

RETICLE RED TUTORIAL

Image Lab

**Dither a photo for your laser,
then tile big art to fit your bed. Free.**

Recorded on the live site · Prep and Slice, no account

reticle-red.com/image-lab

PART 1 OF 2

Prep a photo

Material, tone, DPI, size, dithering and the PNG + LightBurn export

RETICLE RED · IMAGE LAB TUTORIAL

Prep a photo — Material, tone, DPI, size, dithering and the PNG + LightBurn export

reticle-red.com/image-lab

RETICLE RED

Create Prep Make Learn

Q Pricing EN

Start free 12 CR

COMMAND CENTER · PREP · IMAGE LAB

IMAGE LAB

Photo to Laser File — Dither, Trace & Upscale
one upload, every prep step

0 CR

Prep
DITHER & CONTRAST
FREE BATCH
PNG ZIP LBRN2

Upscale
AI ENHANCE UP TO 4x
1 CR free to try
PNG

Remove BG
ISOLATE SUBJECT · 1
CR free to try
PNG

Vectorize
PHOTO → SVG · FROM
8 CR free to try
PNG SVG LBRN2

Slice
TILE LARGE ART
FREE
PNG ZIP

Local processing: This operation runs in your browser. Your image is only uploaded if you explicitly save it to the Armory. [Processing and retention details](#)

GUIDED PREP RECIPES SHOW RECIPES

GUIDE

► My reusable photo settings

► ABOUT THIS TOOL Capabilities, questions operators ask, and related guides for this workspace.

STEP 1 OF 10

Five tabs, one image

Prep and Slice are free and run in your browser.

CLOSE-UP



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< Back

TAKE PHOTO

STEP 1 OF 7 · UPLOAD

Next - Material >

OR TRY A SAMPLE IMAGE:


Dog Portrait
PET


Tumbler
PRODUCT


Medallion 2D
GRAPHICS

BATCH MODE — PROCESS MANY PHOTOS AT ONCE

▶ ABOUT THIS TOOL Capabilities, questions operators ask, and related guides for this workspace.

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STEP 2 OF 10

Upload, or try a sample

The Dog Portrait sample.

CLOSE-UP



Dog Portrait

PET

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✓ UPLOAD

MATERIAL

⋮ ADJUST

🖨️ DPI

📏 SIZE

⚙️ PROCESS

📁 DOWNLOAD

< Back · UploadSTEP 2 OF 7 · MATERIALNext · Adjust >

Select your target material — presets load calibrated tone settings, the recommended dithering algorithm, and DPI.

**Wood (Operator Spec)**
Jarvis-Judice-Ninke
Optimized for 150DPI engraving on
hardwoods and plywood.
✓

**Tile (Operator Spec)**
Stucki
High contrast with sharpening for
300DPI ceramic tile.

**Clear Acrylic (Operator Spec)**
Atkinson
High contrast for 600DPI on clear
cast acrylic. Inverted for bottom
engraving.

**Anodized Aluminum**
Burkes
High contrast, minimal gamma. Clean
marking on anodized surfaces.

📄

🔒

📁

▶ ABOUT THIS TOOL Capabilities, questions operators ask, and related guides for this workspace.

?

STEP 3 OF 10

Material presets

Each loads a tone curve, an algorithm and a DPI.

Wood: Jarvis-Judice-Ninke, 150 DPI.

CLOSE-UP



Wood (Operator Spec)

Jarvis-Judice-Ninke

Optimized for 150DPI engraving on
hardwoods and plywood.



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Make

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TILE LARGE ART ·

FREE

PNG

ZIP

✓

UPLOAD

✓

MATERIAL

⋮

ADJUST

🖨

DPI

📏

SIZE

⚙

PROCESS

📄

DOWNLOAD

< Back · Material

STEP 3 OF 7 · ADJUST

Next · DPI >

TONE ADJUSTMENTS

Loaded from Wood (Operator Spec)

Brightness

15

Contrast

30

Gamma

1.1

PREVIEW

▶ ABOUT THIS TOOL

Capabilities, questions operators ask, and related guides for this workspace.

?

STEP 4 OF 10

Adjust

Brightness, contrast, gamma and sharpness, with a live preview.

