

Render Output

This page provides details on the output settings for rendering.

Overview

A number of output settings can be accessed through the Settings tab of the V-Ray Asset Editor.

UI Path

||V-Ray Asset Editor|| > **Settings** > **Render Output**

Dimensions

- Safe Frame** – Displays a visual cue in the viewport, showing the expected render output area. If there is a difference in aspect ratio between the viewport and image size, this button toggles the safe frame overlay on and off.
- Image Width/Height** – Specifies the width and height of the rendered image, in pixels. If stereo is enabled, this represents the size of the image for one eye only.
- Aspect Ratio**– Sets the proportional relationship between height and width of the rendering in the V-Ray frame buffer. The listed Aspect Ratio options can be grouped in three types.

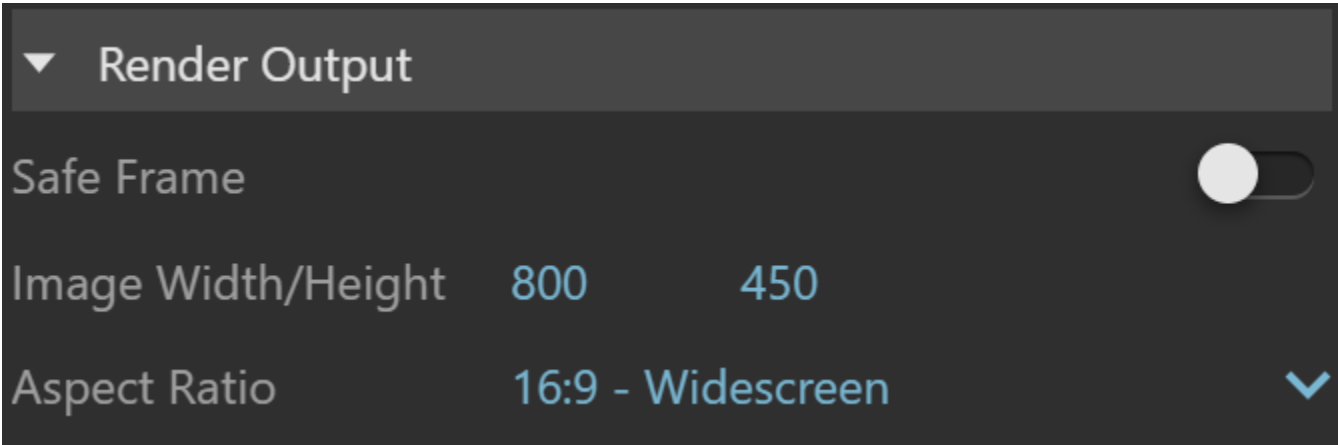
The first one consists of a number of common aspect ratio presets:

- 16:9 - Widescreen
- 1:1 - Square
- 4:3 - Picture
- 5:4 - Landscape
- 4:5 - Portrait

The second type is **Match Viewport**.

The third type is **Custom**. When Custom aspect ratio is chosen, it can be locked/unlocked.

Match Viewport and Custom options provide additional menus for further control.

