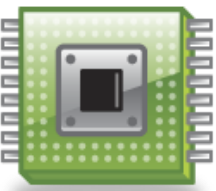


Raspberrypi Setup

Speaker : Tse-Yu Chen

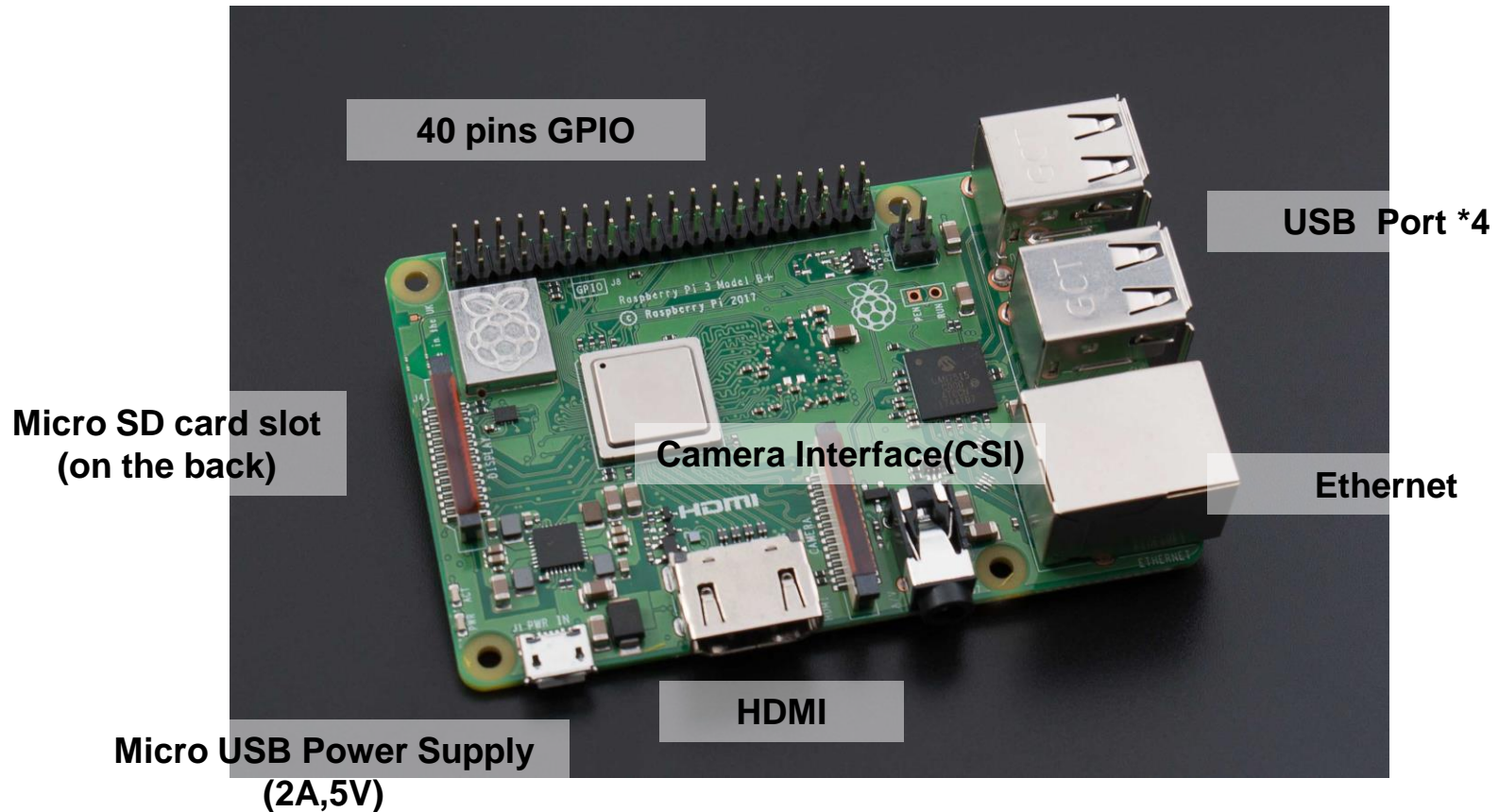
Advisor : Prof. Tong-Yu Hsieh

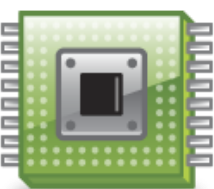


Introduction

■ Raspberry Pi 3 model B+

**Network Card
Included**





PINS

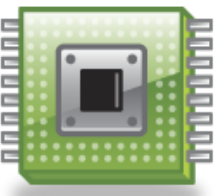


Raspberry Pi 3 GPIO Header

Pin#	NAME	NAME	Pin#
01	3.3v DC Power	DC Power 5v	02
03	GPIO02 (SDA1, I ² C)	DC Power 5v	04
05	GPIO03 (SCL1, I ² C)	Ground	06
07	GPIO04 (GPIO_GCLK)	(TXD0) GPIO14	08
09	Ground	(RXD0) GPIO15	10
11	GPIO17 (GPIO_GEN0)	(GPIO_GEN1) GPIO18	12
13	GPIO27 (GPIO_GEN2)	Ground	14
15	GPIO22 (GPIO_GEN3)	(GPIO_GEN4) GPIO23	16
17	3.3v DC Power	(GPIO_GEN5) GPIO24	18
19	GPIO10 (SPI_MOSI)	Ground	20
21	GPIO09 (SPI_MISO)	(GPIO_GEN6) GPIO25	22
23	GPIO11 (SPI_CLK)	(SPI_CE0_N) GPIO08	24
25	Ground	(SPI_CE1_N) GPIO07	26
27	ID_SD (I ² C ID EEPROM)	(I ² C ID EEPROM) ID_SC	28
29	GPIO05	Ground	30
31	GPIO06	GPIO12	32
33	GPIO13	Ground	34
35	GPIO19	GPIO16	36
37	GPIO26	GPIO20	38
39	Ground	GPIO21	40

Rev. 2
29/02/2016

www.element14.com/RaspberryPi



Build up System(1/6)

