



# Mossaik HDR Pro

v2.3

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# INTRODUCTION

## Mossaik HDR Pro

Mossaik HDR Pro v2.3.0 is a powerful and cognitive image editing software incorporating latest technologies like Artificial Intelligence, GPU processing, High Dynamic Range (HDR) image rendering and up to 48 bit image editing.

In addition to all the standard tools for image editing, Mossaik HDR Pro offers novel tools and features to simplify and make photo editing truly professional.

This document describes the features provided in Mossaik HDR Pro.

MindTree<sup>©</sup> AI Engine, Pixtream<sup>©</sup> Graphics Engine and GPU optimized processing are the mainstay of the editor which provide crisp and non-destructive edits with previews in real time.

### **MindTree<sup>©</sup> AI Engine**

Mossaik HDR Pro is powered by proprietary MindTree<sup>©</sup> Engine that pushes Artificial Intelligence (AI) to a new level with ‘Real Time analysis with Foreground Implementation’.

### **Pixtream<sup>©</sup> Engine**

Mossaik HDR Pro uses proprietary Pixtream<sup>©</sup> Graphics Engine to compute, render images and edit in HDR Color Space. Parallel 48 bit GPU processing augments the engine to bring crisper and well appointed finish, in real time.

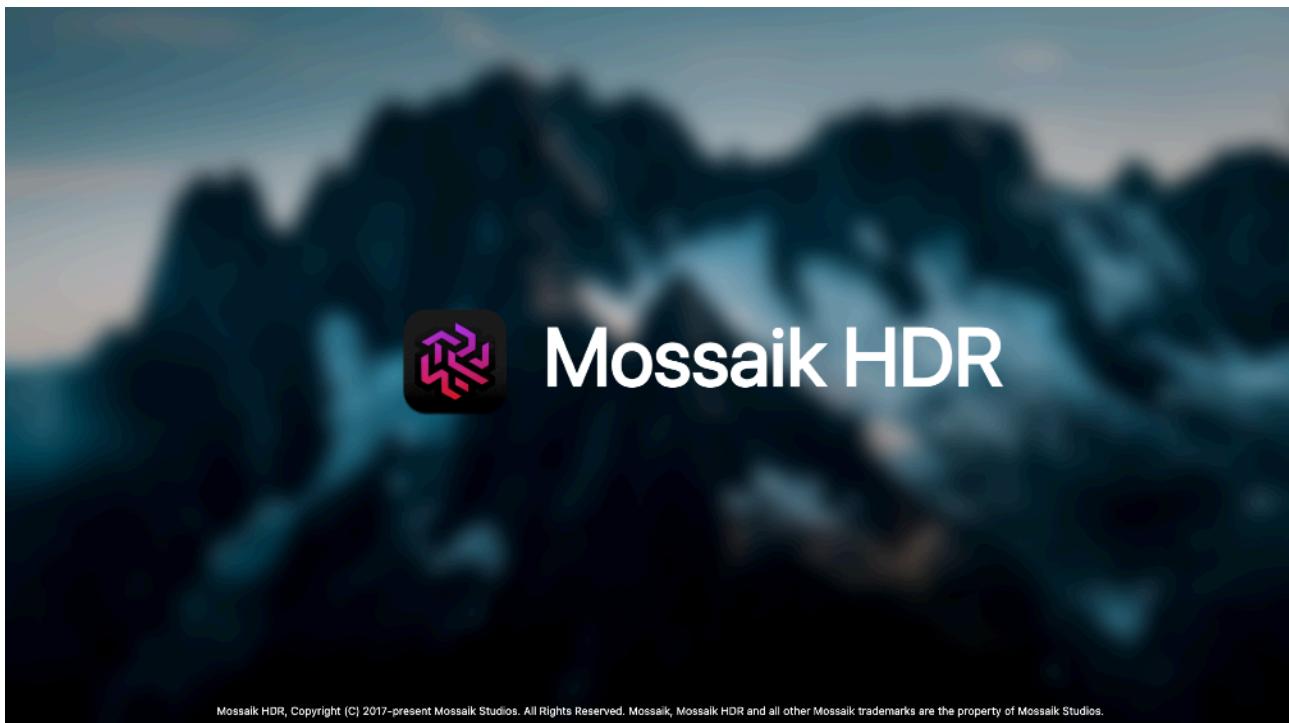
Pixtream<sup>©</sup> Graphics Engine pushes color space limits while rendering in High Dynamic Range (HDR). The HDR envelop covers SDR, HDR, HDR 10 and HDR 10+ gamuts.

### **GPU Processing**

Mossaik HDR Pro harnesses full-power of integrated and/or dedicated GPU to deliver lightning-fast processing without overloading the CPU.

### **High Dynamic Range**

Mossaik HDR Pro is built on latest technologies and supports 12 bit/channel [RGB &  $\alpha$ ] image with 48 bit parallel processing. This allows Mossaik HDR Pro to push the dynamic range to well beyond HDR, rendering extremely high fidelity image post editing.



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## Industry First in this Genre of Photo Editors

- High Dynamic Range Editing (HDR) color space editing that almost matches human eye perception.
- Microsoft SQ1 and SQ2 support - Delivers native performance on the latest ARM processor architecture
- MindTree<sup>®</sup> AI engine powered Image Auto Enhance and tools
- Pixtream<sup>®</sup> Graphics Engine
- GPU Optimizer - Optimized for GPU, provides CPU and GPU load balancing
- RGB color space Histogram
- LUTs import (Color Grading)
- Masking overlays using local adjustments
- Text with multiple text management tools
- Automatic image crop if excessive skewing leads to absence of data in the visible canvas of the image
- No image proxies are created and all edits are made on live images

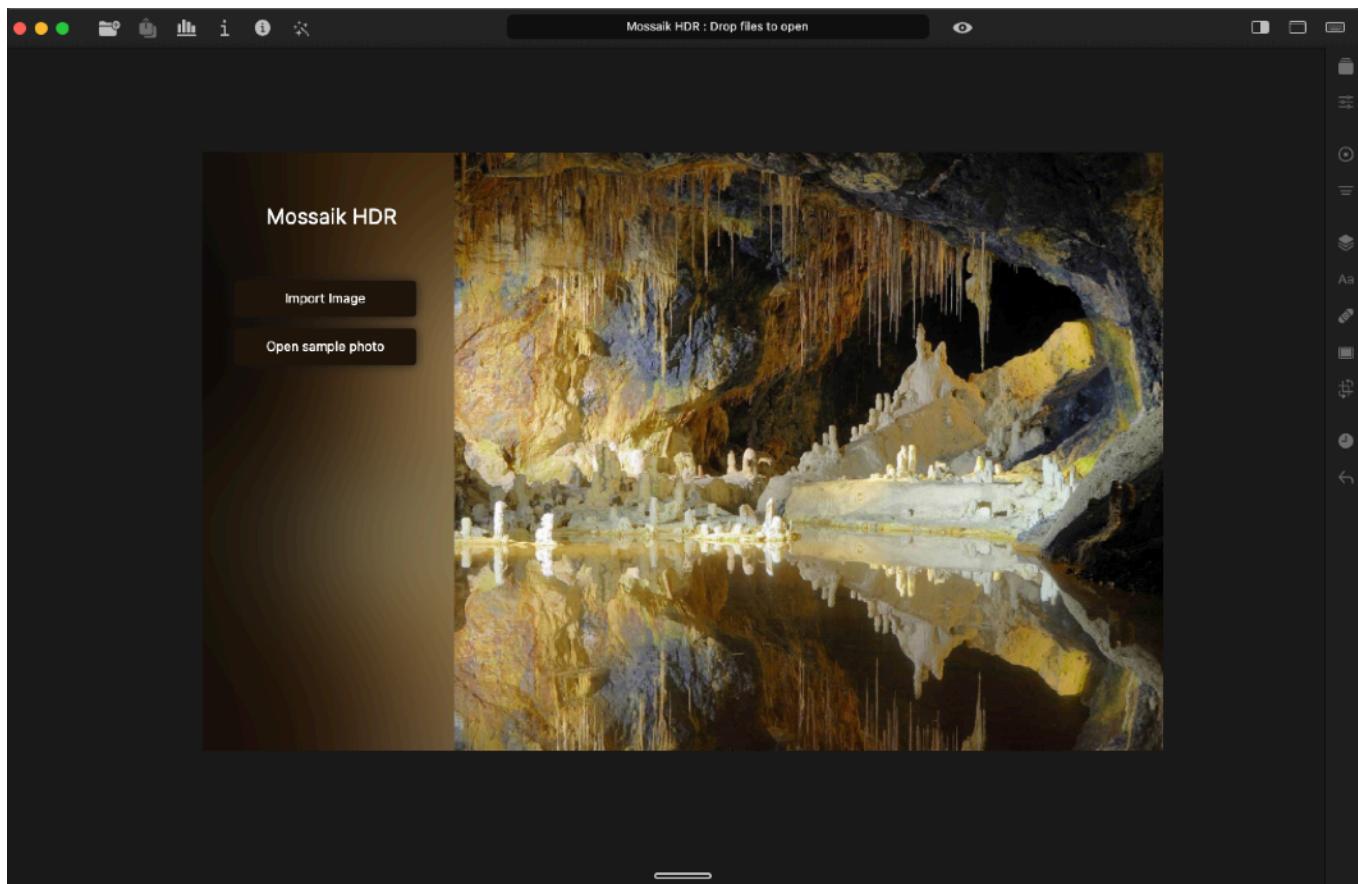


## Layout

The user interface (UI) of Mossaik HDR Pro is designed to make learning easier and quick.

