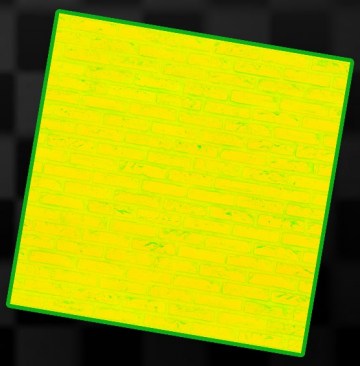
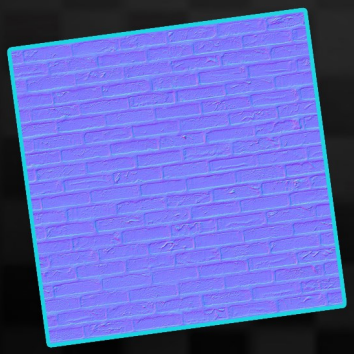
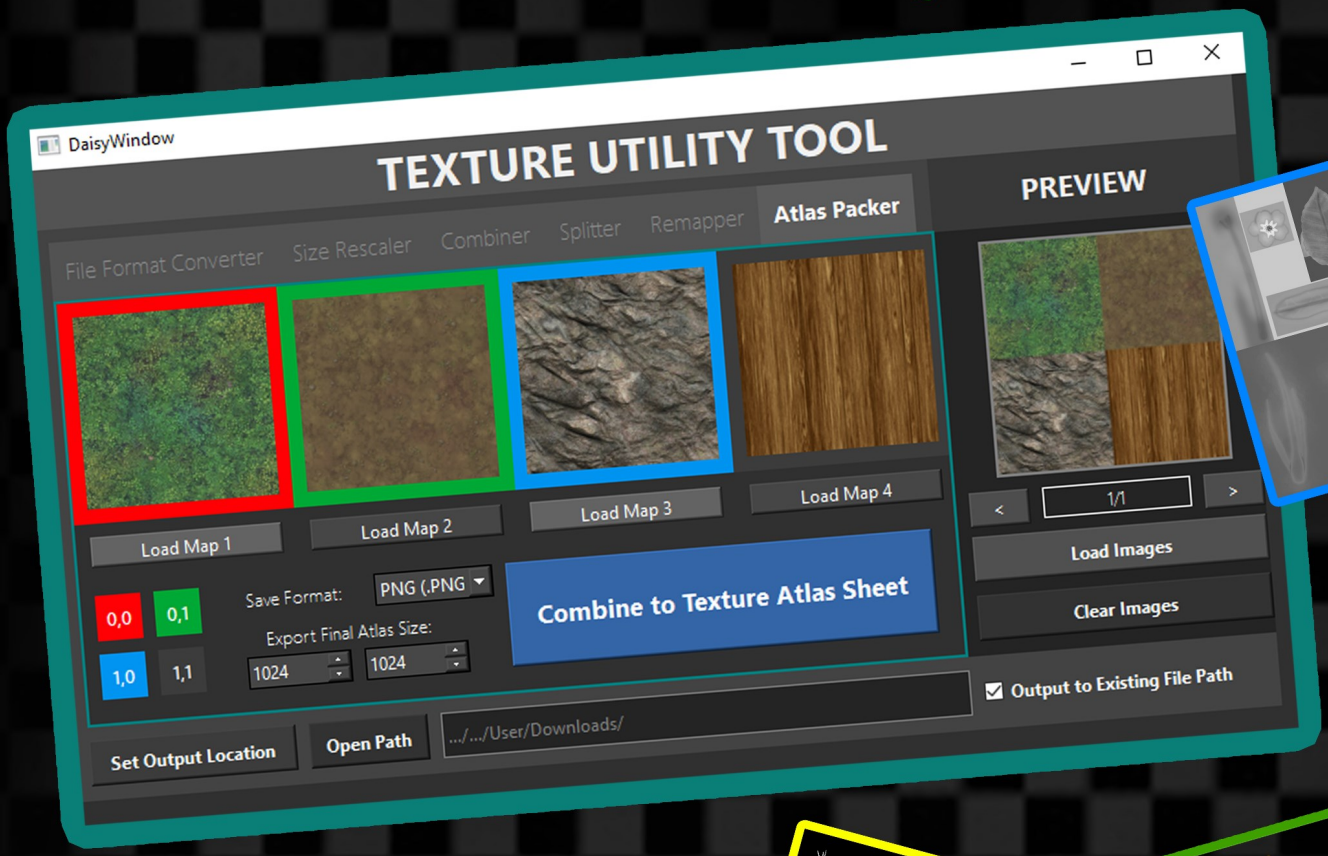