- Download Raspberry Pi operating system image file and flash it into an SD card.
- To download Raspberry pi OS go to <https://www.raspberrypi.org/downloads/>

Download this



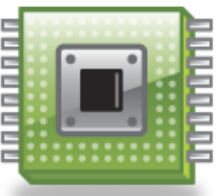
Alternatively, use the links below to download OS images which can be manually copied to an SD card.



Raspberry Pi OS (previously called Raspbian)



NOOBS



Build up System(2/6)

■ Download Raspberry Pi OS(32-bit) with desktop




Raspberry Pi OS (32-bit) with desktop and recommended software
Image with desktop and recommended software based on Debian Buster

Version: August 2020
Release date: 2020-08-20
Kernel version: 5.4
Size: 2531 MB

[Release notes](#)

[Download Torrent](#) [Download ZIP](#)



Raspberry Pi OS (32-bit) with desktop
Image with desktop based on Debian Buster

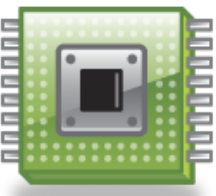
Version: August 2020
Release date: 2020-08-20
Kernel version: 5.4
Size: 1133 MB

[Release notes](#)

[Download Torrent](#) [Download ZIP](#)

SHA-256: 9d658abe6d97f86320e5a0288df17e6fcdd877632320899719aa805106c52

Download this



Build up System(3/6)