### The UI is split into three main sections:

- Top toolbar
- Side toolbar on the right
- Bottom toolbar



All top tier tools can be seen on the launch screen. Tools embedded in the sidebar are collapsed and can be accessed when an image to be edited has been imported and the specific tool is selected.

Tooltips are active and can be accessed by hovering the mouse over the icon for 2 seconds or longer.

### Canvas Background Color

For comfortable editing environment and to reduce ambient screen distraction, you can toggle between light and dark canvas. To do so, click at the top of right toolbar and select preferred Background Color.

### Distraction-free Mode / Hide UI

Icon on the top toolbar toggles between show/hide the UI for distraction free viewing. This helps in viewing the image as it would look when finished.

**Note:** Hide UI mode works best when a tool layer is not active.

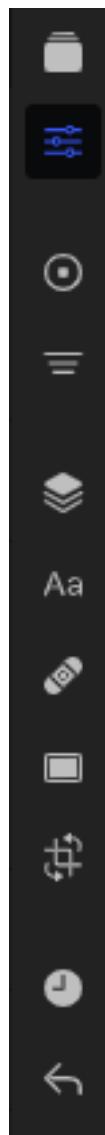


## Toolbars



### Top Toolbar

- Import
- Export
- Histogram
- Live Info
- Image Info
- AI assisted auto enhance
- Image Before/After
- Canvas Color
- Show or hide User Interface
- Keyboard shortcuts

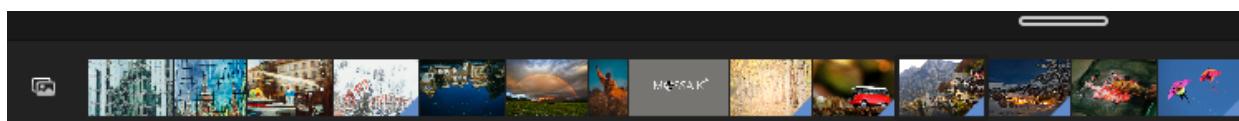


### Side toolbar on the right

- HDR Presets
- HDR Color Grading
- Radial Mask
- Gradient Mask
- Overlays
- Text
- Spot removal
- Border
- Crop
- History
- Undo

### Bottom Toolbar

- Filmstrip - Filmstrip management tools on the left when filmstrip is open





# Getting Started

## Launch Screen

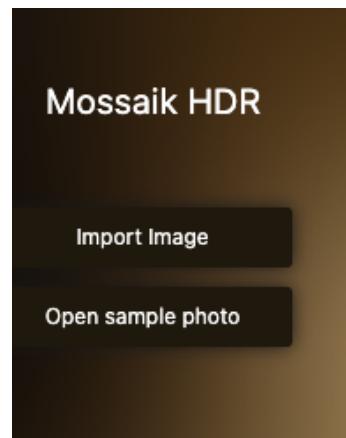
The launch screen provides a view of all the top tier tools and buttons for importing images for editing or viewing.

Following tabs are available:

- **Import Photos:** Opens file explorer
- **Open Sample Photo:** Opens sample photo provided in the Editor

Click on any of the above to get started. Note that any editing work you may have done will not be lost.

Only image import and few editor settings related functions will be active while no image has been selected for editing.



Connect and share your creations on    or reach us at our [website](#)

## Opening and Importing Images

You can edit compressed and camera RAW images in Mossaik HDR Pro.

Mossaik HDR does not generate photo proxies for any of the image file formats when processing and the image can be viewed in real time during editing, thanks to Pixtream® Graphics Engine and GPU powered editing.

### Supported File Formats:

- JPG
- JPEG
- PNG
- BMP
- GIF
- GRAY

### Supported Raw Image Formats:

- MOS (Aptus)
- CR2/CRW (Canon)
- ERF (Epson)
- RAF (Fuji)
- DNG (Leica)
- MRW (Konica Minolta)
- NEF/NRW (Nikon)
- ORF (Olympus)
- RW2 (Panasonic)
- PEF/DNG (Pentax)
- X3F (Polaroid)
- SRW (Samsung)
- X3F (Sigma)
- SR2/ARW/SRF (Sony)



## To Import/Open an image from:

### Local Disk

Select image from the file explorer

Drag-and-drop images from your storage directly into the editor workspace. The image will simultaneously appear in the filmstrip.

### External Disk

1. From the TopToolbar, click on Import icon [Import icon]

2. Select image from the file explorer

3. Drag-and-drop images from your external storage directly into the editor workspace. The image will simultaneously appear in the filmstrip.

**NOTE: Images that were previously imported to the editor, if re-selected for import, will open with all previous edits applied.**

If you need to remove the edits and start afresh, you can choose any of the following options:

**Remove image from filmstrip** - Right click on the image in the bottom filmstrip and select Remove Photo. Now you can re-import the image by following the steps above.

**Revert to original** - Open history [History icon] from the right toolbar, scroll to the bottom and click on Original. Or click Reset [Reset icon] on the right toolbar.

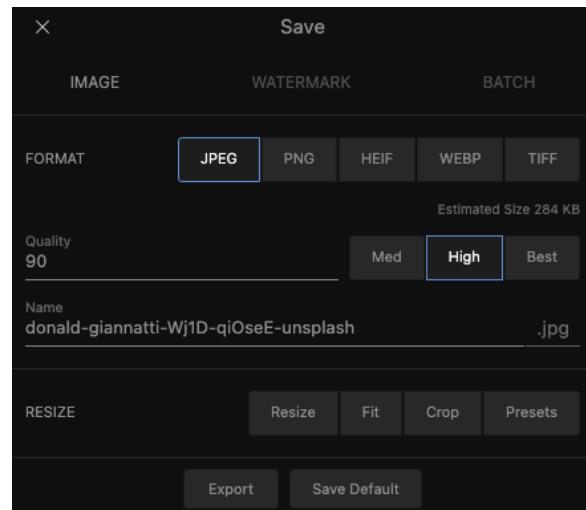


## Saving and Exporting Images

Mossaik HDR Pro supports multiple image file formats for exporting images.

### Compressed image file formats supported:

- Image imported in JPG or JPEG can be exported as JPEG
- Image imported as PNG can be exported as PNG
- Image imported as BMP, GIF, GRAY or RAW format can be exported as JPEG



### Export formats:

Raw images can be exported in multiple formats, different from their original format. There are five available export formats:

- **JPEG**
- **PNG**
- **HEIF**
- **WEBP**
- **TIFF**

**Quality Settings:** Each file format has its own quality settings.

JPEG and WEBP support multiple image qualities:

- Medium (70% quality)**
- High (90% quality)**
- Best (100% quality)**
- Custom Quality** – Can be varied between 1 to 100 using the up/down arrow buttons with a quality indicator. Estimated image size (data) is indicated in KB or MB.

To change name of image to be exported, click on the name field and change the name.

Images to be exported can be resized in four ways. Except Presets, other methods require you to enter the width and height in pixels, centimetres or inches.

- Resize** – This will resize the image, with/without keeping the aspect ratio
- Fit** – This will export image with Fit sizing, so based on required output dimensions, the image will introduce white space to fill up the missing pixel information
- Crop** – This will crop the image based on required image resolution from centre and eliminate remaining pixel data/information
- Presets** – Select the required image export preset for social media distribution or other applications

**To export the image or the batch with required adjustments:**

1. Click on Export icon  in the top toolbar
2. Click on IMAGE tab or the **BATCH** tab in the **EXPORT** dialog box
3. Click on 'Export' to save the currently opened image anywhere on your local disk or iCloud or OneDrive. Click on '**Batch Export**' button to export images in batch with selected options in the Batch tab

**NOTE:** Estimated file size is indicated in KB or MB upon selection of file format and image size

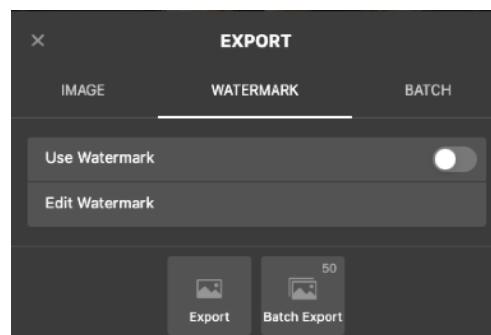


## Watermarking Images

Mossaik HDR Pro provides watermarking feature where you can export the image with a custom watermark. The editor ships with a default watermark, however you can import a custom image as watermark. If selected, watermark is applied to all images in the filmstrip.

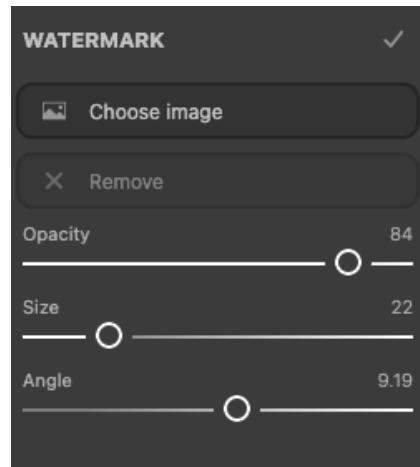
### To include a watermark

1. Click on Export icon  in the top toolbar
2. Click on ‘Watermark’ tab in the SAVE dialog box
3. Click on ‘Use watermark’



### To import a Custom watermark

1. Click on Export icon  in the top toolbar
2. Click on Watermark tab in the SAVE dialog box
3. Click on Edit Watermark. From here you can import a custom watermark.
4. For importing a custom watermark, click on Choose image in the right sidebar.
5. In the Search Folder, select the image you want to use as watermark and click on Open. Supported File formats for watermark include - **JPG, JPEG, PNG, BMP, GIF, GRAY**
6. Adjust properties such as Opacity, Size and Angle of Watermark
7. To revert to original watermark, click on **[Remove]**
8. To go back to Watermark menu, click on **[Done]** at the top right





## Batch Processing

Mossaik HDR Pro supports Batch processing of images. Batch processing can significantly reduce image editing time by exporting multiple images with the same adjustments, sizes, formats and prefix-renaming.