Python Texture Utility Tool

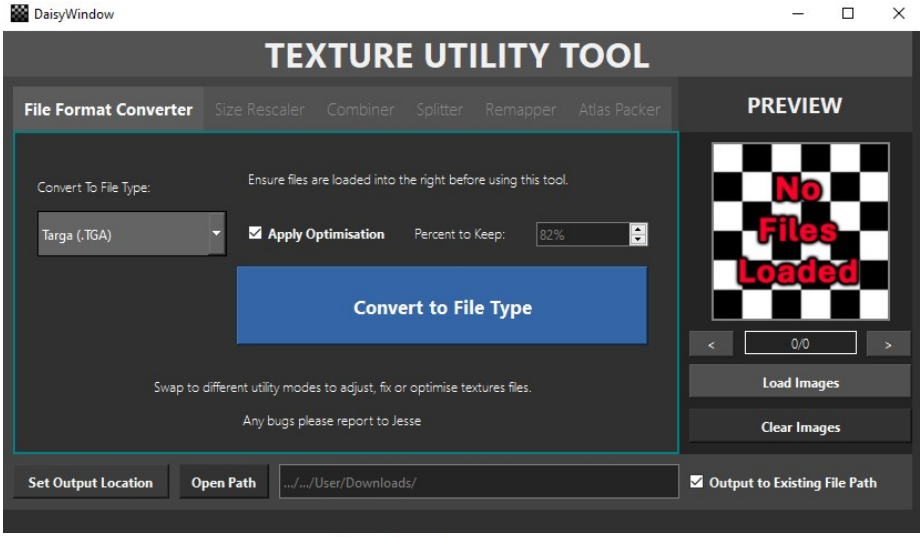
By Jesse Olchawa

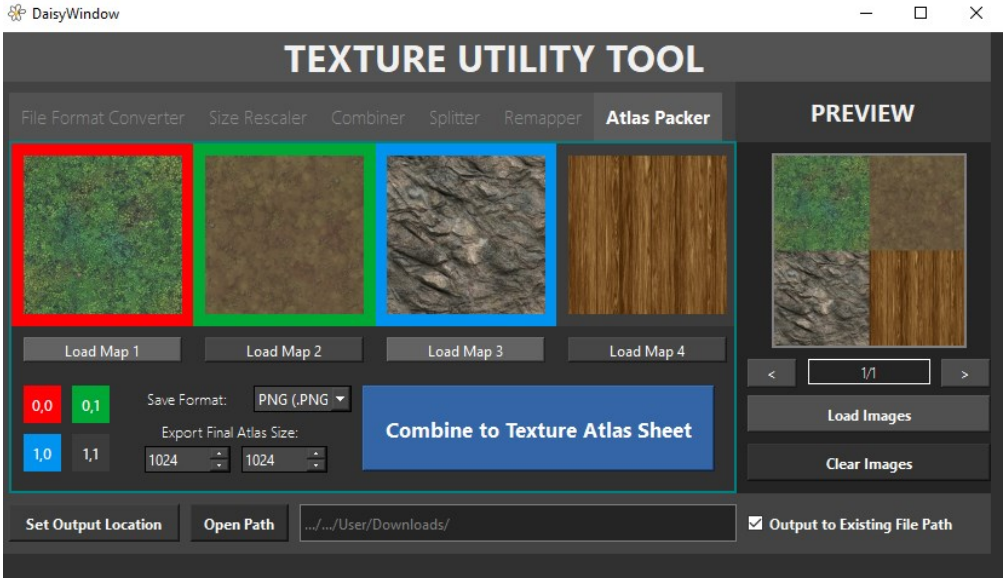
Contents

Getting Started

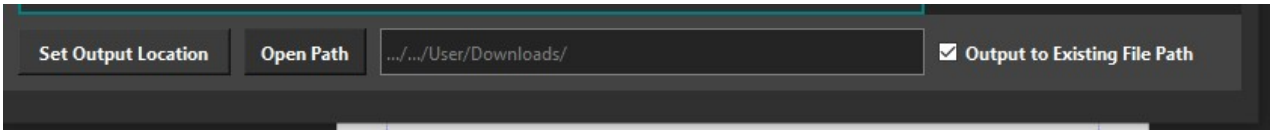
Tool Usage:

This tool is designed to help manage textures files in batch sets or individually for game engines. Using the tabbed view you can easily change the current operation and may need to load specific images. This tool does not need any extra setup, simply load the images on the right side and use the tabbed modes. Some tabbed modes require you to load images inside them instead such as the combiner, remapper and atlas packer.