CLOSE-UP

TONE ADJUSTMENTS

Loaded from Wood (Operator Spec)

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Make

Learn

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UPLOAD

MATERIAL

ADJUST

DPI

SIZE

PROCESS

DOWNLOAD

< Back · Adjust

STEP 4 OF 7 · DPI

Next · Size >

Compare how your image renders at different DPI settings.

150 DPI

254 DPI

300 DPI
RECOMMENDED

500 DPI

600 DPI

> ABOUT THIS TOOL

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STEP 5 OF 10

DPI

Compare how the image renders at each DPI.

CLOSE-UP



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Start free 12 CR

Prep
DITHER & CONTRAST ·
FREE **BATCH**
PNG ZIP **LBRN2**

Upscale
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PNG SVG **LBRN2**

Slice
TILE LARGE ART ·
FREE
PNG ZIP

< Back · DPI

STEP 5 OF 7 · **SIZE**

Next · Process >

Set the physical output dimensions. The image will be scaled to the exact pixel count needed for **300 DPI** engraving.

Source: 1024 × 1024px — native size at 300 DPI = 86.70 × 86.70 mm

INMMCM

WIDTHHEIGHT

100100.000

mmmm

OUTPUT PIXELS AT 300 DPI
1,181 × 1,181
1.39 MP ·  upscaling from source

QUICK PRESETS

2×2"3×3"4×4"4×5"5×7"6×8"8×10"Native

> ABOUT THIS TOOL

Capabilities, questions operators ask, and related guides for this workspace.

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STEP 6 OF 10

Finished size

100 mm wide at 300 DPI = 1,181 px.

CLOSE-UP

Set the physical output dimensions. The image will be scaled to the exact pixel count needed for **300 DPI** engraving.

Source: 1024 × 1024px — native size at 300 DPI = 86.70 × 86.70 mm

INMMCM

WIDTHHEIGHT

100100.000

mmmm

OUTPUT PIXELS AT 300 DPI
1,181 × 1,181
1.39 MP ·  upscaling from source

QUICK PRESETS

2×2"3×3"4×4"4×5"5×7"6×8"8×10"Native

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Create

Prep

Make

Learn

Q

Pricing

EN

Start free 12 CR

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DITHER & CONTRAST

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PNG ZIP LBRN2

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PNG SVG LBRN2

Slice

TILE LARGE ART ·

FREE

PNG ZIP

✓
UPLOAD

✓
MATERIAL

✓
ADJUST

✓
DPI

✓
SIZE

PROCESS

DOWNLOAD

< Back · Size

STEP 6 OF 7 · PROCESS

PROCESS FULL IMAGE

DITHERING ALGORITHM

ERROR DIFFUSION

HALFTONE SCREEN

ORDERED (BAYER)

THRESHOLD

> ABOUT THIS TOOL

Capabilities, questions operators ask, and related guides for this workspace.

STEP 7 OF 10

15 dithering algorithms

Error diffusion, halftone screens, ordered Bayer and threshold.

CLOSE-UP

ERROR DIFFUSION

HALFTONE SCREEN

ORDERED (BAYER)

THRESHOLD

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Start free 12 CR

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Slice
TILE LARGE ART ·
FREE
PNG ZIP

< Back - SizeSTEP 6 OF 7 · PROCESSPROCESS FULL IMAGE

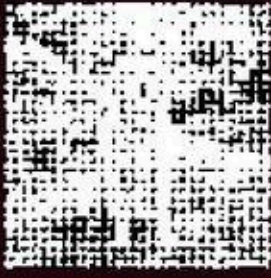
DITHERING ALGORITHM

≡ ERROR DIFFUSION

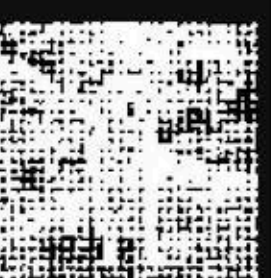
■ HALFTONE SCREEN

⚡ ORDERED (BAYER)

🔍 THRESHOLD


Halftone-Round
CLASSIC
Round dot screen — newspaper look


Halftone-Line
Parallel line screen


Halftone-Diamond
Diamond dot screen

▶ ABOUT THIS TOOL Capabilities, questions operators ask, and related guides for this workspace.