Batch export only works if you have imported more than one image into the editor.

**Batch processing naming methodology:** when the images have been imported to the editor, based on the sequence in which the images are present in the filmstrip from left to right, the batch processor renames them with indices 1, 2, 3 ... If you use a prefix for the batch to be exported, the name becomes **<batch\_prefix>\_<index>.<format>**

### To start batch processing:

Click on Export icon [!] on the top toolbar

Click on the Batch tab in the Export dialog box

Select photos to export

- **All** - Export all the images with the required adjustments and settings
- **Edited** - Only edited images
- **Choose** - Choose between original and edited images from filmstrip

To add a file name, click on Use **Prefix** and assign a prefix name

### Image batch can be resized through Fit or Crop

**Fit** - This will resize the images to required resolution, regardless of dimensions. There will be pillar-boxing of images that do not support transparency

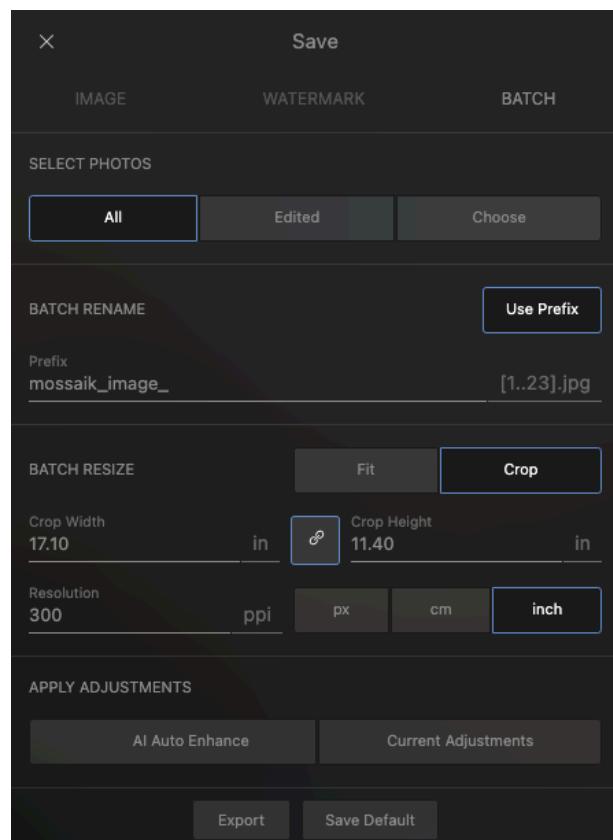
**Crop** - This will crop the image based on required image resolution from centre and permanently remove pixel data/information outside of selection

### To choose type of adjustments for the batch

**AI Auto Enhance** – Enhances individual image based on AI suggestions before export

**Current Adjustments** – uses the adjustments applied to individual images that will be exported during batch export

To export, click on [**Export**]





## Viewing Images

Images can be viewed by accessing the filmstrip. To open the filmstrip, you can

- Drag the handle at the bottom centre upwards
- Single Click on the handle at the bottom centre

You can either use the mouse or touchscreen to zoom and pan the image

**Filmstrip** [?] offers following functions:

- Import Photos
- Remove selected Photos
- Remove all photos



## Mouse

Use the mouse scroll to zoom in/out

Click and drag the image to pan

Double click left mouse button to fill at 100% resolution or zoom out to fit image inside the viewport.



## Touch

Double tap to fill at 100% resolution or zoom out to fit image inside the viewport

Pinch in/out to zoom out/in respectively

Touch and drag the image to pan

Double tap the image to resize to 100% resolution

To switch between images, open the filmstrip by lifting the handle at the bottom centre and click on an image thumbnail to open.

The following shortcuts are available for image zooming, panning and changing

- Next photo **[Ctrl+K]** or **[Ctrl+K]**
- Previous photo **[Ctrl+J]** or **[Ctrl+J]**
- Zoom in **[Ctrl+=]** or **[Ctrl+=]**
- Zoom out **[Ctrl+-]** or **[Ctrl+-]**



## HDR Presets

Mossaik HDR Pro comes pre-loaded with sixty nine carefully crafted HDR presets. The presets are used for applying quick one click global adjustments to instantly enhance your photographs.

Presets appear in the right sidebar with the edits pre-applied on the image selected for editing. This allows you to preview the images for a quick selection of a Preset.

You may click on a Preset to try on the image and change as many times you wish as all edits are non-destructive.



Following genres of Presets are provided:

- **Equinox**
- **Sepia**
- **Minimalist**
- **Black&White**
- **Cabaret**
- **Solarize**
- **Wander**
- **Saperavi**
- **Oceanus**
- **Amble**
- **Vintage**



All Presets in the editor are non-destructive and can be further edited using HDR Adjustments to achieve desired results.

**To apply a Preset:**

Click on the Presets icon on the right toolbar or use the keyboard shortcut **[Ctrl+↑+N]**

You will see all Presets on the right sidebar. Preset applied in your previous photo editing session will be shown as selected.

To view other Presets, just scroll up and down and click on the preset to apply.

**To quit the Preset sidebar:**

Click on the Presets icon  on the right toolbar to exit the Preset tool.



# Adjustments ≡

Mossaik HDR Pro ships with multiple global adjustment sliders and HDR color space sliders. Image editing is completely non-destructive and hence you can revert to the original image by clicking the Revert button [↶] at the bottom of the right toolbar.

Adjustments can be copied and pasted to other images to speed-up your workflow.

**To copy** adjustments, click on Copy Edits at the bottom of the right sidebar, or you can use the keyboard shortcut **[Ctrl+C]**

**To paste** adjustments, click on Paste Edits in the sidebar, or you can use the keyboard shortcut **[Ctrl+V]**

**To reset** any adjustment, right click on the adjustment title name and select '**Reset**' or click on Reset button at the bottom of the right toolbar.

Adjustments include following tools and sliders:

## Color

### Temperature

Fine-tunes the white balance using the Kelvin color temperature scale, ranging between -100 to +100. Move the slider to the left to make the photo appear cooler, and right to warm the photo colors.

### Tint

Fine-tunes the white balance to compensate for a green or magenta tint. Changes the color tint of the image between -100 to 100.

## HDR Color

### HDR Vibrance

Preferentially adjusts saturation of pixels that are less saturated than other pixels. Changes vibrance in the range of -100 to +100. The range between -100 to -90 and between +90 to +100 is in the HDR color space.

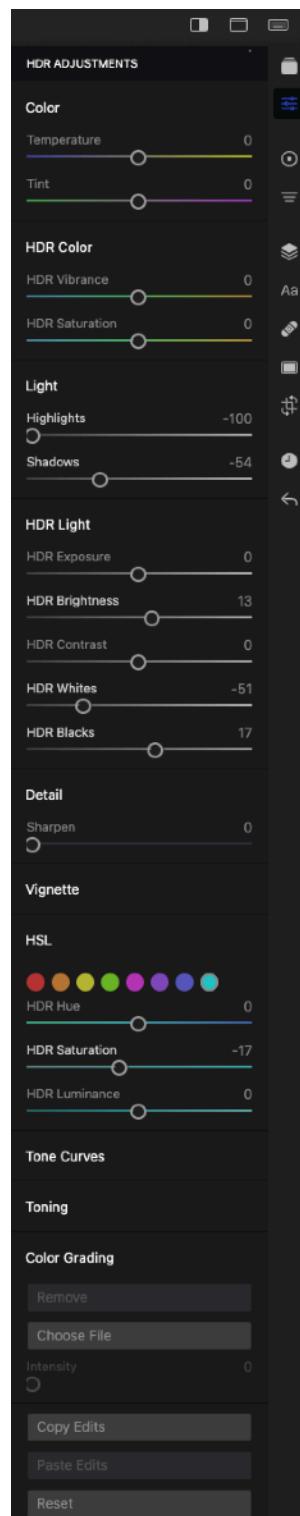
### HDR Saturation

Color saturation refers to how rich, vivid, or intense a color is. Changes saturation in the range of -100 to +100. The range between -100 to -90 and between +90 to +100 is in the HDR color space.

## Light

### Highlights

Adjusts the details in the brighter parts of the photo. Changes highlights from -100 to +100.





## Shadows

Adjusts the details in the darker parts of the photo. Changes shadows from -100 to +100.

## HDR Light

### Exposure

Sets overall image brightness. Move the slider between -100 to +100 until desired result is achieved. The range between -100 to -90 and between +90 to +100 is in the HDR color space.

### HDR Brightness

Adjusts image brightness, mainly affecting mid-tones. Move the slider between -100 to +100 until desired result is achieved. The range between -100 to -90 and between +90 to +100 is in the HDR color space.

### HDR Contrast

Contrast is the difference in brightness between objects in the image. Increasing the contrast makes light areas lighter and dark area in the frame becomes much darker. Decreasing the contrast inversely affects the image tones. Changes contrast in the range of -100 to +100. The range between -100 to -90 and between +90 to +100 is in the HDR color space.

### Whites

Adjusts white clipping. Changes whites in the range of -100 to +100. Clipping is where the intensity in a certain area falls outside the minimum and maximum intensity which can be represented. The range between -100 to -90 and between +90 to +100 is in the HDR color space.

