

USER GUIDE

GALLERYPALETTECONVERT

☐ E Ink's Confirmation

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1 About This User Guide Note

This document is a user guide for the GalleryPaletteConvert image conversion tool that can be used to convert images on a PC into a format that is suitable for E Ink Gallery Palette™ 4000 EPD displays.

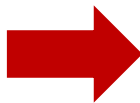
2 Overview

GalleryPaletteConvert takes an image file as the input, performs image processing and outputs the results as a .BMP format. The .BMP files can be used in conjunction with FlashBurner or other software tools to load the images onto MCU development boards.

GalleryPaletteConvert also provides outputs a preview file that can be used to proof the image before loading it onto MCU boards which saves time during the image content creation phase.

2.1 Features

- Converts image files into E Ink Gallery Palette™ 4000 format
- Utilizes dithering to render colors not natively supported
- Generates a preview file that can be used to proof images
- Compatible with .JPG, .BMP, .PNG, .GIF, .PPM, .EPS
- Batch processing support



3 Program Interface

3.1 One Click Mode

Double click on the GalleryPaletteConvert batch file for the appropriate panel to run one-click-mode.

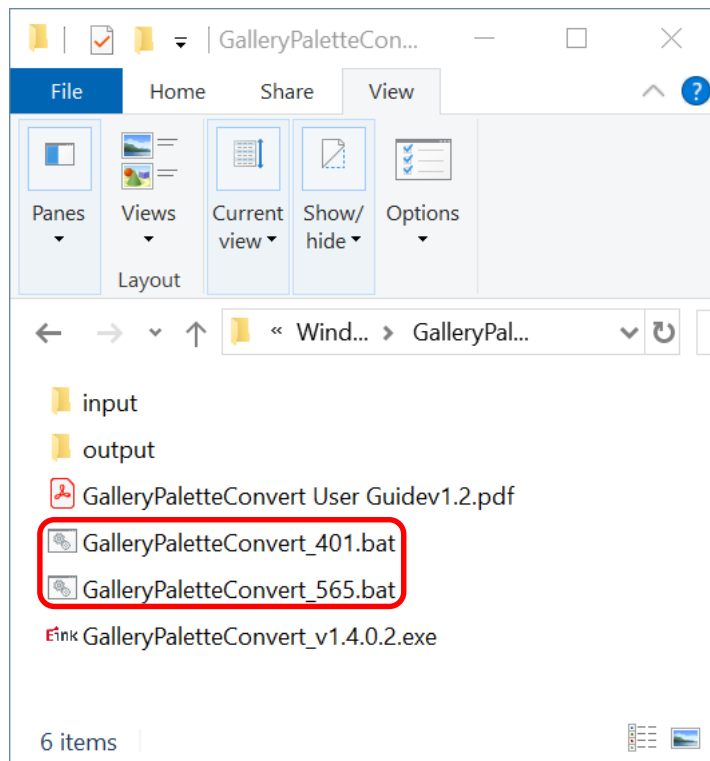


Figure 1 GalleryPaletteConvert Folder and Executable Files

The program will read all the image files in the folder labeled “input”. The user must create this folder.

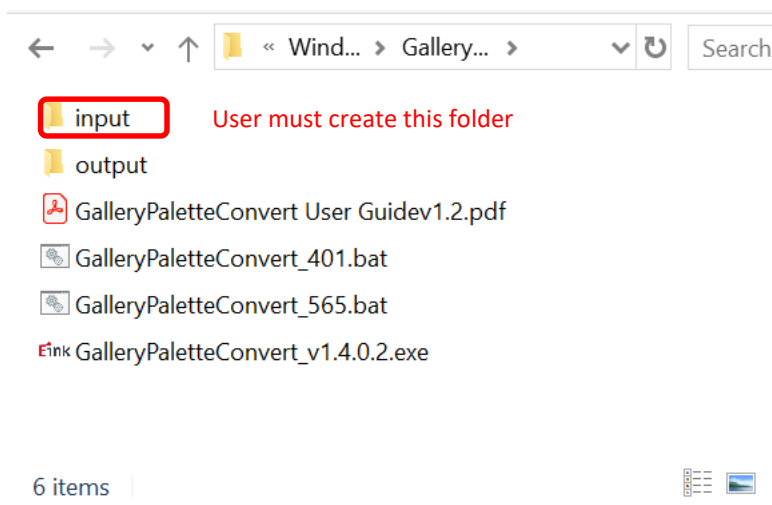


Figure 2 GalleryPaletteConvert main folder

Users should store images they wish to convert in the “input” folder. File format support is listed in Figure 4.

