports of checks
workspace\    temporary area
config\       the operations, the layout of the window, defaults, ICC profiles
system_core\  the engine and the console command
install\      portable environment
wheelhouse\   packages for offline install
```

Source and Target

SOURCE and **TARGET** are the two working paths, each with its history and its pins; SOURCE may be a single file. Under them: **RESET** returns both to the project `input` and `output` (the history is cleared, the pins stay, no file is touched); **LIST** writes into the journal what lies in SOURCE; **TO SOURCE** makes the result the source of the next operation; **CLEAR** deletes the contents of SOURCE, TARGET or both - into the Recycle Bin, after a question that names the paths. In Russian: **ИСТОЧНИК**, **НАЗНАЧЕНИЕ**, **СБРОСИТЬ**, **СПИСОК**, **В ИСТОЧНИК**, **ОЧИСТИТЬ**.