### Blacks

Adjusts black clipping. Changes blacks in the range of -100 to +100. Clipping is where the intensity in a certain area falls outside the minimum and maximum intensity which can be represented. The range between -100 to -90 and between +90 to +100 is in the HDR color space.

## Detail

### Sharpen

Increases the contrast between bright and dark regions to bring out features. Changes image sharpness from 0 to 100.

## Vignette

**Amount** – extent of vignette ranges from -100 (dark) to 100 (bright)

**Feather** – amount of spread of vignette effect

**Highlights** – amount of highlights generated by the vignette effect

**Size** – varying the feather size of the vignette

**Roundness** – ranging from rectangular to elliptical for vignette boundary

**Center** – for changing the center of vignette effect. Deselect the center button after adjusting the center

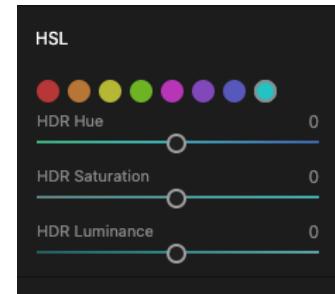


## HSL

Includes the following color range - **Red, Orange, Yellow, Green, Pink, Purple, Blue and Cyan**

### HDR Hue

Changes the color. Select the color to change from the palette above and use the slider in the range of -200 to +200



### HDR Saturation

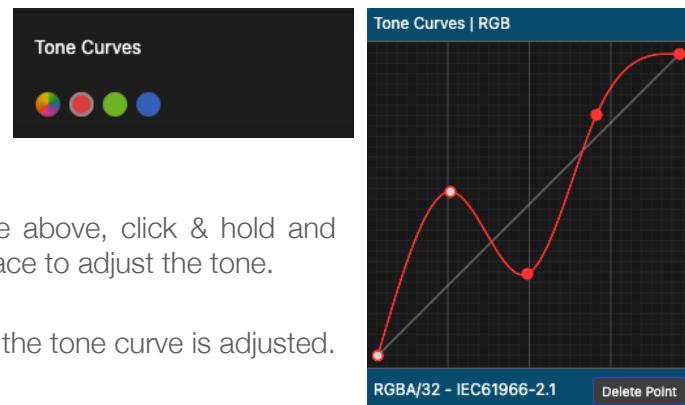
Changes the vividness or purity of the color. Select the color to change from the palette above and use the slider in the range of -100 to +100

### HDR Luminance

Changes the brightness of the color range. Select the color to change from the palette above and use the slider in the range of -100 to +100

## Tone Curves

Includes the following tone curve frequencies - white (all frequencies), red channel, green channel, blue channel.

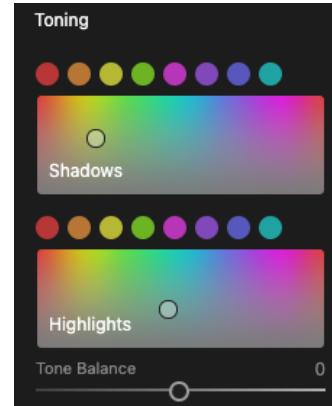


Select the color to change from the palette above, click & hold and drag the curve. Or click in the tone curve space to adjust the tone.

Change in image is rendered dynamically as the tone curve is adjusted. Note that all these edits are non-destructive.

## Toning

Includes the following color range for highlights and shadows - Red, Orange, Yellow, Green, Pink, Purple, Blue and Cyan.



### Shadows and Highlights

Click & hold and drag the control point in the color box to adjust, or Select the color to change from the palette above to move the control point at the desired color in the color box. Click & hold and drag the control point in the color box to adjust

### Balance

For balancing color palette between concentration of highlights and shadows. Move the slider between -100 to +100. -100 denotes only shadows and +100 denotes only highlights



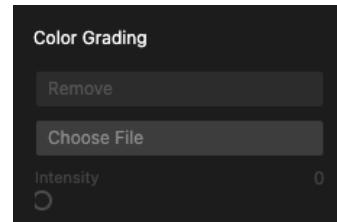
## Color Grading

These are Look Up Tables or LUTs or presets that can be imported into the editor for faster editing workflows, with direct integration with HDR Adjustment sliders

**Supported LUT formats: .CUBE, .VF, .3DL**

### To import a LUT

1. Click on Choose File in the LUT menu in HDR Adjustments
2. Select the file and click Open, or simply double click the file to open in the editor. You may drag & drop the LUT file in the image area and apply the LUT to the image being edited.
3. Modify the LUT effect as needed using adjustments etc.



LUT intensity can be adjusted by moving the **intensity slider**.

### Reset [↔]

At the bottom of the sidebar - resets all adjustments.



## Masks

Mossaik HDR Pro offers **Radial Mask [◎]** and **Gradient Mask [=]** which can be accessed from the right toolbar.

Masks consist of multiple tools for editing the image. The adjustments are made using sliders for precise control and a numerical value is indicated for the extent of adjustment. As the sliders are moved, corresponding change is shown in the image in real time.



## Sliders

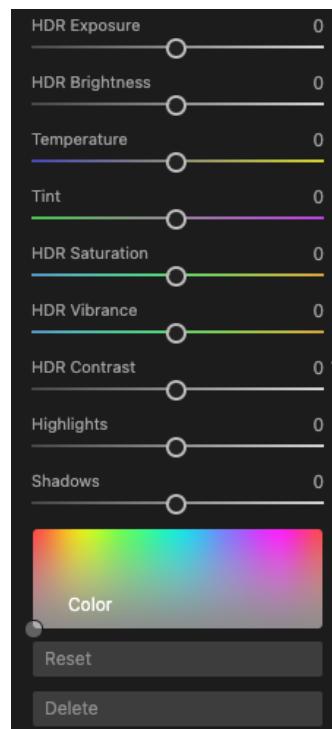
The tools contain sliders in the right sidebar and buttons in the bottom context toolbar. Sliders range from -100 to 100, with value at 0 being original.

Following sliders are provided to make the desired edits:

- **Exposure**
- **Brightness**
- **Temperature**
- **Tint**
- **Saturation**
- **Vibrance**
- **Contrast**
- **Highlights**
- **Shadows**
- **Color (Palette)**

The adjustments can be made by moving the sliders with the mouse or by using the right & left arrow keys on the keyboard after the slider is selected with the mouse. The arrow keys increment or decrement the slider value by 1 unit, providing precise control.

Live edits are displayed as you move the slider, thanks to the powerful Pixtream® Graphics Engine.



### Exposure

Sets overall image brightness. Move the slider between -100 to +100 until desired result is achieved. The range between -100 to -40 and between +40 to +100 is in the HDR color space.

### Brightness

Adjusts image brightness, mainly affecting mid-tones. Move the slider between -100 to +100 until desired result is achieved. The range between -100 to -40 and between +40 to +100 is in the HDR color space.

### Temperature

Fine-tunes the white balance using the Kelvin color temperature scale, ranging between -100 to +100. Move the slider to the left to make the photo appear cooler, and right to warm the photo colors.

### Tint

Fine-tunes the white balance to compensate for a green or magenta tint. Changes the color tint of the image between -100 to 100.

### Saturation

Color saturation refers to how rich, vivid, or intense a color is. Changes saturation in the range of -100 to +100. The range between -100 to -50 and between +50 to +100 is in the HDR color space.

**Vibrance**

Preferentially adjusts saturation of pixels that are less saturated than other pixels. Changes vibrance in the range of -100 to +100. The range between -100 to -50 and between +50 to +100 is in the HDR color space.

**Contrast**

Contrast is the difference in brightness between objects in the image. Increasing the contrast makes light areas lighter and dark area in the frame becomes much darker. Decreasing the contrast inversely affects the image tones. Changes contrast in the range of -100 to +100. The range between -100 to -40 and between +40 to +100 is in the HDR color space.

**Highlights**

Adjusts the details in brighter parts of the photo. Changes highlights from -100 to +100.

**Shadows**

Adjusts the details in darker parts of the photo. Changes shadows from -100 to +100.

**Color**

Provides a palette to pick up the color you wish to edit.

**Reset**

Resets all adjustments made in the active layer.

**Delete**

Deletes the active layer.

**Context Tools**

These tools provide mask specific controls. More on this in the description of Masks below.



## Layer Management

Mossaik HDR Pro handles layers separately for Masks. Whenever a new instance of a mask is initiated, a new layer is created which can be accessed directly by clicking on the tool.

All layers have no mutual dependencies and completely Non Destructive to the original image as imported.

The layers you create appear in the same chronological order as created and numbered accordingly. If a layer is deleted, all following layers are shifted up and renumbered.

For managing individual layer:

### Create layer

1. Click on the mask button in the right sidebar
2. In the sidebar, to create a new layer/instance for the tool, click on the 'Add Layer' button
3. Make desired adjustments and click on the 'Done' button on the top
4. A layer is added in the right sidebar with the name of the mask and layer sequence number.
5. To add another layer, repeat steps 2-4 above. Note that the layer sequence number increments with each added layer.

RADIAL MASK	Add Layer
Radial Mask	Layer: 1
Radial Mask	Layer: 2
Radial Mask	Layer: 3
Radial Mask	Layer: 4

GRADIENT MASK	Add Layer
Gradient Mask	Layer: 1
Gradient Mask	Layer: 2
Gradient Mask	Layer: 3
Gradient Mask	Layer: 4

### Delete layer

1. Right click the layer you wish to delete
2. 'Delete' button will appear
3. Click on the Delete button

Note that the sequence number of all layers are adjusted upon deletion of any layer.