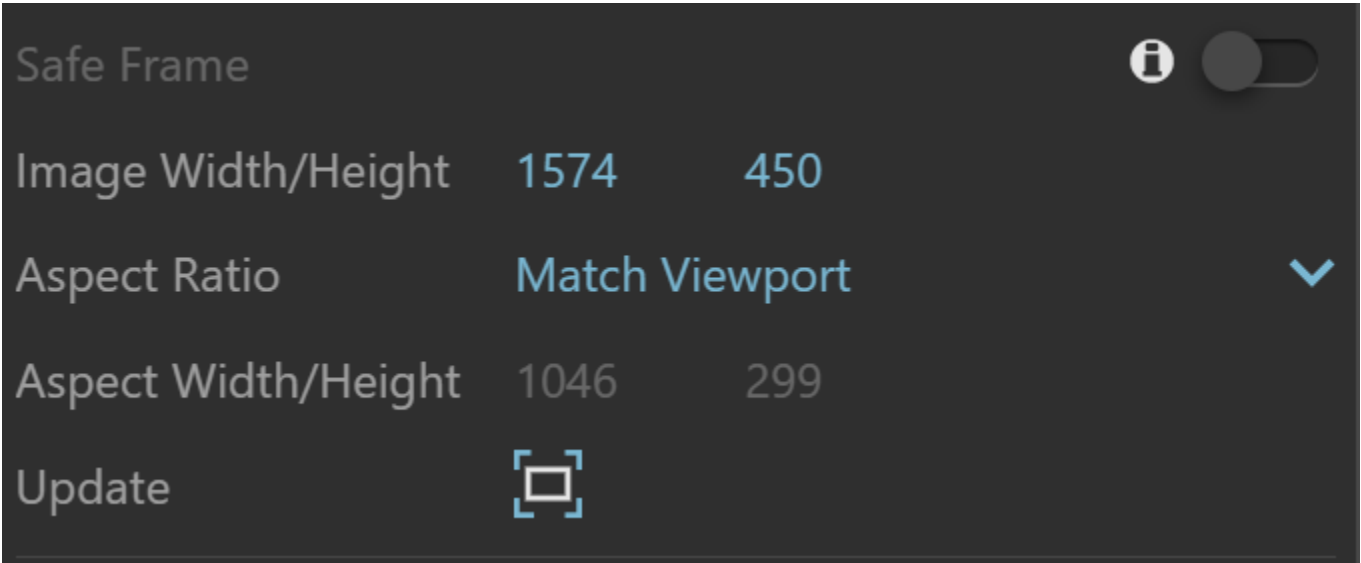


Match Viewport

The **Safe Frame** is disabled while **Match Viewport** (Aspect Ratio) mode is selected because the aspect of the rendered image exactly matches the viewport aspect.

Aspect Width/Height – Shows the current dimensions of the viewport. Changes to the viewport dimensions are shown only after the **Update** button is pressed.

Update – Sets the Aspect Width and Height to the dimensions of the current viewport.

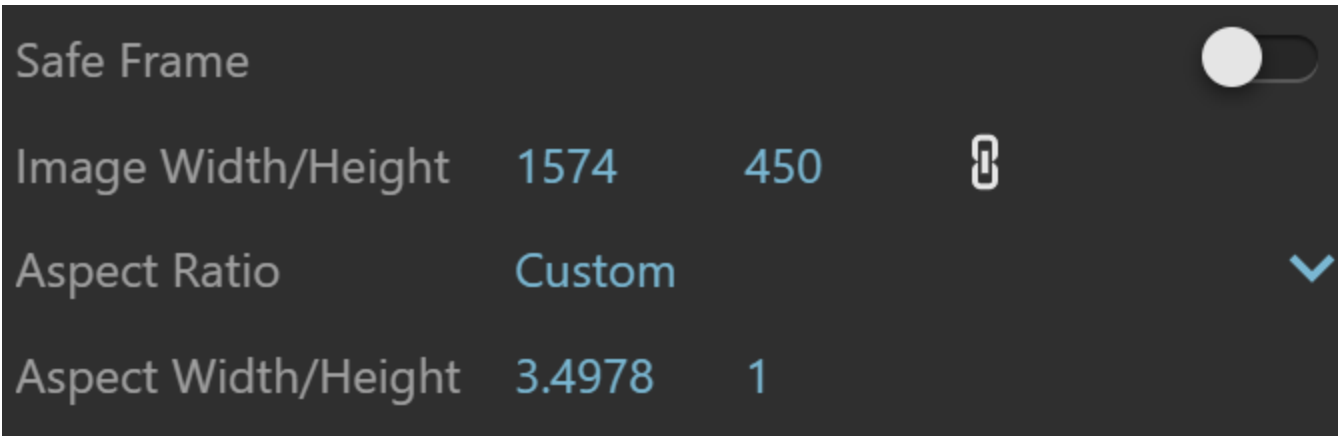


Custom

Image Width/Height – Specifies the width and height of the rendered image, in pixels. If stereo is enabled, this represents the size of the image for one eye only.

Lock/Unlock - When this button is unlocked, you can freely choose the width and height pixel size instead of being permanently locked to a specific aspect

Aspect Width/Height – Sets the width and height of the custom aspect. The Lock/Unlock button allows you to freely choose width and height pixel size instead of being permanently locked to a specific aspect.