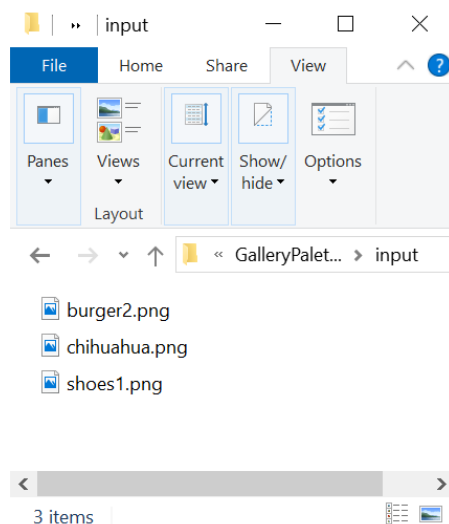
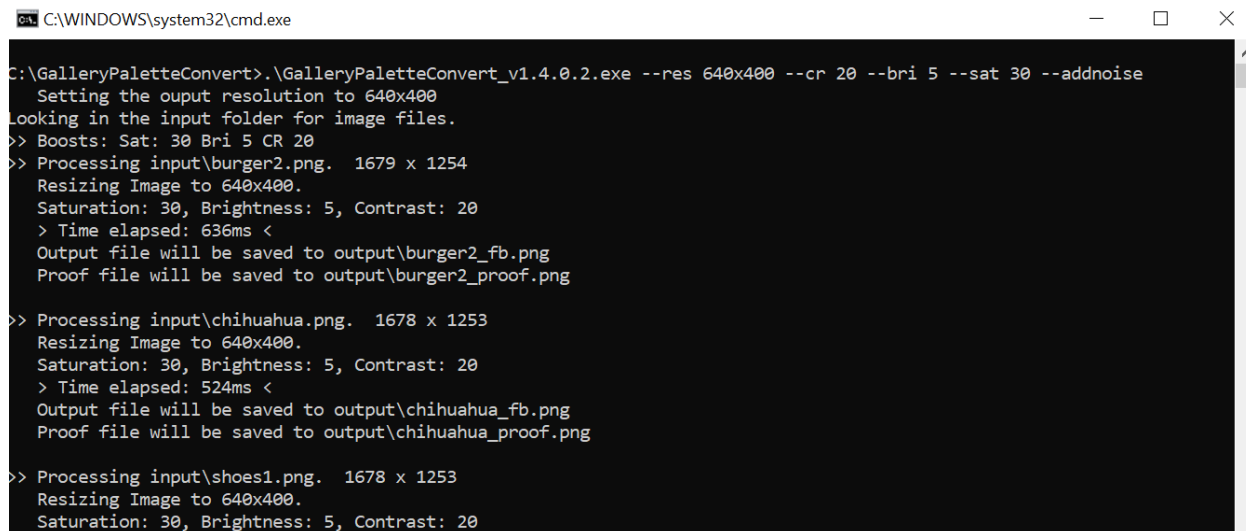


Figure 3 GalleryPaletteConvert input folder containing images

File Type	Extension
Bitmap	.bmp
Encapsulated Postscript	.eps
Graphics Interchange Format	.gif
Joint Photographic Expert Group Image	.jpg
Portable Network Graphics	.png
Portable Pixelmap	.ppm

Figure 4 Supported image file formats

A dialog window will appear providing status information on the image conversion process shown in Figure 5



```
C:\WINDOWS\system32\cmd.exe
C:\GalleryPaletteConvert>.\GalleryPaletteConvert_v1.4.0.2.exe --res 640x400 --cr 20 --bri 5 --sat 30 --addnoise
Setting the outpu resolution to 640x400
Looking in the input folder for image files.
>> Boosts: Sat: 30 Bri 5 CR 20
>> Processing input\burger2.png. 1679 x 1254
Resizing Image to 640x400.
Saturation: 30, Brightness: 5, Contrast: 20
> Time elapsed: 636ms <
Output file will be saved to output\burger2_fb.png
Proof file will be saved to output\burger2_proof.png

>> Processing input\chihuahua.png. 1678 x 1253
Resizing Image to 640x400.
Saturation: 30, Brightness: 5, Contrast: 20
> Time elapsed: 524ms <
Output file will be saved to output\chihuahua_fb.png
Proof file will be saved to output\chihuahua_proof.png

>> Processing input\shoes1.png. 1678 x 1253
Resizing Image to 640x400.
Saturation: 30, Brightness: 5, Contrast: 20
```

Figure 5 GalleryPaletteConvert Dialog window

GalleryPaletteConvert will process the images and the results will be stored in a folder labeled “output”. If the output folder doesn’t exist, GalleryPaletteConvert will attempt to create the folder automatically. If the folder already exists, the files with the same name will be overwritten.

