

Installing the Trebax Image Viewer on a Raspberry Pi.

Note: this document is intended as guide only. All is done at your own risk.

The Software is distributed on an as is basis without warranties or conditions of any kind.

The viewer requires some additional packages on your Raspberry Pi. A script bash file is delivered so that this will be done for you. The total installation will require some time, take 2 hours in account if none of the packages are yet installed.

Packages to be installed:

- OpenCv_4_5_5
- Gtk3

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Step 1, setting up the Raspberry Pi

First install Raspberry Pi with the Buster or Bullseye release of the OS.

<https://www.raspberrypi.com/software/>

One of the requirements to run a camera on the Raspberry Pi is that the camera and I2C interface are enabled. Please check if this is done in the application menu (see figure 1):

- Click on the raspberry Pi icon on the top left corner
- Go to preferences -> Raspberry Pi configuration.
- Go to the interface tab. In here enable the camera and the I2C interface (by default both are disabled) (in case of the Bullseye OS, please execute step 1b first)

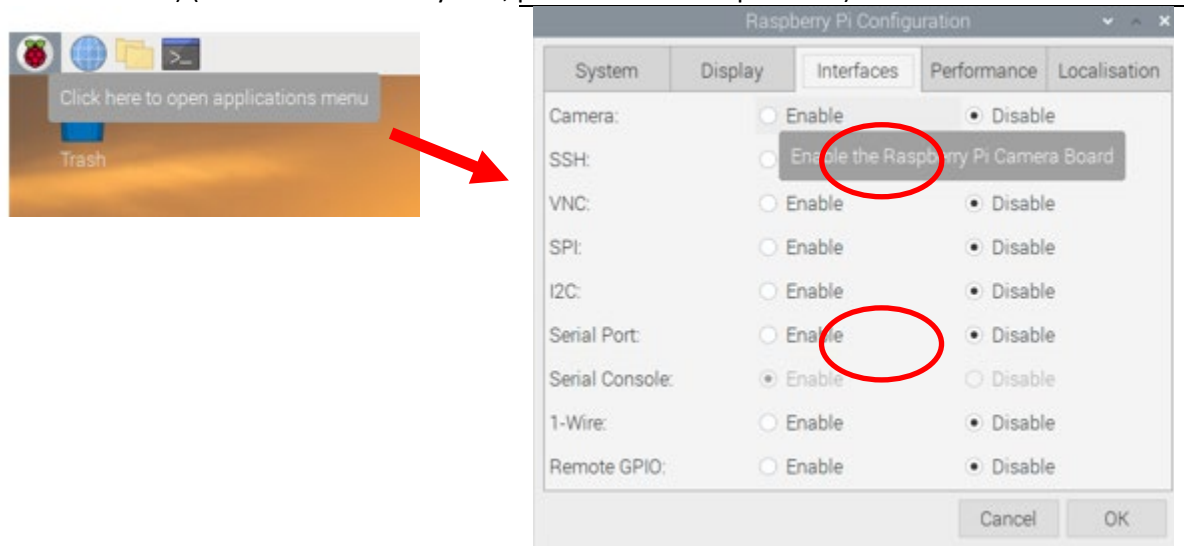


Figure 1: enabling the camera and I2C interface

- Inside the menu go to the tab Performance (to the right from the tab Interfaces in figure 1).
- In here you see on the second line GPU memory. Increase this to 128 (MB). See figure 2.
- After the camera and I2C are enabled reboot the Raspberry Pi.

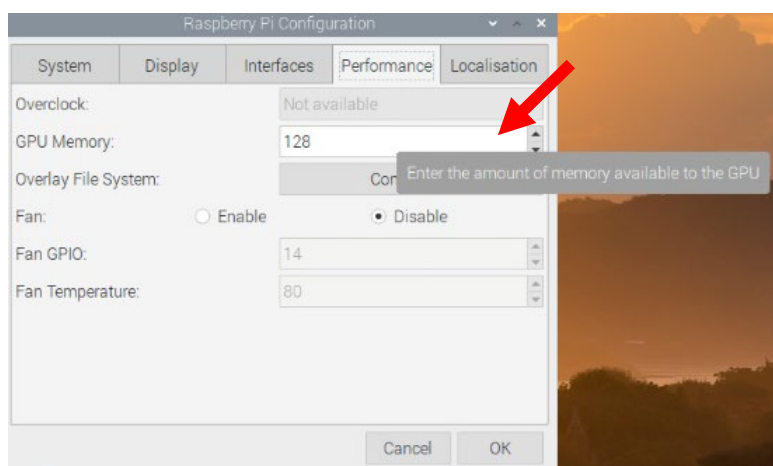
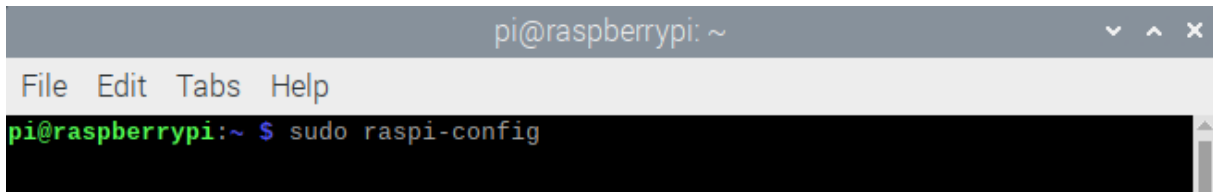


