

Raspberry Pi Installation

1. Get a new empty SD card or format a SD card (using GParted on linux system).

2. Download Raspberry Pi Image from the internet:

<https://www.raspberrypi.org/software/operating-systems/>

The first one has been used: Raspberry Pi OS (Raspberry Pi OS with desktop and recommended software)

"2020-08-20-raspbian-buster-armhf-full.img" is downloaded.

3. Insert the SD card with the computer. For example, /dev/sdc is the SD card device. Open a terminal, use this command to transfer the image to the SD card. It may keep some time, do not break the process, wait until the process finishes, then pull out the SD card.

```
>>> lsblk -p
>>> dd bs=4M if=2020-08-20-raspbian-buster-armhf-full.img of=/dev/sdc conv=fsync
>>> sync
```

4. Get the SD card, which contains "2020-08-20-raspbian-buster-armhf-full.img" and insert it into Raspberry Pi Board. Power ON.

5. Get the Raspbian desktop. Choose German, Change the password as raspberrypi. The old password for user Pi is raspberry. If the time does not match, then the website can not be opened. Change the date and time.

```
>>> date -s "1 DEC 2020 08:14:00"
```

6. There is an setting (Einstellung) under the main menu, there is a Raspberry-Pi-Konfiguration. I have activated some interfaces like SSH, VNC, SPI, I2C, Serial Port, Serial Console, I2C-Bus, GPIO-Fernzugriff.

```
>>> sudo nano /etc/apt/sources.list
uncomment the deb-src line
>>> sudo nano /etc/apt/sources.list/raspi.list
uncomment the deb-src line
>>> sudo apt-get update
>>> sudo apt-get upgrade
>>> sudo raspi-config
```