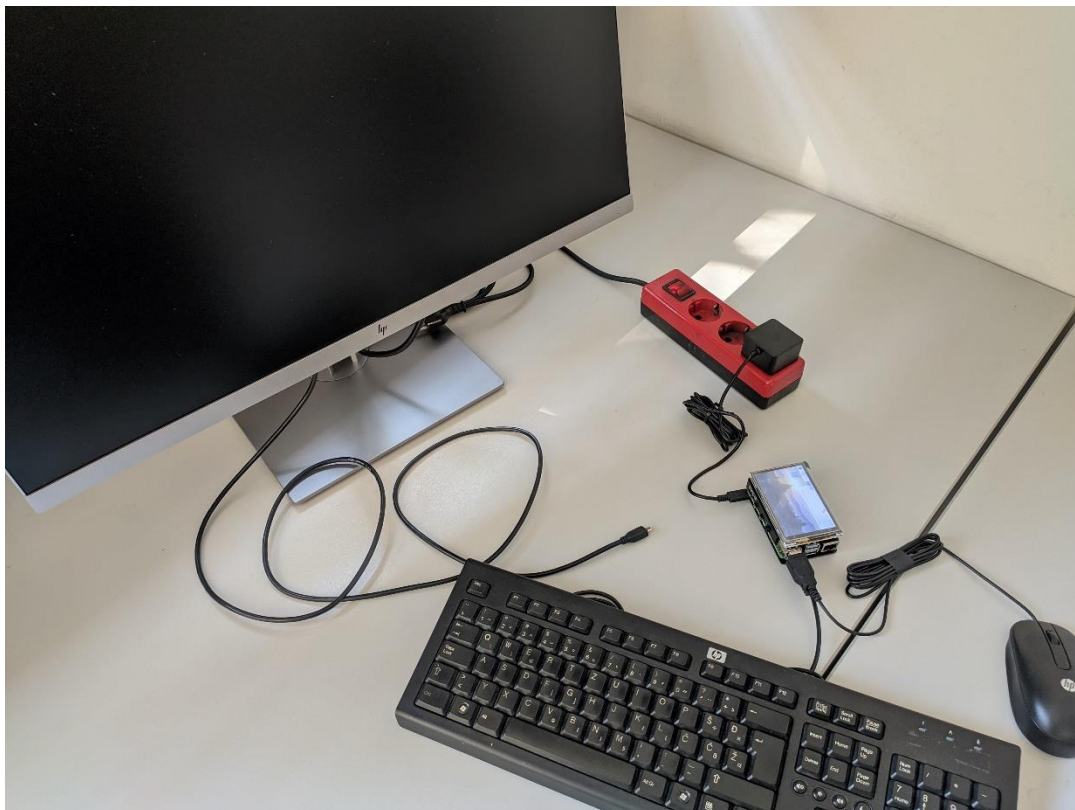


Instruction: Raspberry Pi setup + Display Installation

Our Hardware:

- Raspberry Pi 4 Computer Model B 2GB (short: RPi)
- Personal Computer/Laptop
- Micro sd card
- 3.5inch RPi Display: 480x320 Pixel, XPT2046 Touch Controller (Manufacturing Model: VMP400)
- External Monitor (+ HDMI <-> micro HDMI cable)
- Keyboard
- Mouse
- Raspberry Pi (RPi) USB-C Power Supply



Installation of Raspberry Pi OS and 3.5inch Display (through GPIO connection)

http://www.lcdwiki.com/3.5inch_RPi_Display

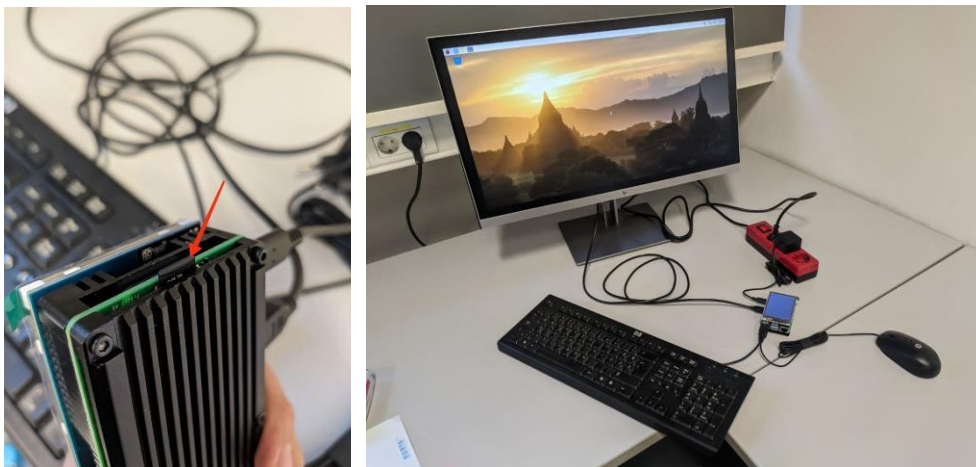
1. How to install Raspberry Pi Operating System (OS) on the micro sd card:
 - 1.1. Insert micro sd on your Personal Computer (not the RPi)

- 1.2. Download and install the 'Raspberry Pi Imager' Software, to write the OS to sd-card (<https://www.raspberrypi.org/software>)
- 1.3. Open 'Raspberry Pi Imager' and select Raspberry Pi OS and the micro sd, and then click on 'write'