Figure 2: set GPU memory

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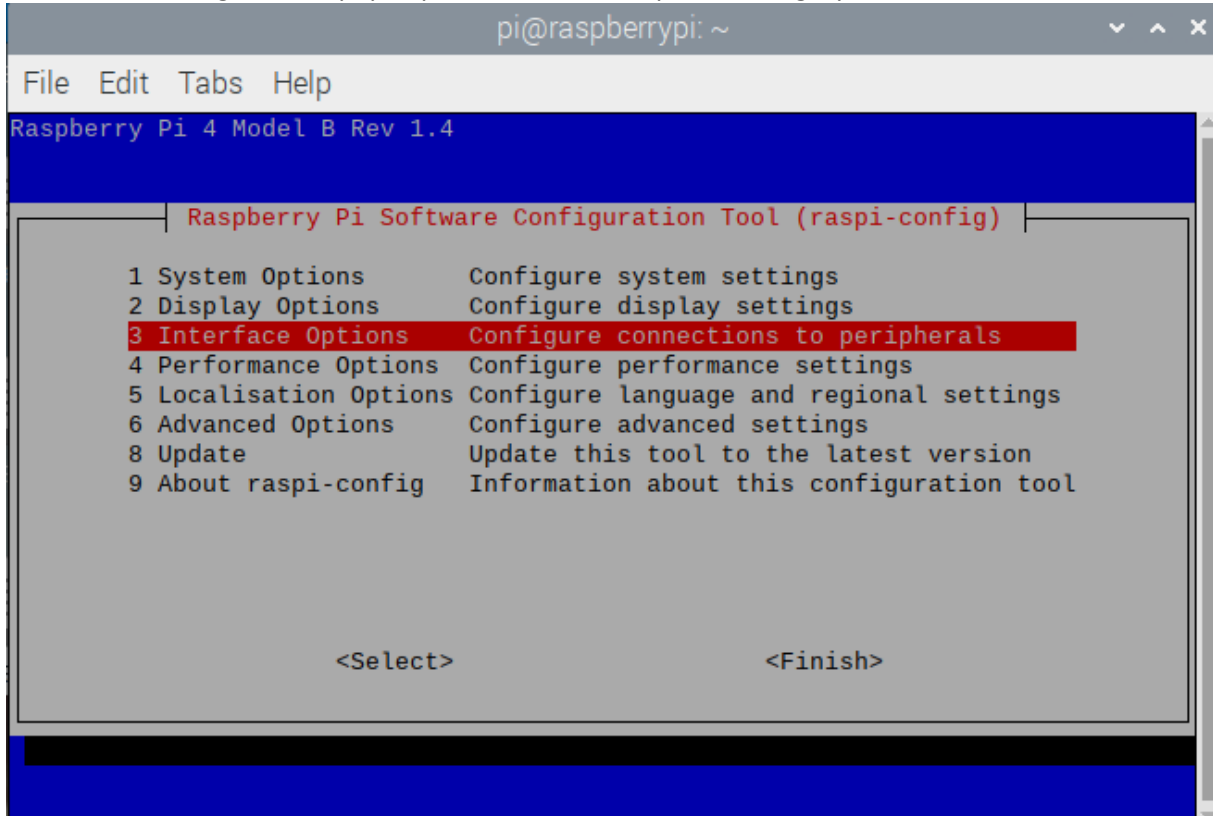
Step 1b, enable legacy camera support in the Bullseye OS release

If you use a the Buster OS, you can skip this step. To enable legacy camera support, open command prompt and enter: `sudo raspi-config`



```
pi@raspberrypi: ~  
File Edit Tabs Help  
pi@raspberrypi:~ $ sudo raspi-config
```

Then the following window pops-up. Go to Interface Options -> Legacy Camera and enable it.



```
pi@raspberrypi: ~  
File Edit Tabs Help  
Raspberry Pi 4 Model B Rev 1.4  
Raspberry Pi Software Configuration Tool (raspi-config)  
  
1 System Options          Configure system settings  
2 Display Options         Configure display settings  
3 Interface Options        Configure connections to peripherals  
4 Performance Options     Configure performance settings  
5 Localisation Options    Configure language and regional settings  
6 Advanced Options        Configure advanced settings  
8 Update                  Update this tool to the latest version  
9 About raspi-config      Information about this configuration tool  
  
<Select>                  <Finish>
```

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Step 2, installing the required packages

You need to install OpenCV rev 4_5_5, gtkmm3 and the viewer.