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STEP 8 OF 10

PROCESS FULL IMAGE

DOWNLOAD PNG keeps the
DPI: it opens at 100 mm.

EXPORT .LBRN2: a LightBurn
project at the same size.

CLOSE-UP

PROCESS FULL IMAGE

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PNG SVG **LBRN2**

Slice
TILE LARGE ART ·
FREE
PNG ZIP

< Back · Process

STEP 7 OF 7 · DOWNLOAD

DOWNLOAD PNG



Drag the divider to compare — tap 1:1 to inspect the dithering at true pixels.

Halftone-Round · Wood (Operator Spec) · 300 DPI · 1181x1181px output

ARMORY

DOWNLOAD PNG (521.8 KB)

EXPORT .LBRN2

Try Another Algorithm

LightBurn starter settings: 20% power, 100 mm/s. These are unverified for your machine and material; review them in LightBurn before running. [Create a calibration test](#)

APPLY THESE SETTINGS TO MORE PHOTOS

Same tone, Halftone-Round dithering and 300 DPI — bundled into one .zip.

NEXT STEP

MAGIC EDIT 4 CR →

SLICE FOR TILING FREE →

SEPARATE INTO LAYERS →

MOCKUP ON A PRODUCT →

SEND TO FABRICATOR →

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STEP 9 OF 10

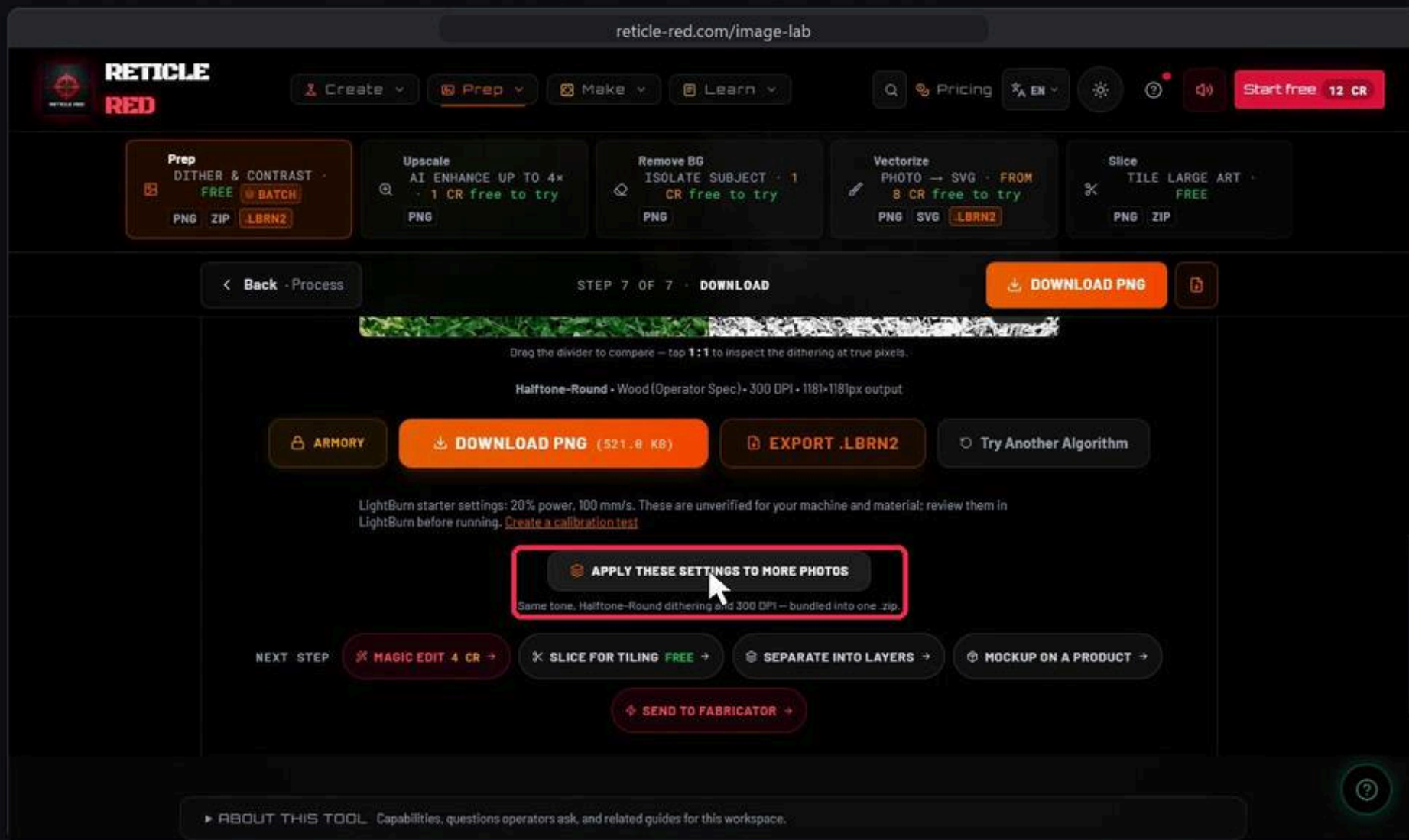
Starter settings

20% power, 100 mm/s. Check them for your machine and material.

CLOSE-UP