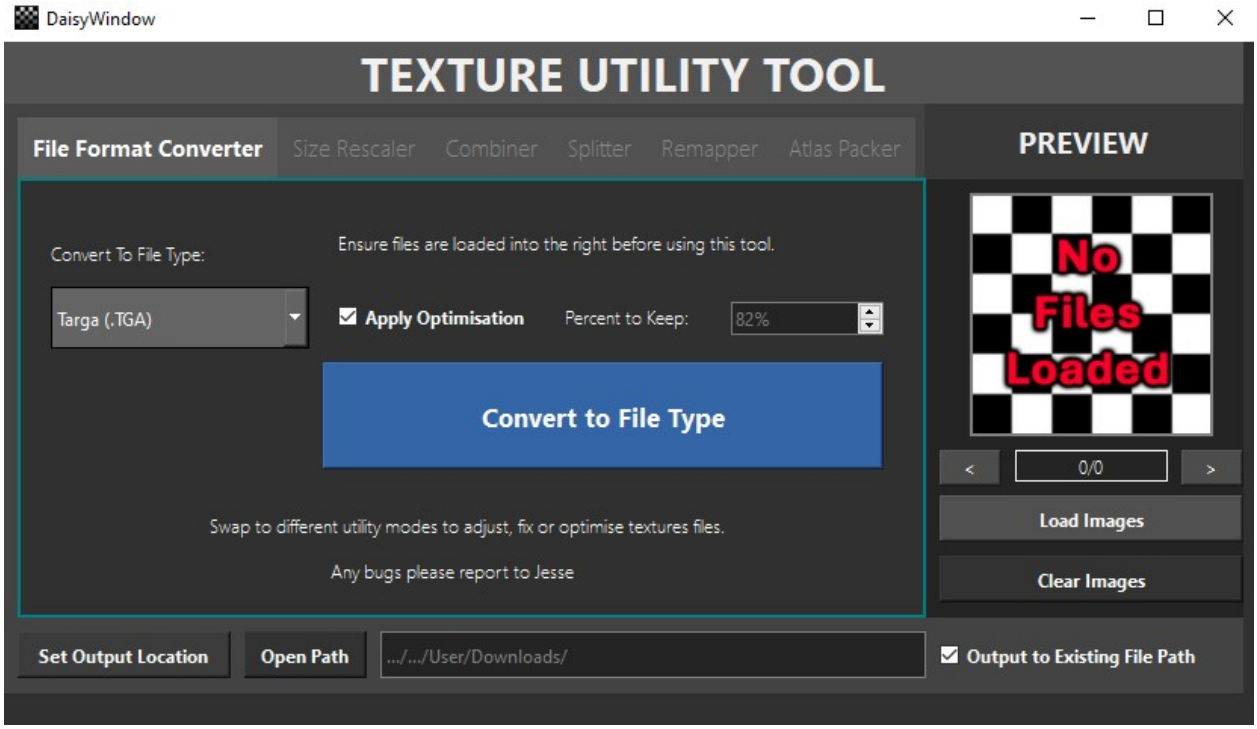
Set your file path folder below to ensure all modes go to the correct location. If you prefer them to go the same folder as loaded files tick the checkbox.



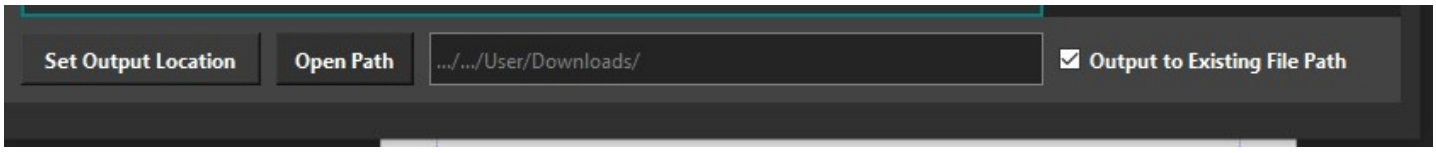
Converting Images

Converting File Types:

The first and default tab for the tool is for converting files. To get started click on the load images icon to insert your images. This tool supports one image at a time and batch mode (multiple images). Once loaded the UI will update to showcase a picture of one of your images loaded in. Use the arrow buttons to check all images have loaded in.