First copy the installation file InstallOpenCV_gtkmm3.sh and TrebaxImageViewer_3_0_1.deb to the root of the pi, see Figure 2.1.

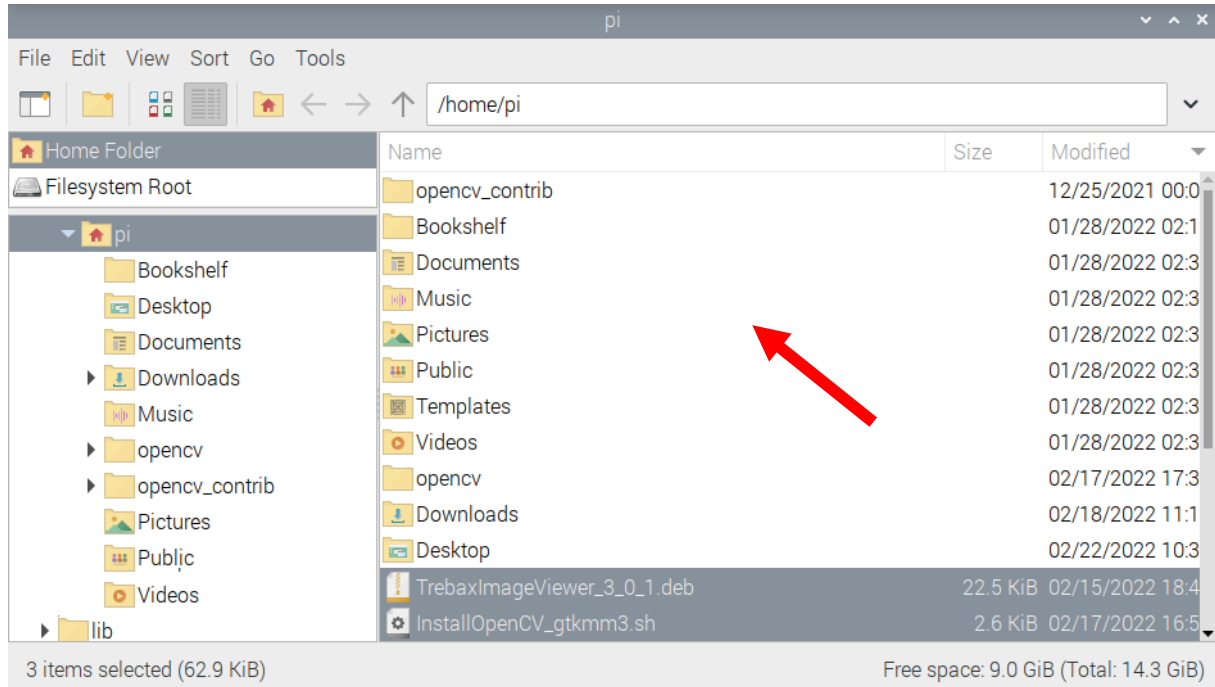


Figure 2.1

To Install OpenCV and htkmm3, we have created a batch file: InstallOpenCV_gtkmm3.sh

You can run this batch script by taking the following steps:

- Start the terminal and enter: `./InstallOpenCV_gtkmm3.sh` followed by enter. See figure 2.2. Note the installation of OpenCV can take several hours.

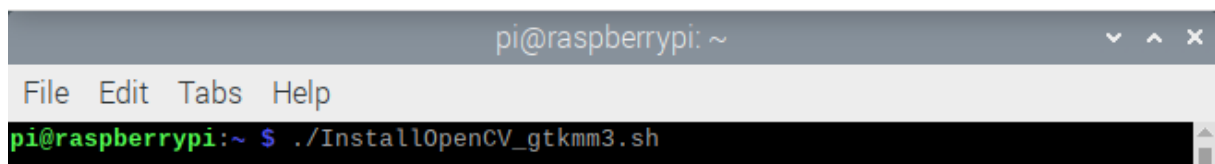


Figure 2.2: start bash script to install OpenCV.