LightBurn starter settings: 20% power, 100 mm/s. These are unverified for your machine and material; review them in LightBurn before running. [Create a calibration test](#)

Prep a photo — Material, tone, DPI, size, dithering and the PNG + LightBurn export



APPLY THESE SETTINGS TO MORE PHOTOS

CLOSE-UP

Same tone, Halftone-Round dithering and 300 DPI – bundled into one .zls

PART 2 OF 2

Slice large art

Grid, overlap, registration marks and the tile ZIP

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Slice large art — Grid, overlap, registration marks and the tile ZIP

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Prep
DITHER & CONTRAST
FREE BATCH
PNG ZIP LBRN2

Upscale
AI ENHANCE UP TO 4x
1 CR free to try
PNG

Remove BG
ISOLATE SUBJECT · 1
CR free to try
PNG

Vectorize
PHOTO → SVG · FROM
8 CR free to try
PNG SVG LBRN2

Slice
TILE LARGE ART ·
FREE
PNG ZIP

PHYSICAL SIZE — fit to laser bed ▾

Columns 3

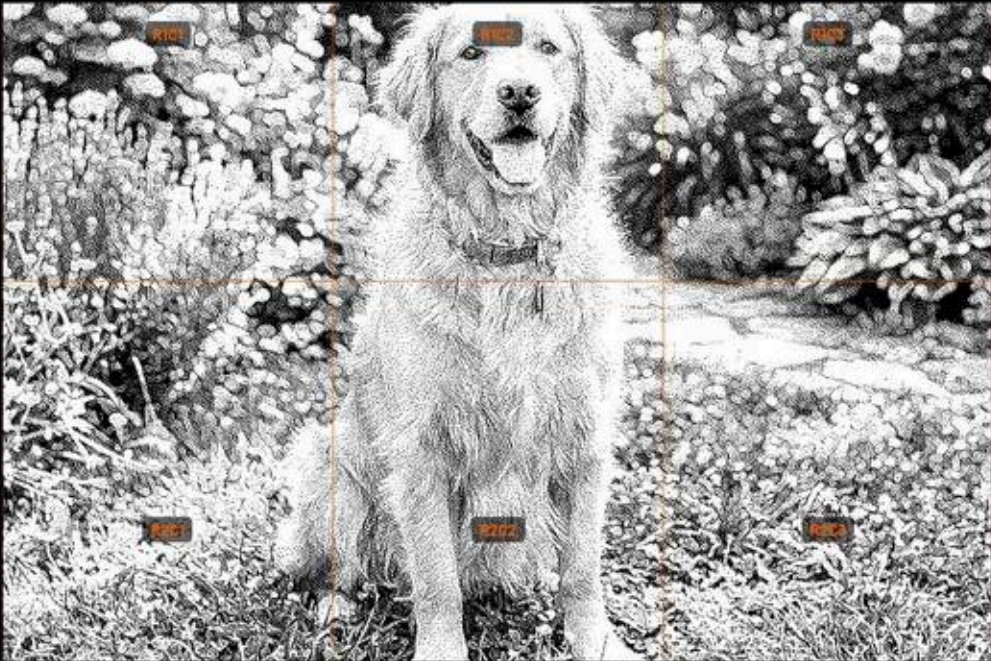
Rows 2

Overlap (px) 20px

☒ Registration marks
Corner crosshairs, edge ticks and an R#C# label are stroked into the 20px overlap margin only — never across the kept artwork. Outer edges of edge tiles have no overlap, so they stay clean.