**Note:** All layers are shown in order of creation from top to bottom.

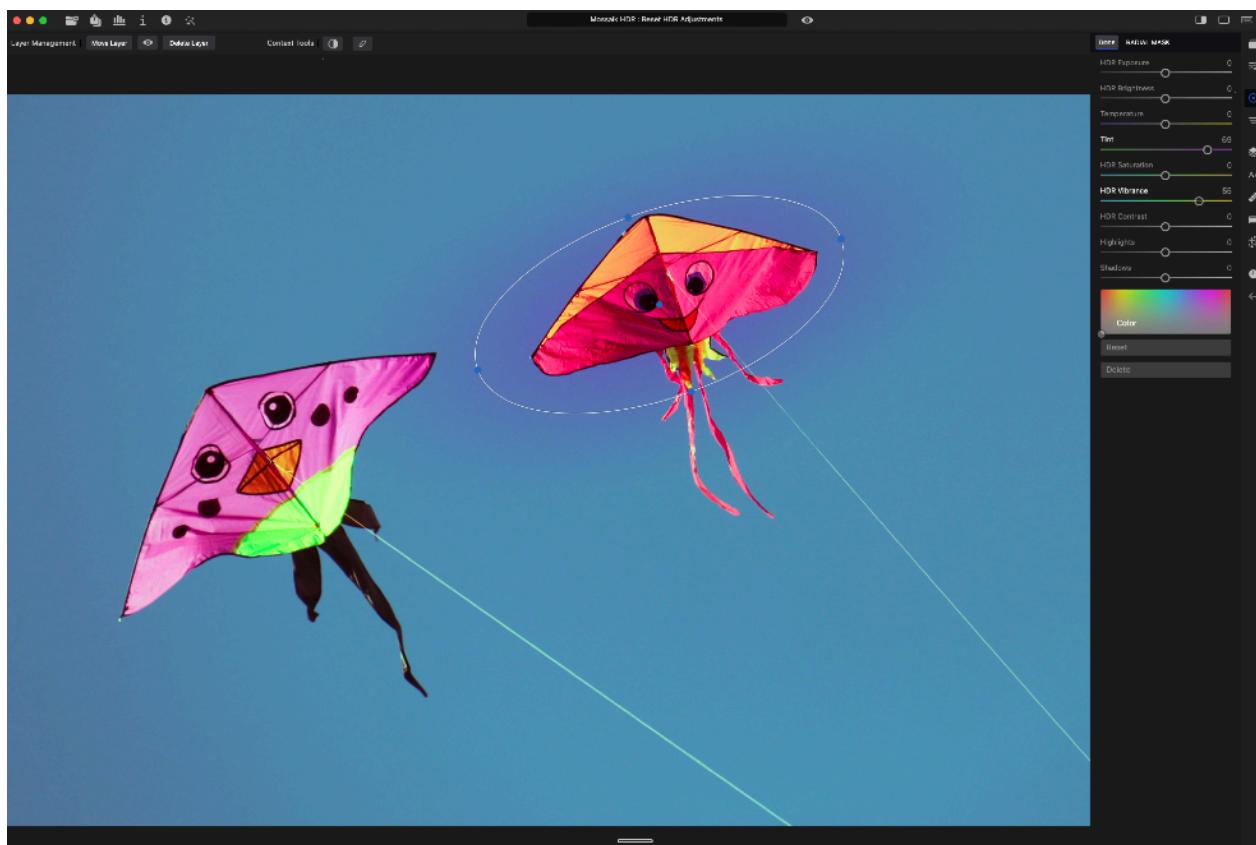


## Radial Mask ⊗

Radial Mask enables you to create multiple, vignetted areas to edit specific portions of an image.

With the Radial Mask, you can select specific area in the image with an elliptical marker and make local adjustments inside or outside of the selection.

The Mask can be resized proportionally by click & hold and dragging any of the 4 control points on the ellipse. The Mask can be moved to any position by click & hold and dragging the center point. To rotate the ellipse, click & hold and drag any of the 4 control points on the ellipse.



## Context Tools

**Feather** [⊖] - Varies the applied area

**Invert** [●] - Inverts affected area of the tool

**Before/After** [●] - Toggle between images with current edits applied and the original with mouse button pressed

**Move Layer** - Pan the image

**Delete Layer** - Delete the current layer

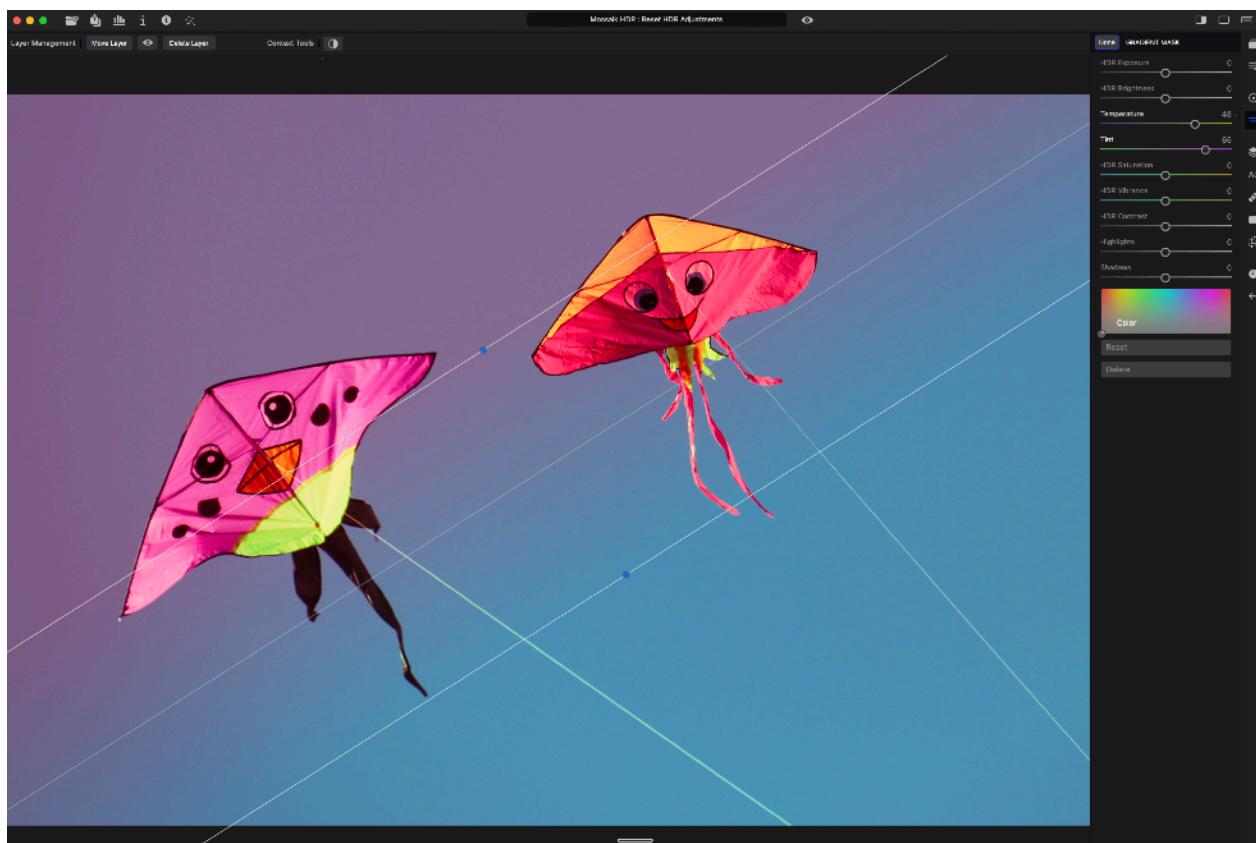


## Gradient Mask ≡

Gradient Mask enables you to create multiple, rectangular areas to edit specific portions of an image.

With the Gradient Mask, you can select specific area in the image with parallel lines and make local adjustments. The mask extends endlessly in both directions of the gradient stops and is generally used for applying a smooth gradient effect in the image.

The Mask can be resized by click & hold and dragging any of the 2 control points on the lines. The Mask can be moved to any position by click & hold and dragging the center point. To rotate the lines, click & hold and drag any of the 2 control points.



## Context Tools

**Invert [O]** - Inverts affected area of the tool

**Before/After [O]** - Toggle between images with current edits applied and the original with mouse button pressed

**Move Layer** - Pan the image

**Delete Layer** - Delete the current layer



## Overlays

Overlay is used to combine two separate images into a single image. The overlays are added as non destructive layers.

Mossaik HDR Pro ships with a suite of overlays and supports custom overlays. You can import an external image of your choice as an overlay.

All the overlays are customizable with multiple tools for additional effects as detailed below.

### Following Overlays are provided in the editor:

#### Custom

Import external image as an overlay. Supported file formats are **JPG, JPEG, PNG, BMP, GIF and GRAY**.

#### Camera Flares

Simulate camera flares when taking images of very high brightness light sources and display bokeh effect

#### Dual Tone

Switch highlight and shadow regions to a 2-tone color by replacing pixel color values with the 2-tone color set

#### Gradients

Apply a 2-color gradient effect to an image as overlay

#### Light Leaks

Simulate light leakages when the camera lens gets external light due to bad camera sensor, or lens curvature

### To start using overlays:

- Click on the Overlays icon  or open overlays using keyboard shortcut **[L]**
- Select the type by clicking on the overlay tabs. To add a custom overlay, click on ‘Custom Overlay’ button. Click on ‘Add’ button and choose the file from the folder
- Chosen overlay will appear on the panel as a thumbnail

### Overlay Resizing:

- The overlay can be resized by click & hold and dragging any of the 8 control points. The aspect ratio can be maintained by pressing the shift key when dragging the control point.
- To rotate the overlay, click anywhere outside the layer and drag to rotate. Or, press and hold the command key (or control key) and drag the control point.
- To pan the layer, click & hold and drag the layer from the center.