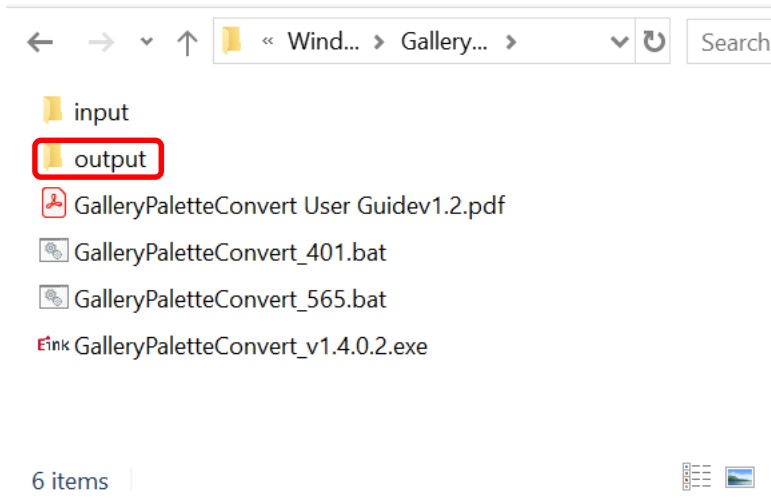


Figure 6 GalleryPaletteConvert output folder

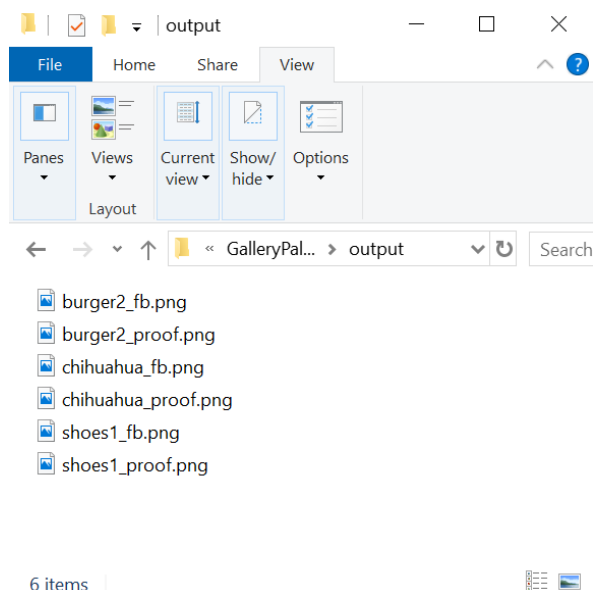


Figure 7 GalleryPaletteConvert output folder containing images

The default image processing flow for One Click Mode.