You can now select the **desired export file type**. If the file is the same type it will ignored during export. Next set your export path, this is critical for where your file will go.



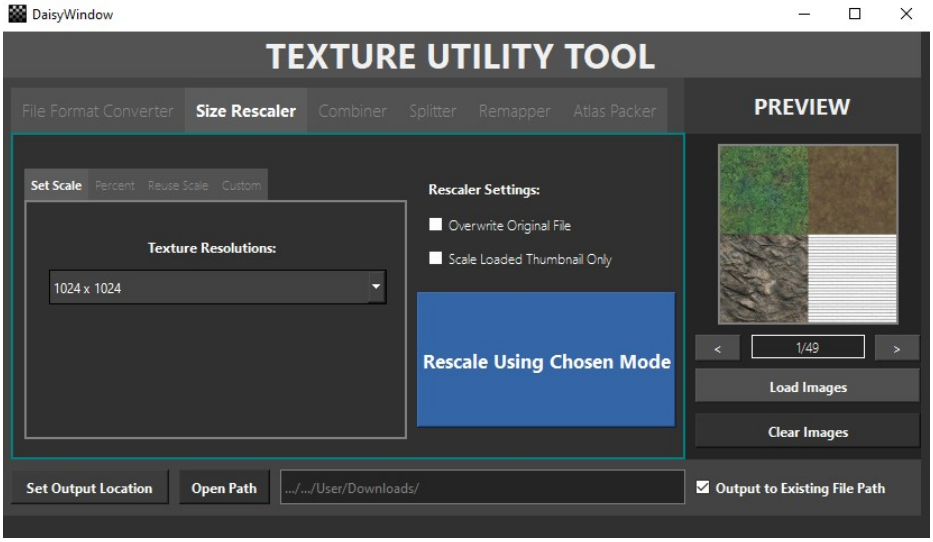
To convert your files, click on the **convert all loaded files button to begin.**

Aiming for a smaller file size? Try saving as JPEGS or increasing the optimisation slider to compress the image more.

Rescaling Images

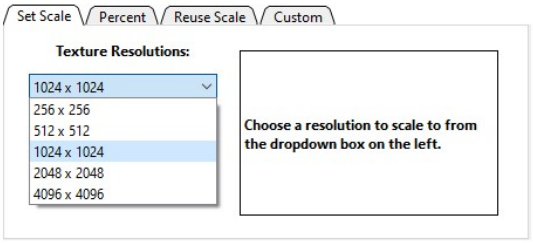
Rescaling Images:

The second tab is for resizing your images. Ensure they are loaded on the right preview.



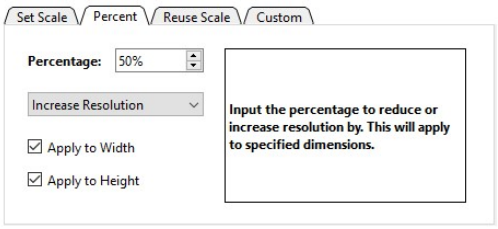
Set Scale Rescale:

When working with square texture formats this mode has a quick dropdown of the most common texture resolutions.



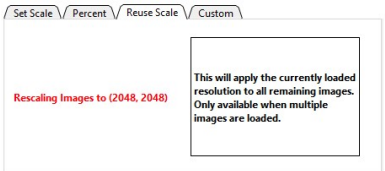
Percentage Reduce/Upscale:

This works ontop of existing resolution per image, so if you want to halve all loaded images use this method.



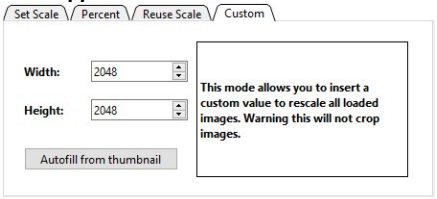
Reuse Scale from Thumbnail:

This works by setting all loaded images to match the thumbnail resolution. Good for matching tileable sizes.