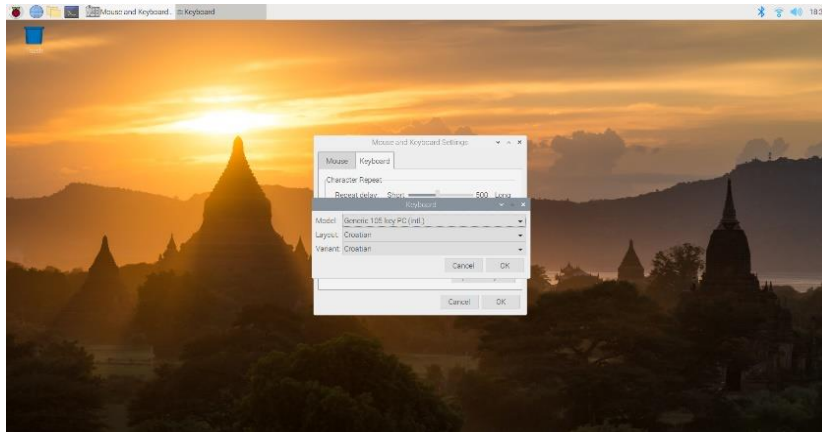


2. Attach the Raspberry Pi to the other hardware:

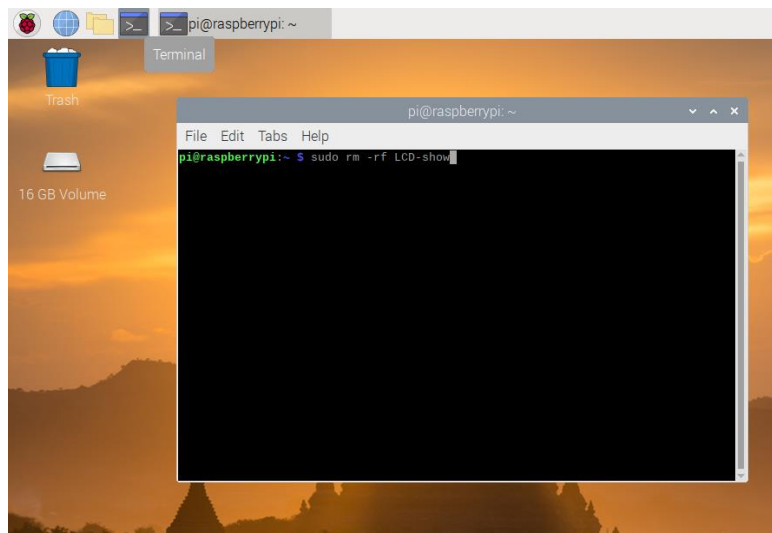
- 2.1. Take out the micro sd from your computer and insert it to the RPi. Connect the external monitor, mouse, 3.5inch RPi Display, keyboard and the power supply to the RPi



- 2.2. Plug the external Monitor and the RPi power supply in the plug socket. Now the RPi should boot.
- 2.3. Set up the OS regarding keyboard (menu>preference>keyboard and mouse>keyboard>keyboard layout) and wifi (click on wifi symbol)



3. How to install the driver for the 3.5inch RPi Display ([http://www.lcdwiki.com/3.5inch RPi Display](http://www.lcdwiki.com/3.5inch_RPi_Display)):



3.1. Open Terminal on your RPi and execute the following commands step by step:

- 3.1.1. `sudo rm -rf LCD-show`
- 3.1.2. `git clone https://github.com/goodtft/LCD-show.git`
- 3.1.3. `chmod -R 755 LCD-show`
- 3.1.4. `cd LCD-show/`
- 3.1.5. `sudo ./LCD35-show`

Explanation:

- 3.1.1 & 3.1.2 *First delete the ,LCD-show' folder, if this already exists. Then downloading the desired ,LCD-show' folder, which contains the driver for display, from the link. Inside this folder is the desired driver named 'LCD35-show'.*
- 3.1.4 *Open the ,LCD-show' folder to access its content with the following commands*
- 3.1.5 *Install the 'LCD35-show'-driver inside the folder and reboot*

3.2. Now the RPi will reboot. If the 3.5inch Display still doesn't show anything: turn off the RPi, unplug the hdmi cable from RPi and reboot it (unplug and plug the power supply)



How to switch between ext. monitor and 3.5inch RPi Display:

(WARNING: Frequent switching between both display may corrupt the OS)

- RPi Display -> monitor: a) Connect monitor cable to RPi and restart OR b) Open Terminal and execute:
 - `chmod -R 755 LCD-show`
 - `cd LCD-show`
 - `./LCD-hdmi`
- monitor -> RPi Display: Open Terminal and execute:
 - `chmod -R 755 LCD-show`
 - `cd LCD-show`
 - `./LCD35-show`

If the driver Installation of step 3. causes trouble:

1. Insert micro sd card to your PC
2. On your PC: Download Software to write OS to micro sd. For Windows: Win32DiskImager, For Linux: Etcher
3. Download the modified OS:
<https://mega.nz/folder/ixQiTa7R#EM2uFGwMC8QSU6D4untoGA> (user:pi password:raspberrypi)
4. Open the installed Software from 2. and select the modified OS from 3. Then select the micro sd and start writing the selected OS to the micro sd card.
5. Insert micro sd to RPi and reboot