Output Layout

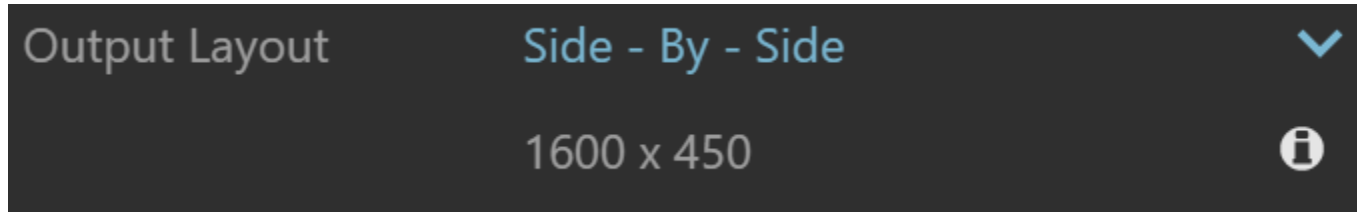
The **Output Layout** parameters become available when **Stereo Mode** is enabled in the **Camera** section of the **Settings** tab.

Output Layout – Specifies the placement/arrangement of the left and right eye images. Selects the layout type based on the software/hardware that is used for viewing the result.

Side - by - Side – Positions the images horizontally.

Top - Bottom -- Positions the images vertically.

Width/Height – The value here is not editable and is double of the above **Image Width/Height** parameter to render both the left and right eyes.



Save Image

Save Image – Enables you to set or change the **File Path**.

File Path – Specifies the file location and type to save the rendered image.

File Type – Specifies the image file format. The following file type options are available: **png**, **bmp**, **tga**, **hdr**, **sgi**, **jpg**, **exr**, **pic**, **tif**, **vrimg**.

Single File Output – When enabled only the main channel of the rendered image is saved to a file. This is either RGB Color or effectsResult. Other render elements are not saved as additional files. The option is ignored when file type is set to vrimg or multichannel exr.

The **File Type** and the **Single File Output** options become active after a valid **File Path** has been set.

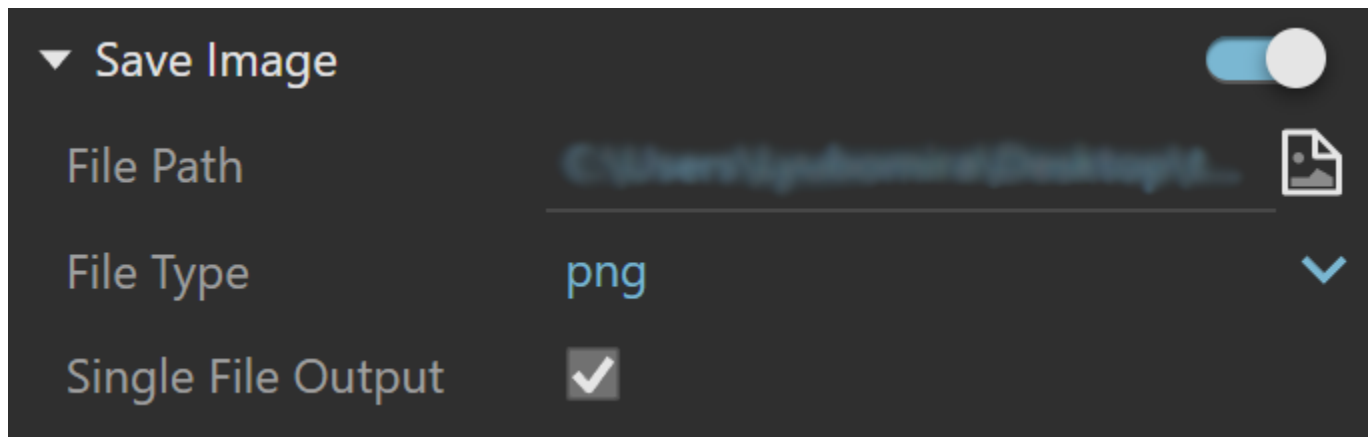


Image Options

Alpha – Determines how the Alpha channel is handled. This option is available for the following formats: .png, .tga, .sgi, .exr, .pic, and .tif.

No Alpha – No Alpha channel is saved. The background is visible even if the output image format supports transparency.

Include Alpha – The Alpha channel is saved as image Alpha or Transparency depending on the file format.

Separate Alpha – The Alpha channel is saved as a separate file.

Compression Level – Specifies the image compression level for the *.png* file type.

