

Department of Computer Science

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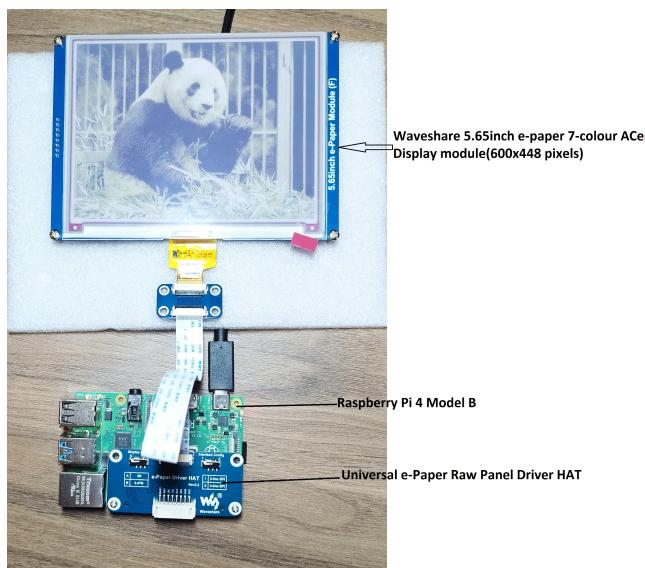
Integrating manual to upload images to Waveshare e-paper module.

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Hardware Requirements

- Raspberry pi 4 Model B(used), you can choose a newer version after Rpi 3.
- E-paper module: here we used Waveshare 5.65inch e-paper 7-colour ACep Display module(600x448 pixels)
- [Universal e-Paper Raw Panel Driver HAT](#)
- <https://uk.pi-supply.com/products/pijuice-standard> (If you want to run RPi over a portable power supply - Access the remote connection via WiFi over a laptop for input and output)



Software Requirement

- [https://www.waveshare.com/wiki/5.65inch_e-Paper_Module_\(F\)](https://www.waveshare.com/wiki/5.65inch_e-Paper_Module_(F)) (manual available for waveshare e-paper module)
- <https://cloudconvert.com/bmp-converter> (To convert the images into BMP format with 600x448 pixels)
- VNC viewer on laptop and on RPi.
- <https://github.com/waveshare/e-Paper> (Python code used from an example in a given repository)

Details

- Enable SSH, VNC and SPI connection from `raspi-config` command.
- Install BCM2835 libraries:

```
wget http://www.airspayce.com/mikem/bcm2835/bcm2835-1.71.tar.gz
tar zxvf bcm2835-1.71.tar.gz
cd bcm2835-1.71/
sudo ./configure && sudo make && sudo make check && sudo make install
```

- Install WiringPi libraries:

```
git clone https://github.com/WiringPi/WiringPi
cd WiringPi
./build
gpio -v
```

- Install Python3 libraries:

```
sudo apt-get update
sudo apt-get install python3-pip
sudo apt-get install python3-pil
sudo pip3 install RPi.GPIO
sudo pip3 install spidev
```

- Convert any image format to BMP

Go to <https://cloudconvert.com/bmp-converter>

Upload your image and set the options for Width and Height(i.e. 600x448 pixels).

Download it and save and send it to RPi storage via any medium (USB or VNC file transfer or any other method)

- Download the executable GUI application from
https://github.com/mark-nirde/e-paper_python

Extract the folder.

Go to the dist folder.

Open run_me.

Select your desired image (Converted in the above step).

Wait till the process is complete.

Hurray!! image is on the colour e-paper module.