Total pieces: 6
Piece size: 382 × 532px max

✂️ SLICE IMAGE



▶ ABOUT THIS TOOL Capabilities, questions operators ask, and related guides for this workspace.

STEP 11 OF 12

Slice for Tiling

Columns, rows and overlap.

Registration marks sit only inside the overlap.

CLOSE-UP

Columns 3

Rows 2

Overlap (px) 20px

☒ Registration marks
Corner crosshairs, edge ticks and an R#C# label are stroked into the 20px overlap margin only — never across the kept artwork. Outer edges of edge tiles have no overlap, so they stay clean.

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Slice large art — Grid, overlap, registration marks and the tile ZIP

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Prep
DITHER & CONTRAST
FREE **BATCH**
PNG ZIP **LBRN2**

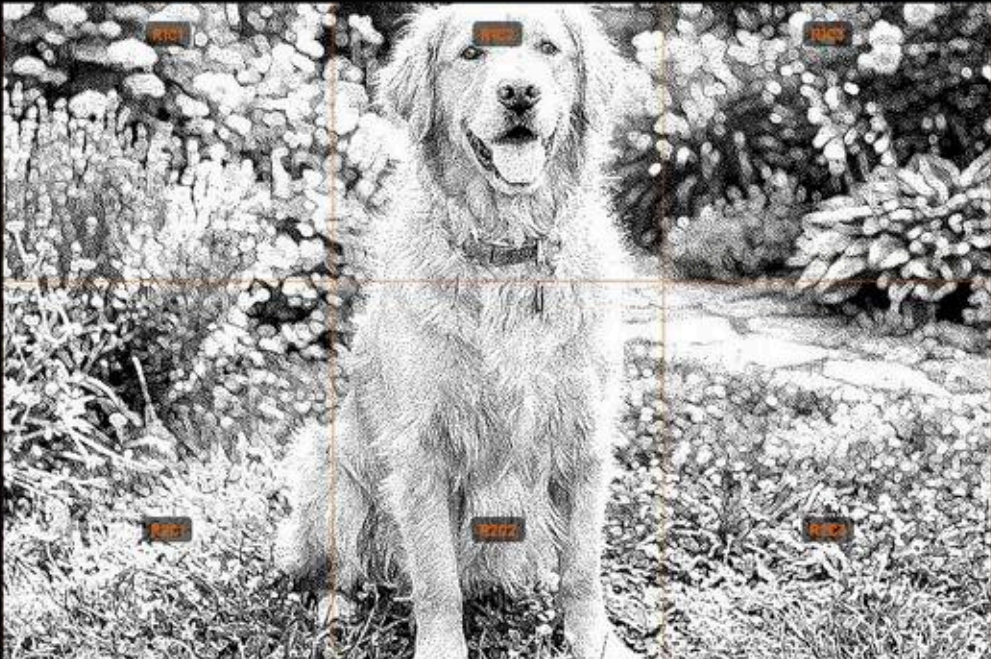
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PHYSICAL SIZE — fit to laser bed ▾
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Corner crosshairs, edge ticks and an R#C# label are stroked into the 20px overlap margin only — never across the kept artwork. Outer edges of edge tiles have no overlap, so they stay clean.
Total pieces: 6
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SLICE IMAGE



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STEP 12 OF 12

SLICE IMAGE → DOWNLOAD ALL (.ZIP)

Every tile, an assembly map and
a README.

CLOSE-UP

SLICE IMAGE

Your photo, ready to burn

Prep → Image Lab

Prep and Slice are free, right in your browser, no account needed.

More tutorials: reticle-red.com/tutorials

Narration: AI voice (ElevenLabs). Screens: the real reticle-red.com.