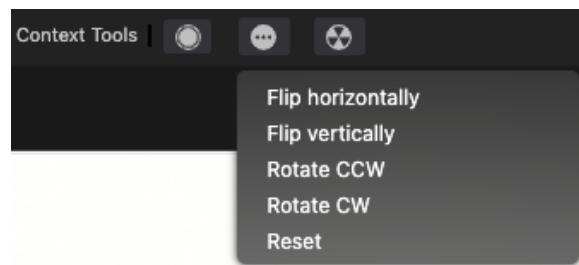
### Context Toolbar - Overlay Edits:

Multiple tools are provided in the context tool bar for varying how the overlay is applied to the base image.

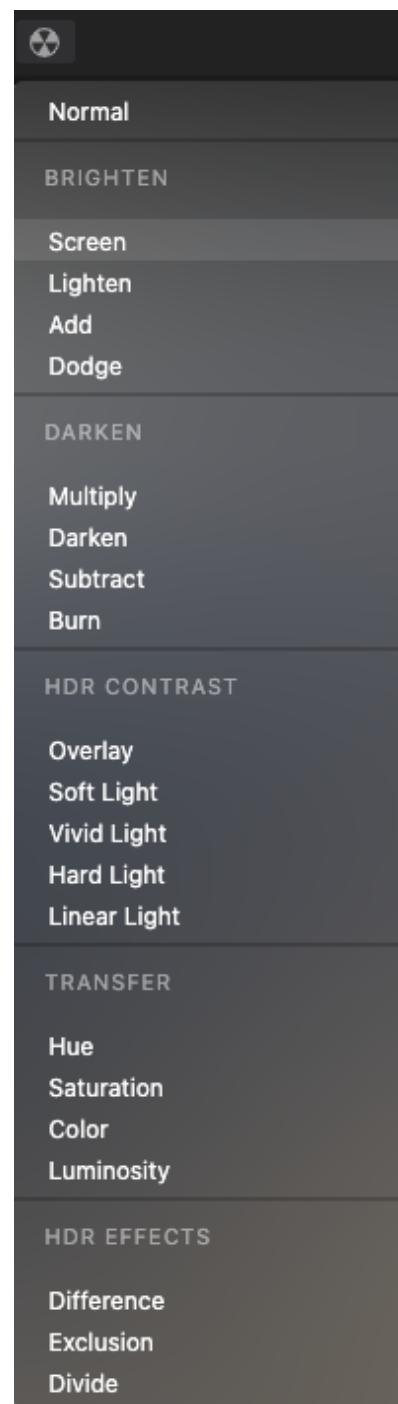
**Opacity**  – To vary the opacity of the layer

**Orientation [⌚]** - Following orientations are provided:

- Flip horizontally
- Flip vertically
- Rotate CCW
- Rotate CW
- Reset

**Blend Modes [⊛]** - Following modes are provided:

- Normal
- Brighten
  - Screen
  - Lighten
  - Add
  - Dodge
- Darken
  - Multiply
  - Darken
  - Subtract
  - Burn
- HDR Contrast
  - Overlay
  - Soft Light
  - Vivid Light
  - Hard Light
  - Linear Light
- Transfer
  - Hue
  - Saturation
  - Color
  - Luminosity
- AI Effects
  - Difference
  - Exclusion
  - Divide

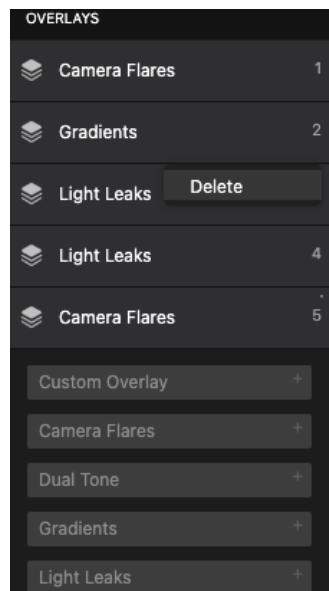


**Before/After [👁️]** - Toggle between images with current edits applied and the original with mouse button pressed

**Move Layer** - Pan the image

**Delete Layer** - Delete the current layer

To delete an overlay, right click on the layer and click on Delete.





## Text Aa

Mossaik HDR Pro provides a dedicated tool to create text based layers.

Text layers are added by clicking on the Text icon on the right toolbar, adding text and then hit 'Done'. The layers are arranged and numbered in order of creation from top to bottom.

The editor comes with a selection of fonts. In addition to the provided fonts, custom fonts can be imported.

### To start using the Text Tool:

Click on the Text Tool icon [Aa] or access the tool using the keyboard shortcut [T]

To create a new text layer, click on 'Add Text' tab.

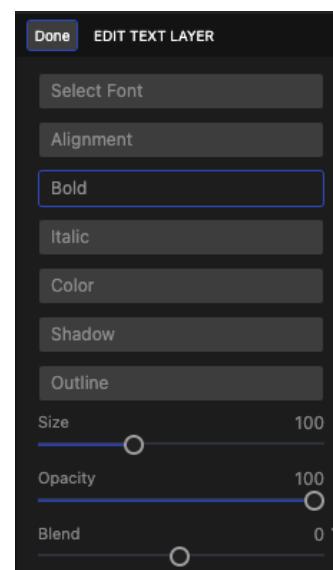
### Text Properties:

#### Font

To select the font, click on the top tab, showing the name of the font currently selected. By default, Sans Serif font is selected.

To import a new font, click on the Import font tab on the top of the sidebar. From the dialog box, select the font you want to import, and click Open, or simply double click on the font you want to include

The imported font will be placed on the top, in order of import.

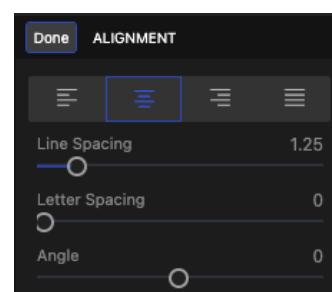


Supported font file-format for custom fonts:

- TrueType Fonts (**TTF**)
- OpenType Fonts (**OTF**)
- The Web Open Font Format (**WOFF and WOFF 2.0**)
- Embedded OpenType Fonts (**EOT**)

**Alignment** [≡] - To change the alignment of the text, click on the Alignment button

- Left-align [≡]
  - Right-align [≡]
  - Center-align [≡]
  - Justify [≡]
- To change the spacing in-between lines of text, you can use the line spacing slider
- To change inter-character spacing, you can use the letter spacing
- To change the rotation angle of the text layer, you can use the Angle slider or the right/left arrow keys. Note that arrow keys change the angle with two decimal places



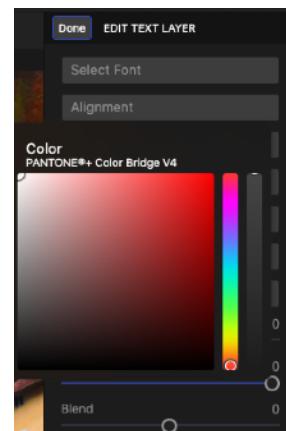


**Bold** - Click on the tab to toggle

**Italic** - Click on the tab to toggle

## Color

- The left color picker is for the varying shades of colors from greyscale to selected hue
- The middle color picker is for different hues
- The right color picker is for varying the opacity or the alpha-channel values of the text