Custom Resolution Input:

This option gives the most control, for quick input use the button to autofill the default values with the currently selected loaded thumbnail image.

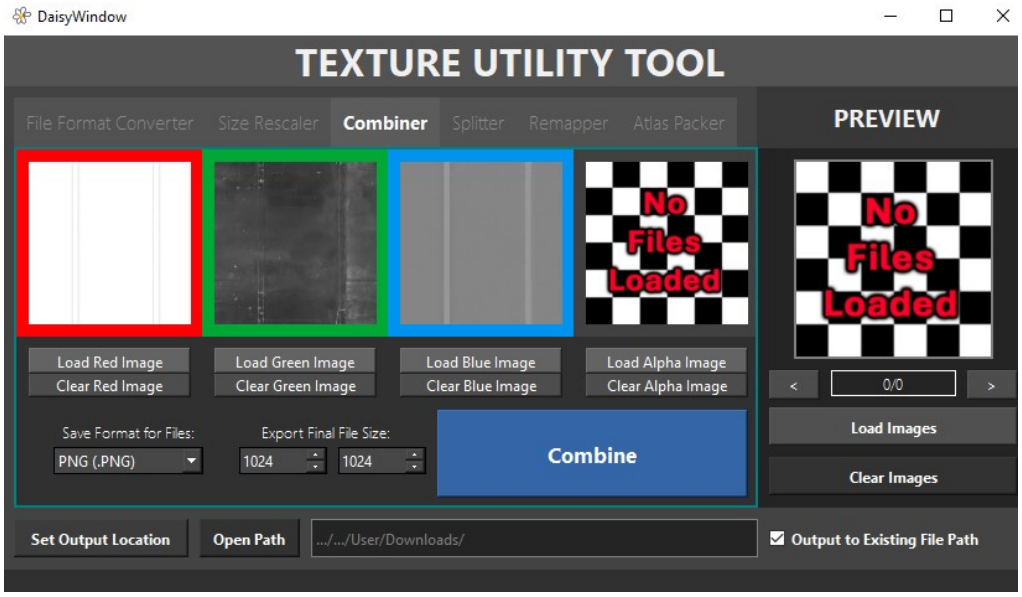


Packing Images

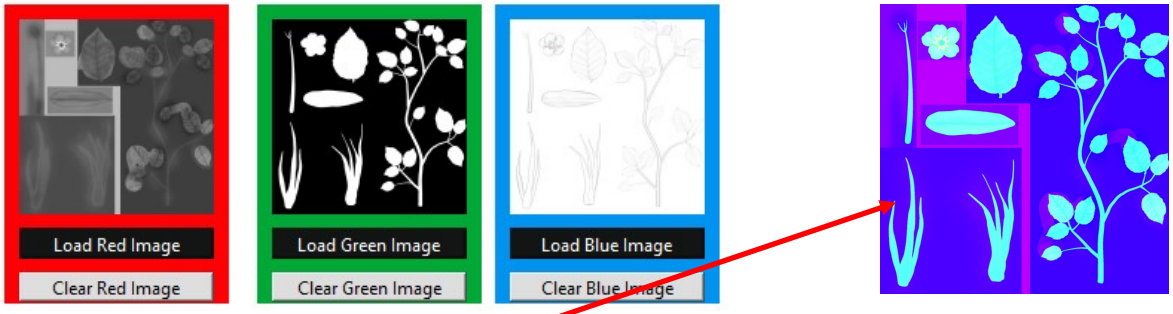
Packing Images to Channels:

To pack different images into one final file click on the packer tab and load your images.

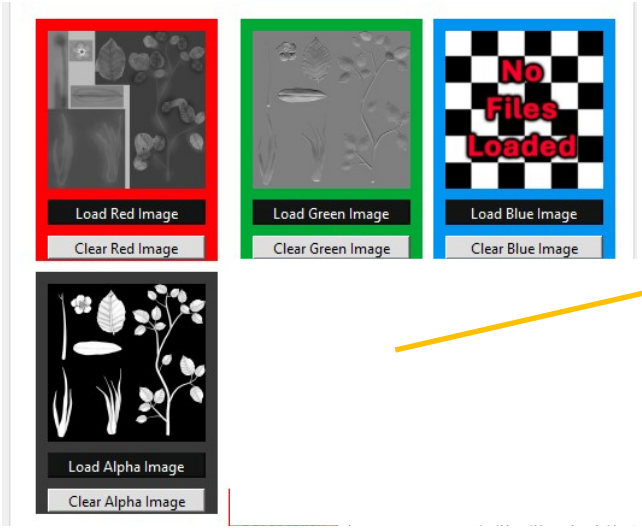
Caution: Loaded images will be converted into grayscale. Don't forget to set export path.