Bits per Channel – Specifies the bit depth, i.e. the amount of data per channel for the *.png*, *.sgi*, *.exr*, and *.tif* file types. The following options are possible depending on the file type:

8 bits
16 bits
16 bits (half-float)
32 bits
32 bits (full-float)

Compression – Specifies the image compression method for the *.tga* and *.exr* file types. The following options are possible depending on the file type:

Default
No compression
Run-length
RLE
ZIPS
ZIP
PIZ
pxr24

Quality(%) – Specifies the image compression level when saving with the *.jpg* file type.

Multichannel – When saving the output as an *.exr*, enables all the scene render elements to be saved as channels of a single image.

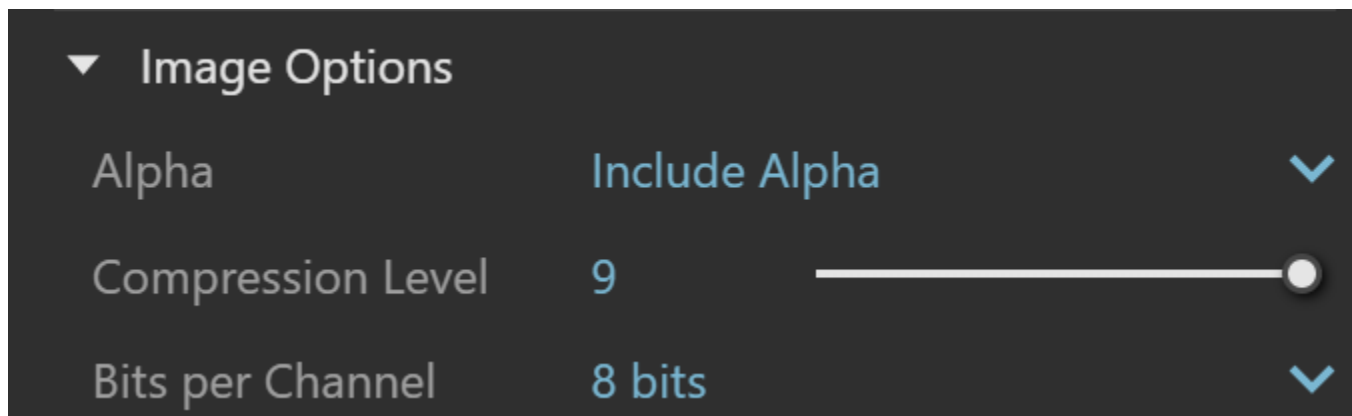
Data Window – Specifies how V-Ray determines and writes data window information to the *.exr* file.

Render Region – Saves the currently selected render region to the *.exr* file.

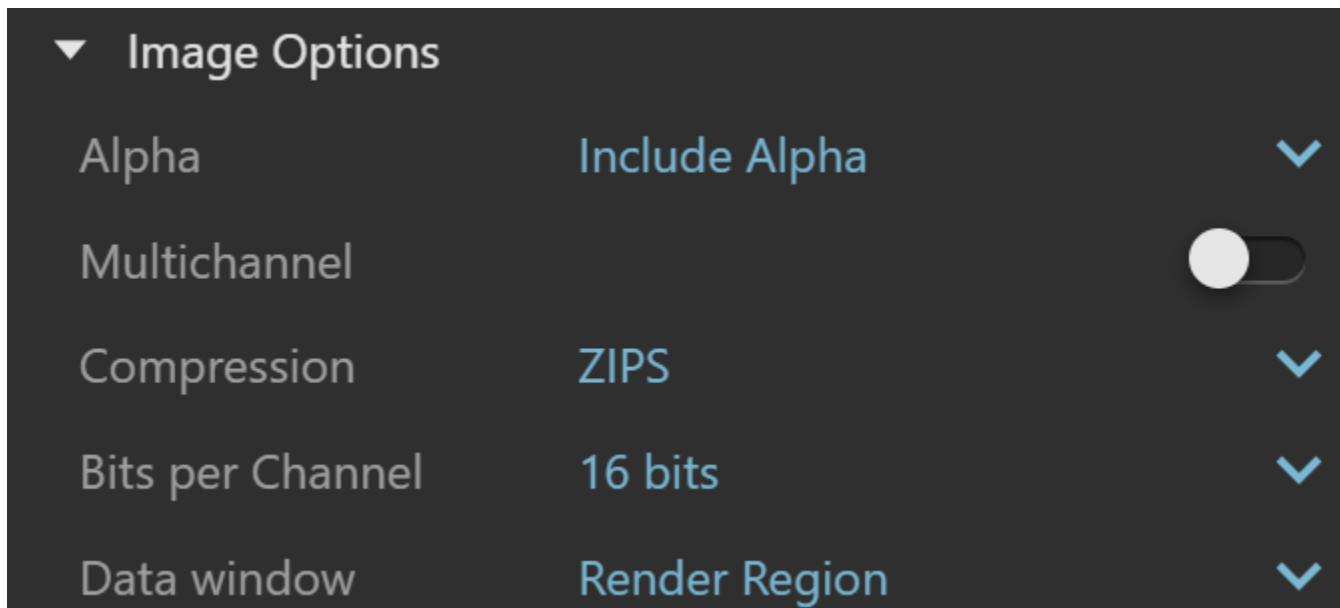
Auto – Automatically determines and writes data window information to the *.exr* file. The data window is determined by the pixels that have non-zero alpha values.