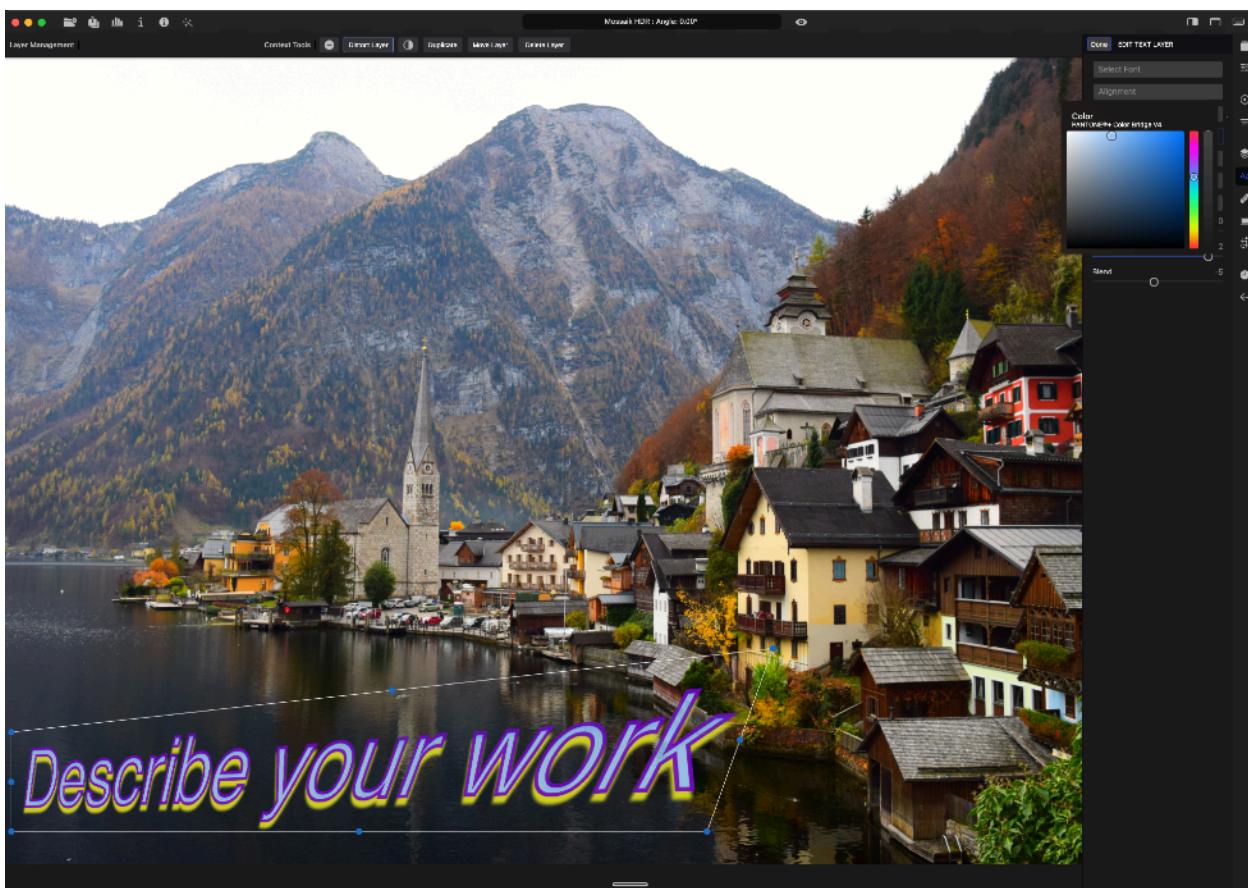
## Shadow

- To change the color of the shadow, click on Color button

- The left color picker is for the varying shades of colors from greyscale to selected hue
- The middle color picker is for different hues
- The right color picker is for varying the opacity or the alpha-channel values of the text

- Blur - Slider to blur the shadow

- Remove shadow by clicking on Remove button





## Outline

- To change the color of the outline, click on Color button
  - The left color picker is for the varying shades of colors from greyscale to selected hue
  - The middle color picker is for different hues
  - The right color picker is for varying the opacity or the alpha-channel values of the text
- Size - Slider to adjust the outline thickness
- Slider to blur the shadow Remove the outline by clicking on Remove button

## Resize text

Click & hold and drag any of the 8 control points. You can also change the size of the layer proportionally using the Size slider

## Rotate text

Click & hold anywhere outside the layer and drag to rotate

## Pan text

Click & hold and drag the layer from the center

## Opacity

Change opacity of the text layer

## Blend

Blend the text layer

## Context Toolbar

### Distort Layer

Click & hold one control point and skew the text box

### Invert Selection

To invert the edits applied. The image will be masked to the text, and the text color will be applied to the unmasked region

### Duplicate

Duplicate the layer and handle as an independent layer. Duplicate a text layer with all adjustments and settings. Click on the duplicate text box and drag to the desired location.

### Move Layer

Pan the image

### Delete Layer

Delete the current layer



## Spot Removal

Removes (or add) spots and other undesired objects from the images. The Spot removal tool has two modes:

### Heal

Softer effect to provide precise control

### Clone

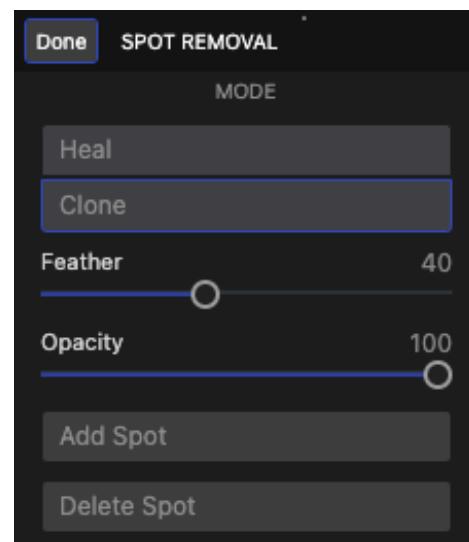
Stronger form of heal which can be used for completely replacing area(s) with sampled area(s)

To create a new layer, click on '**Add Layer**' in the top of the sidebar.

Select between heal or clone mode.

### Feather

Slider can be used for selecting the threshold of the area where the tool is applied



### Opacity

Slider can be used for varying the opacity of the sampled region being applied to another region

## For changing the Sample and Apply tool locations:

### Sample tool

This is the tool with single control point on the circle. Area inside the circle will be sampled and pasted over the Apply circle.

- To rotate the tool, click & hold on the control point and adjust to desired angle
- To change position of the tool, click & hold and drag the tool from the center
- To change size of the tool, click & hold and drag the control point in/out

### Apply tool

This is the tool without any control point and sampled area will be applied in this location. To change position of the tool, drag the tool from the center.

To delete the spot removal layer, right click on the layer and click on Delete, or click on the Delete Spot button in the context toolbar or at the bottom of the sidebar.

## Context Toolbar

### Move Layer

Pan the image

### Delete Layer

Delete the current layer



Right Toolbar



## Border □

Border tool can be accessed via the Border tool. Click on the button in the sidebar.

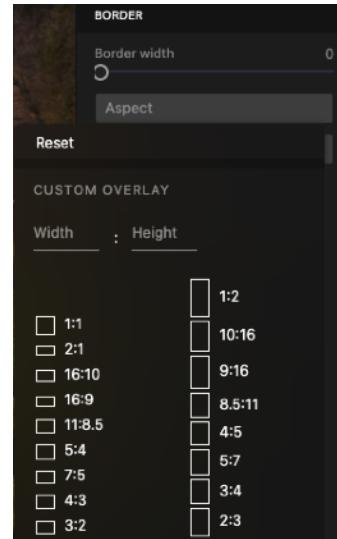
To change the Border Width, use the Border Width slider. Use the arrow keys on the keyboard for finer control.

### Aspect

There are multiple aspect ratios for custom border thickness. Included are 17 aspects

**Width:Height ::** 1:1, 2:1, 11:8.5, 5:4, 7:5, 16:10, 16:9, 4:3, 3:2

**Height:Width ::** 1:2, 8.5:11, 4:5, 5:7, 10:16, 9:16, 3:4, 2:3



### Border Color

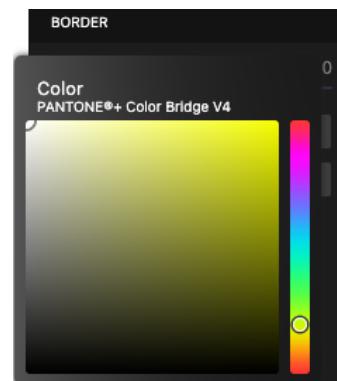
You may choose border width of your choice by entering a numeral in the Width & Height fields. Preset aspect ratio is highlighted when the custom ratio matches that of a preset ratio.

You can change the color of the border by clicking on the Color button.

Border tool automatically picks up colors which are most visible in the image. These colors can be accessed as circular buttons below the Color button.

On pressing the Color button, color palette opens for a custom color. The left color picker is for varying the shades of colors from greyscale to selected hue.

The right color picker is for selecting different hues





## Crop & Rotate

Click on the Crop icon [] or access the tool via the keyboard shortcut [R]

### Manual Crop & Rotate

- Adjust the crop rectangle by click & hold and dragging the the vertices and edges.
- Rotate the image for horizon correction, click & hold and drag the dial on the right side of the image.

### Aspect

17 Preset crop aspect ratios are available

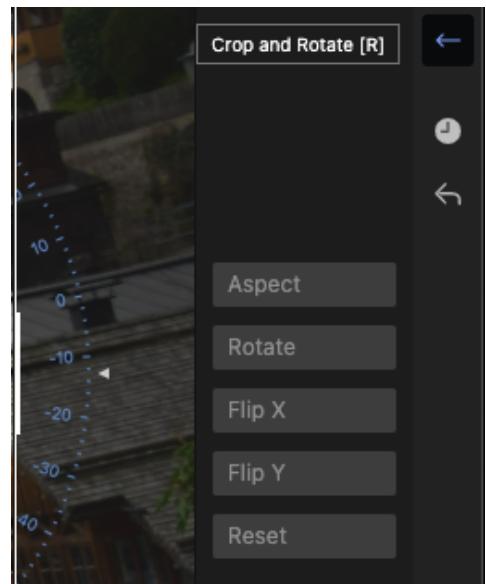
**Width:Height ::** 1:1, 2:1, 11:8.5, 5:4, 7:5, 16:10, 16:9, 4:3, 3:2

**Height:Width ::** 1:2, 8.5:11, 4:5, 5:7, 10:16, 9:16, 3:4, 2:3

### Rotate & Flip

- Rotate CCW with each click
- Flip X - Flip the image horizontally or along the Y axis
- Flip Y - Flip the image vertically or along the X axis

**Reset** – Resets all adjustments made in the active layer





## History & Undo ⏪

Mossaik HDR Pro maintains infinite editing history (Limited by system memory). The history can be maintained for all images until removed from the editor.

History appears in the chronological order in which edits are made. The edit history tabs also indicate the set value of the sliders, where applicable.