Here are some examples of packing these files and the final result:



Packing RGB e.g AORM



Packing RGBA to have Alpha transparency

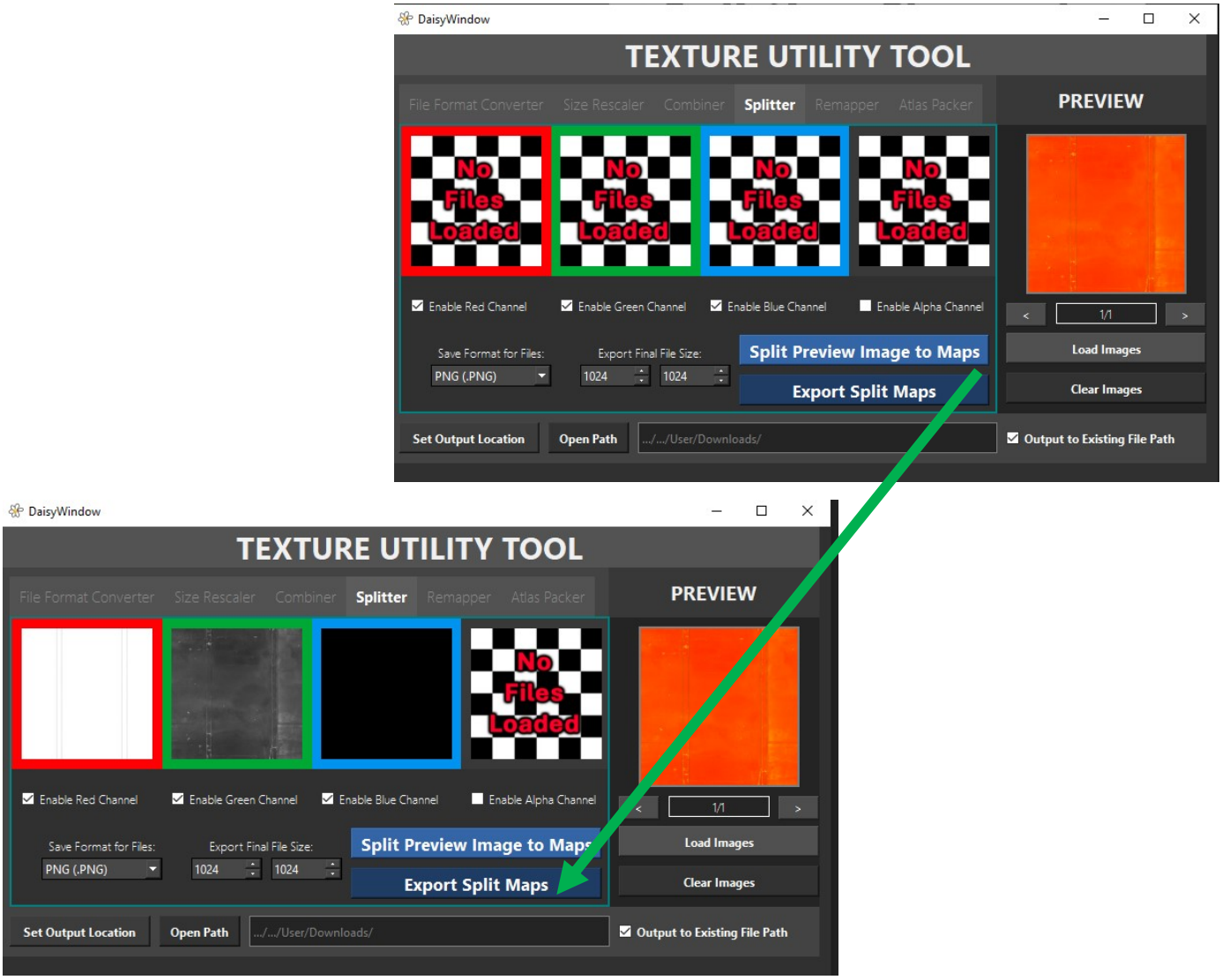
Splitting Channels

Splitting Image into Channels:

For the reverse to a colour image, **switch to the splitter tab to split a image into channels**.