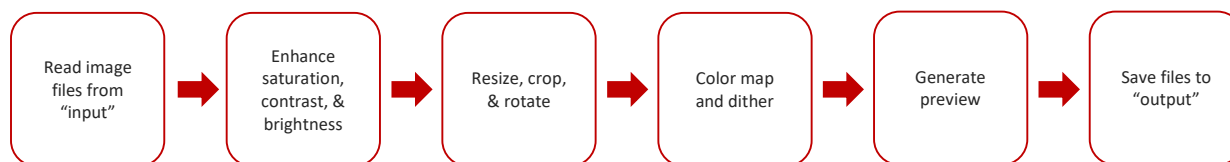


Figure 8 Image conversion flow chart

Important Note

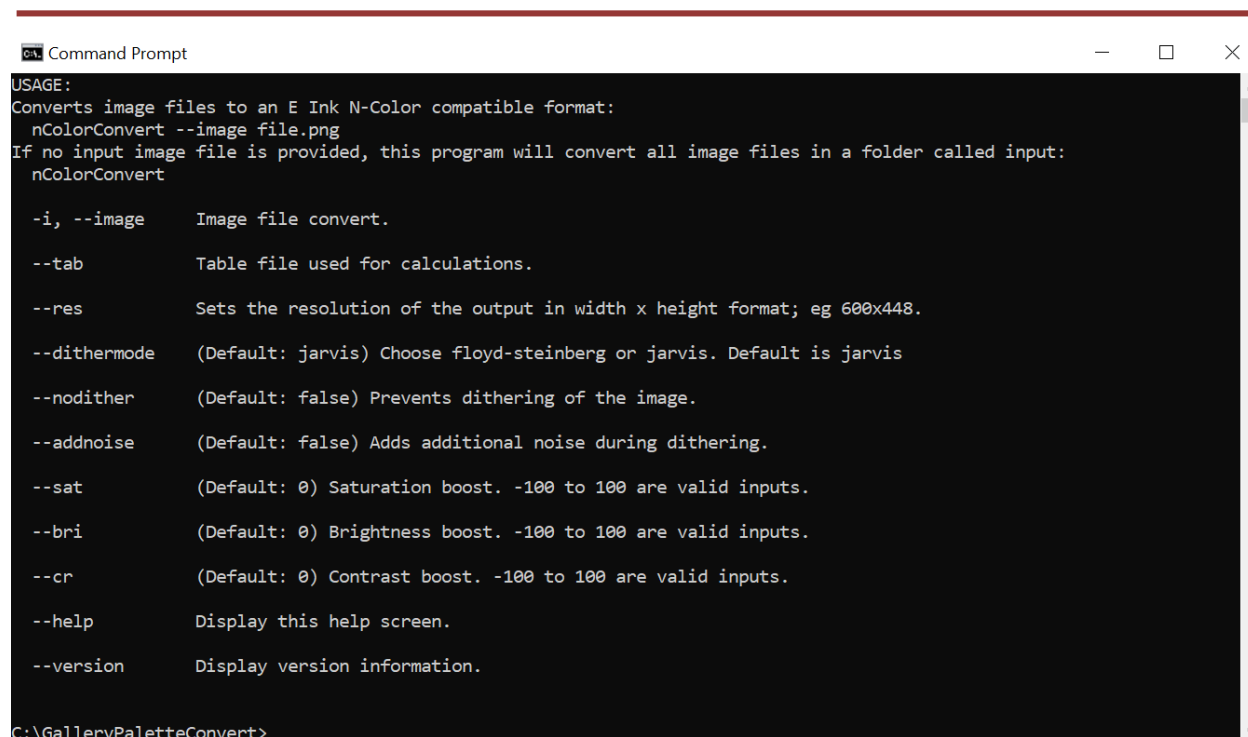
The “.proof.png” files are meant for proofing. Do not attempt to use these files onto GalleryPaletteConvert EPD panels as the results may be unpredictable.

3.2 Manual Mode

GalleryPaletteConvert can also be used in manual mode. Users can use a command line interface to control the GalleryPaletteConvert program.

```
> GalleryPaletteConvert.exe -h
```

This will list the usage and available options for using GalleryPaletteConvert in manual mode.



```

C:\> Command Prompt
USAGE:
Converts image files to an E Ink N-Color compatible format:
nColorConvert --image file.png
If no input image file is provided, this program will convert all image files in a folder called input:
nColorConvert

-i, --image      Image file convert.

--tab            Table file used for calculations.

--res            Sets the resolution of the output in width x height format; eg 600x448.

--dithermode     (Default: jarvis) Choose floyd-steinberg or jarvis. Default is jarvis

--nodither       (Default: false) Prevents dithering of the image.

--addnoise       (Default: false) Adds additional noise during dithering.

--sat            (Default: 0) Saturation boost. -100 to 100 are valid inputs.

--bri            (Default: 0) Brightness boost. -100 to 100 are valid inputs.

--cr             (Default: 0) Contrast boost. -100 to 100 are valid inputs.

--help          Display this help screen.

--version        Display version information.

C:\GalleryPaletteConvert>

```

Figure 9 GalleryPaletteConvert manual mode operation

```

-i, --image      Image file convert.

--tab            Table file used for calculations.

--res            Sets the resolution of the output in width x height format; eg 600x448.

--dithermode     (Default: jarvis) Choose floyd-steinberg or jarvis. Default is jarvis

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--addnoise       (Default: false) Adds additional noise during dithering.

--sat            (Default: 0) Saturation boost. -100 to 100 are valid inputs.

--bri            (Default: 0) Brightness boost. -100 to 100 are valid inputs.

--cr             (Default: 0) Contrast boost. -100 to 100 are valid inputs.

--help          Display this help screen.

--version        Display version information.

```

Example

```
GalleryPaletteConvert.exe -i imagefile.jpg -res 600x480 -nodither -satval 1.25
```

The above will convert a file named imagefile.jpg into a Gallery Palette™ compatible image with a resolution of 600x480. GalleryPaletteConvert will enhance the color saturation by 1.25. Contrast and brightness boosts will be the default values. The resulting image file will use not dithering during image processing.

Saved images will be stored in the “output” folder.

**Important
Note**

The “.proof.png” files are meant for proofing. Do not attempt to use these files onto GalleryPaletteConvert EPD panels as the results may be unpredictable.

Revision History

Version	Date	Page	Description	Author
0.1	2019/12/12		Initial	Bryan Chan
1.1	2020/01/09		Updated to nColorConvert_1.1	Bryan Chan
1.2.0	2020/08/18		Updated GalleryPaletteConvert	Bryan Chan
1.2.1	2020/08/18		E Ink Gallery Palette™ 4000 official name	Bryan Chan