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Step 3 Install the Trebax Viewer

- Please reboot the raspberry Pi first
- Open the terminal and enter the command: `sudo dpkg -i TrebaxImageViewer_3_0_1.deb` (see figure 3.1)

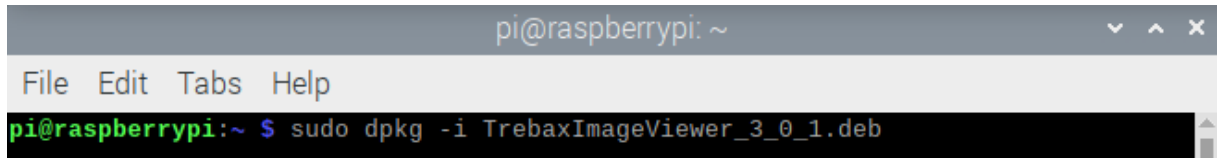


figure 3.1

- The viewer is now installed and you can run it via the terminal by just entering its name: `TrebaxImageViewer` and hit enter (see figure 3.2). The viewer should start now.

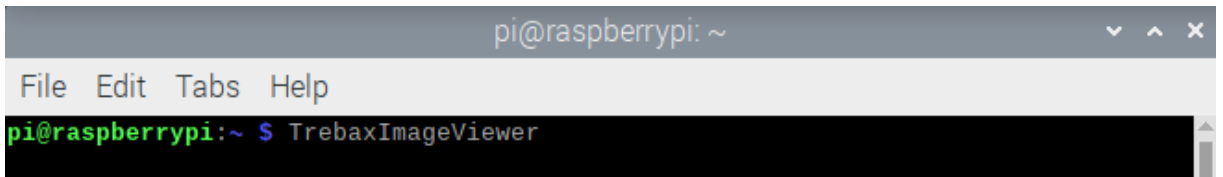


Figure 3.2

Since the viewer is installed you can enter “TrebaxImageViewer” from any folder, since it has become a kind of command to start the viewer. After entering the command the viewer will start. Figure 3.3 shows the viewer.

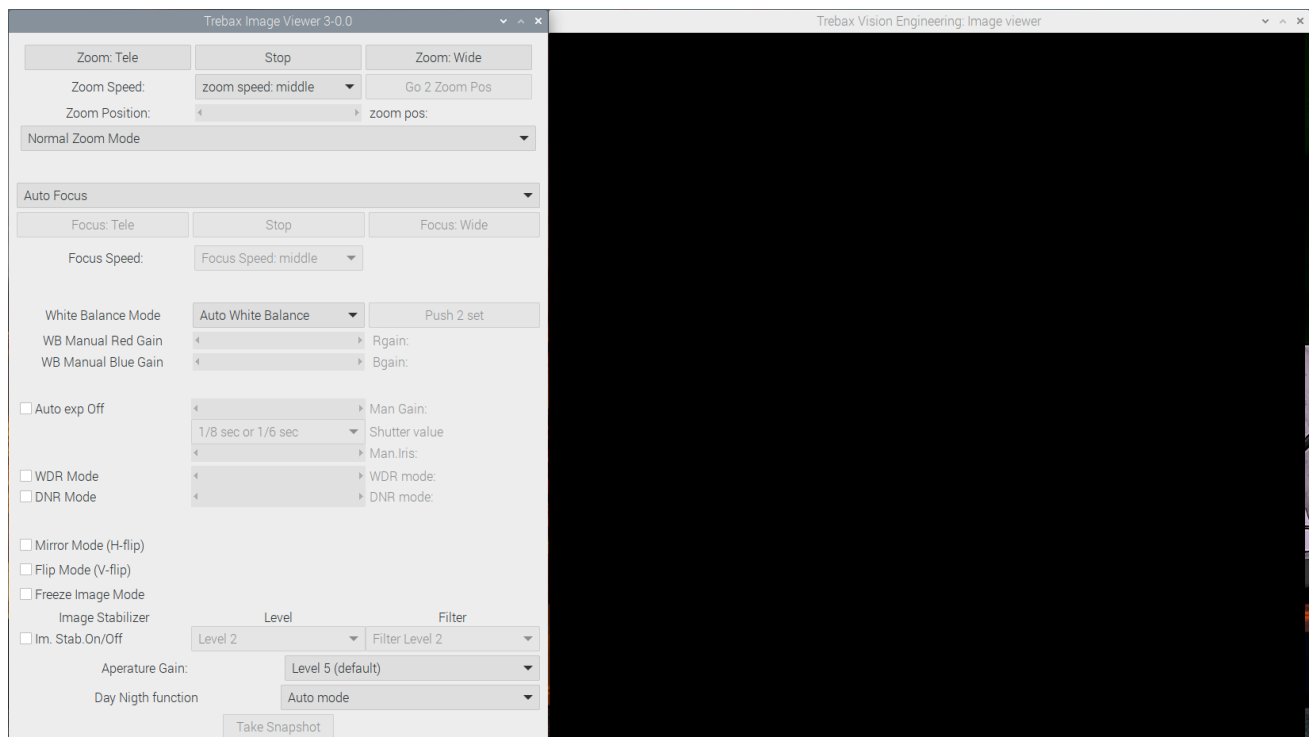


Figure 3.3 Trebax Image Viewer