Click on the load images to thumbnail and if you are working on multiple files ensure the one to split is currently previewed.

Now you can toggle all the channels you want to split to alongside the export settings, location and file type. Once setup, click on the **split into channels button.**



One split up your channels will preview in the thumbnails.

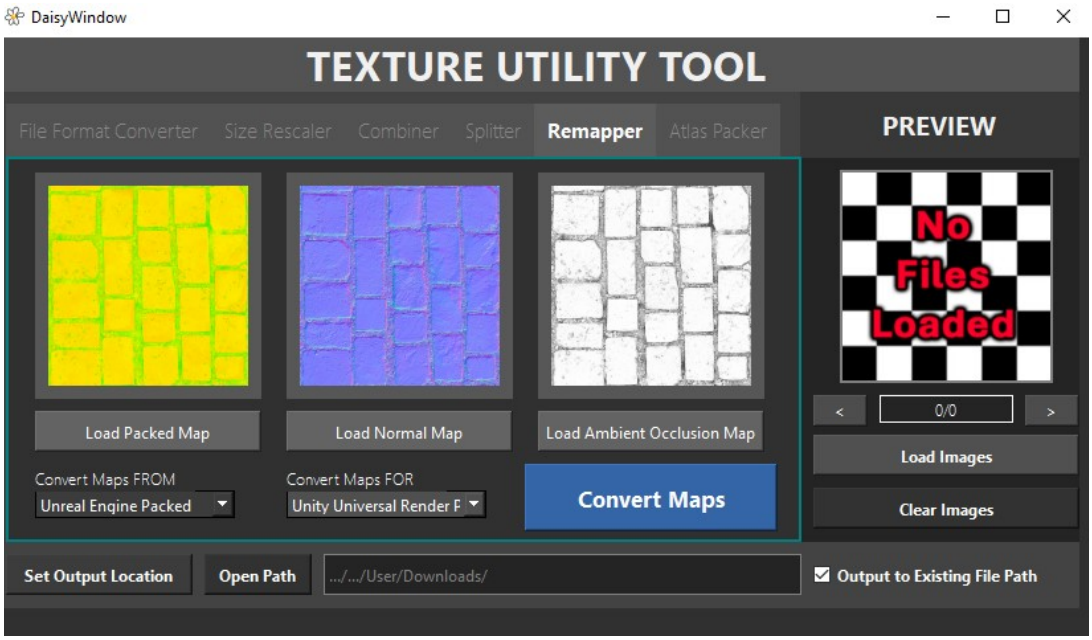
Want to save the thumbnails? Click on Export Split Maps.

Engine Remapping

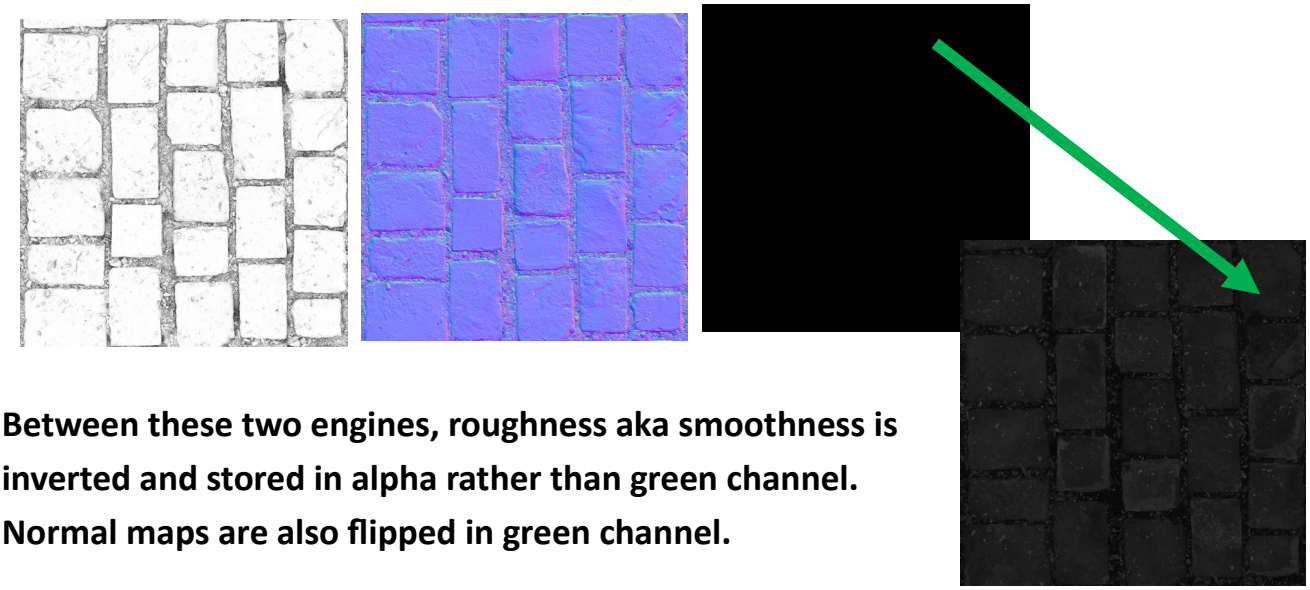
Remapping Textures for different engines.