Whole Image – Saves the whole image even when a render region is selected.

The **Image Options** parameters become available after a valid **File Path** has been set in the **Save Image** option. The available parameters also depend on the selected **File Type**.



Options for *.png* files



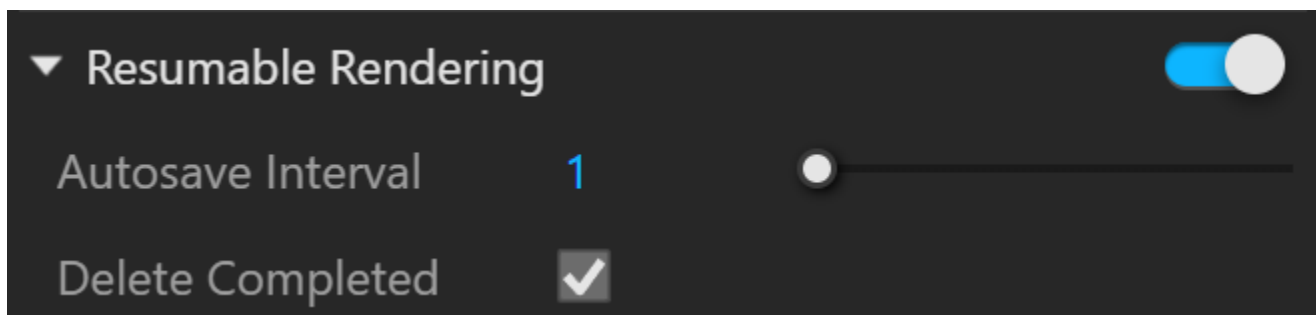
Options for .exr files

Resumable Rendering

Resumable Rendering – Enables resumable rendering. The toggle is interactable only after a valid file path is set in **Settings > Render Output > Save Image > File Path**. *For more information, see the [Resumable Rendering](#) page.*

Autosave Interval – Specifies an interval in minutes for saving resumable files during rendering. This usage applies only to Progressive sampling. Non-progressive (Bucket) rendering is saved on every completed bucket. A value of 0 disables autosaving during rendering and resumable files are saved only at the end of the rendering.

Delete Completed – Deletes the resumable file once the frame is rendered.



Notes

- When rendering a still VR image with the **VR Cubemap Camera** Type, the output **Aspect Ratio** is locked to 6:1. Similarly, the **VR Spherical** Type locks the **Aspect Ratio** to 2:1. In both cases, the user-specified **Image Height** is preserved, but the **Image Width** automatically adjusts for the aspect ratio.
- When setting up an **Animation** it is advisable to set the **Scene Delay** parameter to 0.0. This setting can be found using **View > Animation > Settings**.
- **Frames Per Second** is hard-coded to 30.
- When using Parallel or 2-Point Perspective camera and the viewport aspect ratio changes, the Safe Frame does not keep the view consistent.

- .vrimg is a Chaos proprietary file format used by the V-Ray Frame Buffer to store the rendered image incrementally (bucket by bucket) while rendering in full floating-point format, with all available render elements. It is used as a render output but it is not recommended to use it as a texture file format. VRIMG contains metadata, i.e. render statistics. It supports dynamic bucket size.
- Single File Output option is not supported for animations.