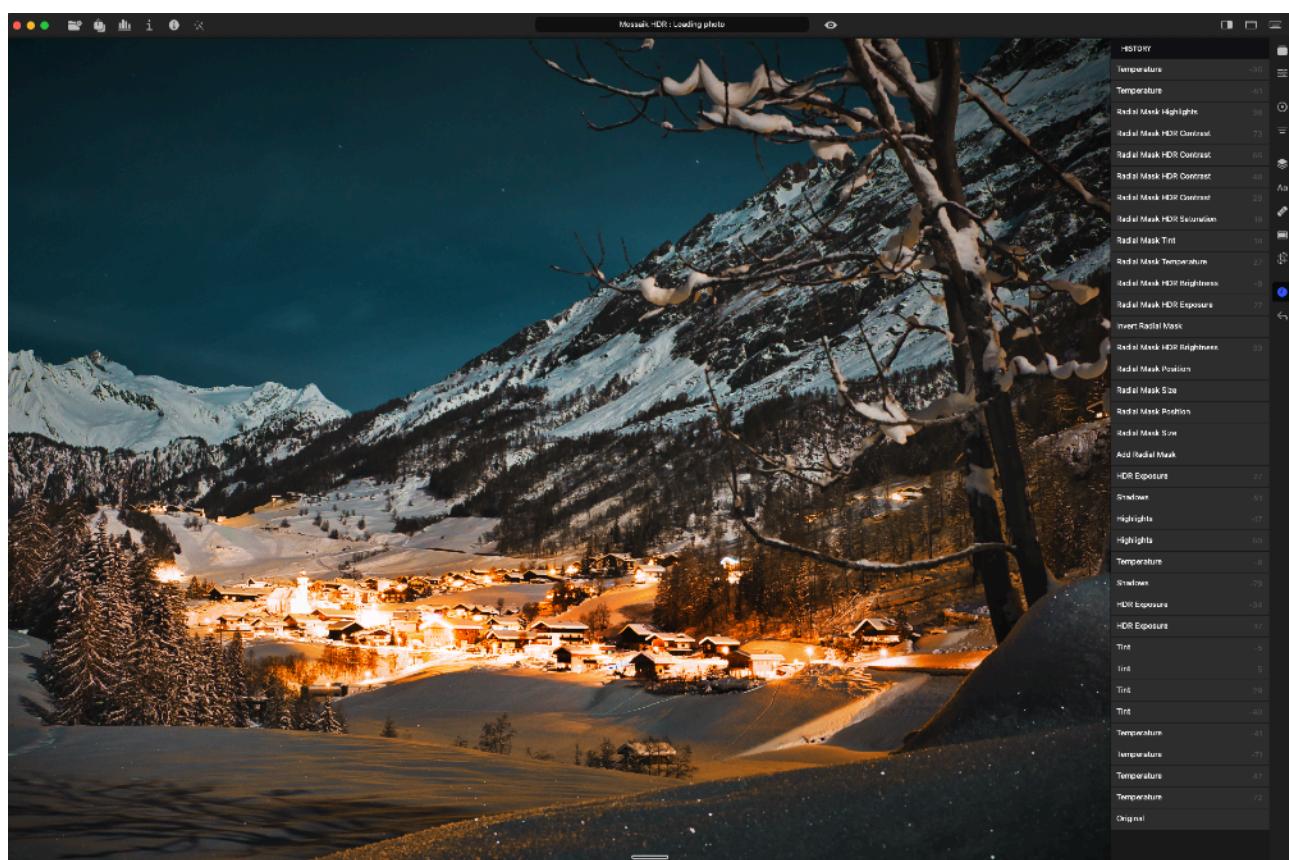
The history module saves all the editing history during editing. Thus, history is not lost if the editor gets accidentally closed and you can resume your work from the point you left off.

To access editing history, click on the History icon [⌚] or access the sidebar via keyboard shortcut [H]

### Note - History will be lost if the filename is changed

The original image can be obtained by scrolling to the bottom of the history and clicking on Original.

Right Toolbar





## Top Toolbar



### Mac OS Window Controls

Close, Minimize and Full Screen

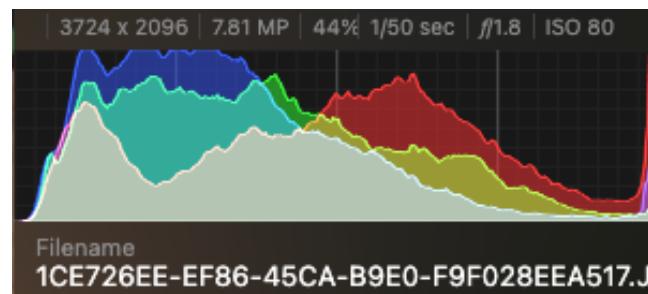
### Opening and Importing Images

### Saving and Exporting Images

## Histogram

Displays the tonal range of an image. It shows how the pixels are distributed by plotting the number of pixels at each of the 256 brightness levels in an image.

Mossaik HDR Pro provides histogram in RGB color space. It also provides basic image metadata for quick reference.



The histogram can be displayed or hidden by clicking on the icon  on the top toolbar.

Histogram can be positioned by click & hold and dragging to the desired location on the canvas.

## Image Information

Both the image information icons are placed on the top toolbar.

**[i]** View Camera data under the top toolbar

**[I]** View EXIF and metadata of the image currently opened or being edited

## AI Auto Enhance

Mossaik HDR Pro provides an AI powered single click auto enhance for quick results. The AI model is trained on **2+ million images** and provides a quick one touch image enhancement.



## Image Filename

The filename of the image under editing is displayed in the middle of the top toolbar.

**Before/After [⌚]** – Toggle between images with current edits applied and the original. This feature assists in a quick comparison between original and edited image.



## Canvas Background Color [■]

Mossaik HDR Pro provides a choice of light and dark background colors to make your editing experience free of ambient screen distraction.

## Toggle UI [□]

Show/Hide UI to reduce ambient distraction when viewing the finished image.

## Keyboard Shortcuts [⌨]

[Ctrl+,] or [Ctrl+,-]

Keyboard shortcuts can be accessed by **[Ctrl+,]** or **[Ctrl+,-]** or by clicking on the icon **[⌨]** in the top toolbar, rightmost icon.





## Filmstrip

Filmstrip allows easier viewing and access to the images imported into the editor. Images appear in the same order as imported.

The images in the filmstrip are not proxies and images are displayed with live edits in realtime.



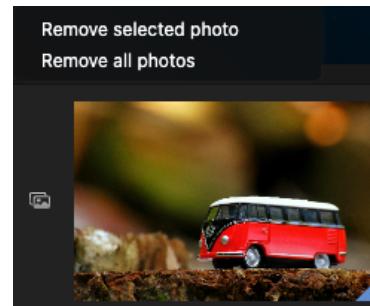
To open the filmstrip:

- Use the keyboard shortcut **[↑+F]**
- Drag the handle at the bottom center upwards
- Single Click on the handle at the bottom center

The filmstrip can be used for removing either a single image, or all images at once. To do so,

Filmstrip icon  offers following functions:

- Remove selected Photo
- Remove all photos



**Note:** To remove a single image, right click on any image in the filmstrip and select 'Remove photo'

The filmstrip has dynamic resizing for comfortable viewing. Use the floating handle on top of the filmstrip for changing the height of the filmstrip.



## Appendix

### Supported File Formats

#### IMPORT

**Compressed Image Formats:**

JPG, JPEG, PNG, BMP, GIF, GRAY

**Supported Raw Image Formats:**

- MOS (Aptus)
- CR2/CRW (Canon)
- ERF (Epson)
- RAF (Fuji)
- DNG (Leica)
- MRW (Konica Minolta)
- NEF/NRW (Nikon)
- ORF (Olympus)
- RW2 (Panasonic)
- PEF/DNG (Pentax)
- X3F (Polaroid)
- SRW (Samsung)
- X3F (Sigma)
- SR2/ARW/SRF (Sony)

**Custom Overlay**

To import custom images as layers in any of these formats:

JPG, JPEG, PNG, BMP, GIF, GRAY

**Supported File formats for Watermark:**

JPG, JPEG, PNG, BMP, GIF, GRAY

**Supported LUT formats:**

.CUBE, .VF, .3DL

**Font Formats:**

TTF, OTF, WOFF, WOFF 2.0, EOT



## EXPORT

Supported LUT format: .CUBE

### Export options:

Raw images can be exported in multiple formats, different from their original format. There are five available export formats:

JPEG, PNG, HEIF, WEBP, TIFF.

Each file format has its own quality settings. JPEG and WEBP support multiple image qualities:

-Medium (70% quality)

-High (90% quality)

-Best (100% quality)

-Custom quality – ranging from 1 to 100, based on quality required. Image size (data) gets bigger in proportion to quality

### Default Save options:

-Image imported in JPG or JPEG can be exported as JPEG

-Image imported as PNG can be exported as PNG

-Image imported as BMP, GIF, GRAY or RAW format will be exported as JPEG



## System Specifications

Mossaik HDR Pro requires Windows 10 (Anniversary Update - 1607) or later.

## Windows Integration

- Full, native support for the Microsoft SQ1 & SQ2 processors
- Integrated and dedicated GPU switching
- Designed and built for high DPI displays
- Mossaik HDR Pro runs natively on both ARM-powered and Intel-based processors
- Open Portrait photos with masks
- OneDrive integration
- Multi-window support
- Default Windows menus and shortcuts
- Versions
- Autosave
- Full Screen mode & Split View
- Use built-in camera to add pictures to your compositions
- Import images from camera or scanner with Image Capture
- Drag & drop support
- Share images using the native Share interface



## Technologies

- Mossaik HDR Pro is built using Native tools and languages
- Pixtream® Graphics Engine powered by OpenCL, Metal, Core Image and Grand Central Dispatch
- MindTree® Artificial Intelligence engine powered by CoreML
- ML features are accelerated using the Apple Neural Engine for up to 20x faster processing speed
- 48-bit architecture and HDR
- ColorSync color management