If you are working between engines and want to display your exported texture maps from Unreal Engine in Unity's URP this tab is for you. Simply import the maps into the slots and select which engine they are made from and which they need to be reconfigured for.
Further rescaling and converting can be done with other tabs. Caution: Some roughness artifcating may occur when working with pitch black smoothness maps.

Here is how the maps look like for Unreal Engine.



Here is how the maps look like for Unity Engine.

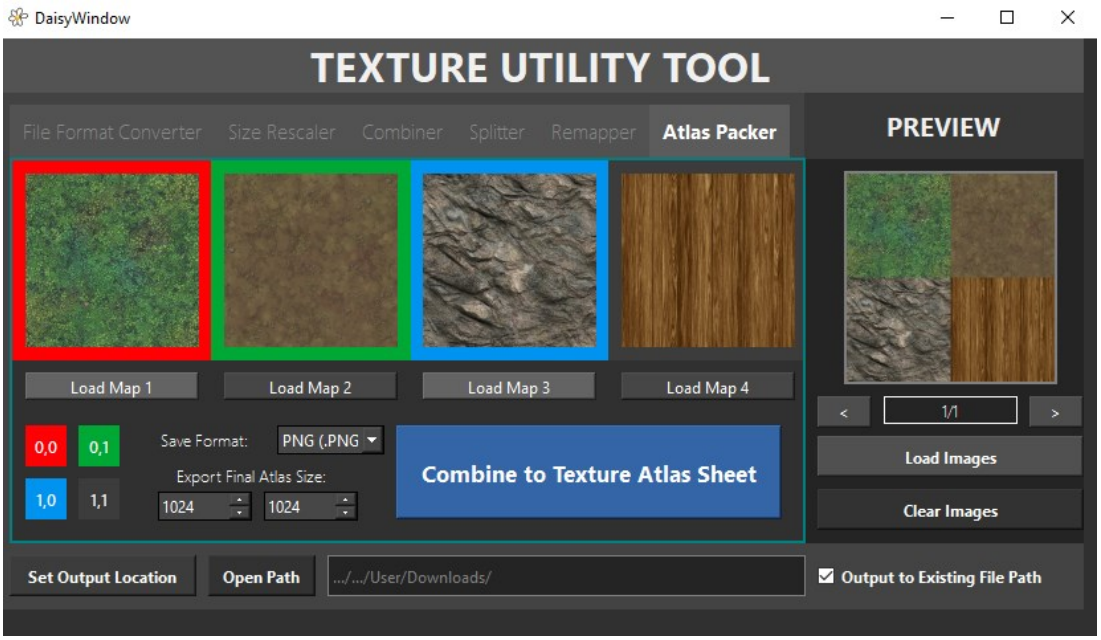


Between these two engines, roughness aka smoothness is inverted and stored in alpha rather than green channel. Normal maps are also flipped in green channel.

Packing to Atlas

Packing Multiple Textures to Atlas:

To reduce texture drawcalls, consider packing many sheets to a larger file. Within engine you will have to zoom in your texture coords via tiling to access each square. **To pack textures load them into the tool and click the button.**



Using each quadrant you can store 4 textures.

If you utilise this with RGBA noise maps like AORM or Metalness Smoothness you can store up to 12 greyscale textures in one file by dividing them into 4 quadrants.

Be warned this should not be used with flipbooks/sprite sheets as it will break tiling.