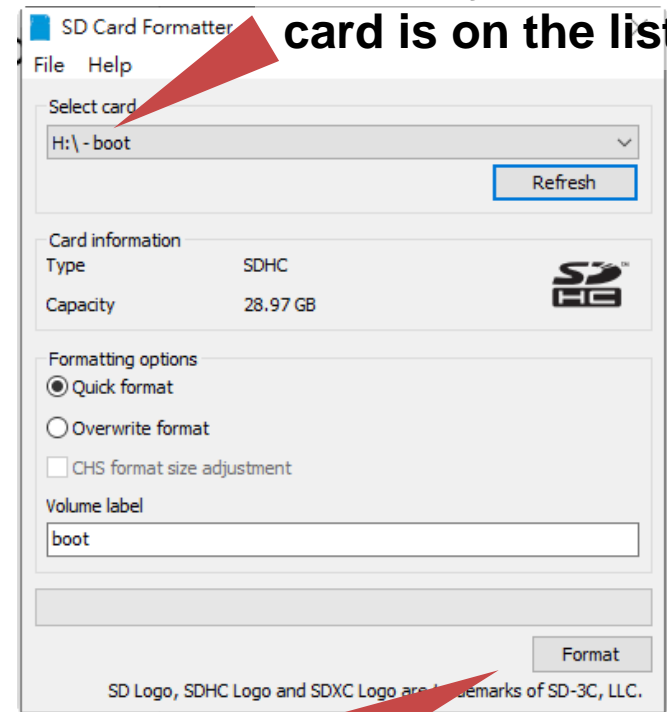
- Before start flash in the image file, the SD card needs to be formatted.

- 1.Download SD Card Formatter
- 2.Select your SD card
- 3.Format the SD card

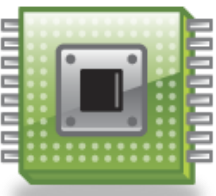


<https://www.sdcard.org/cht/downloads/formatter/>

Check your SD card is on the list

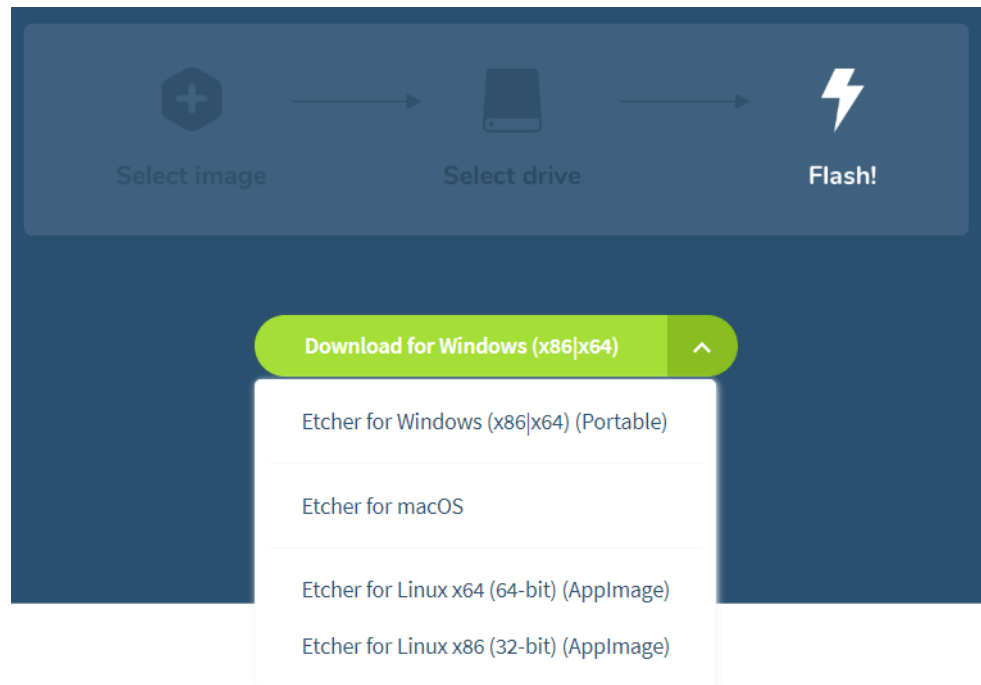


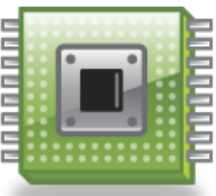
Format



Build up System(4/6)

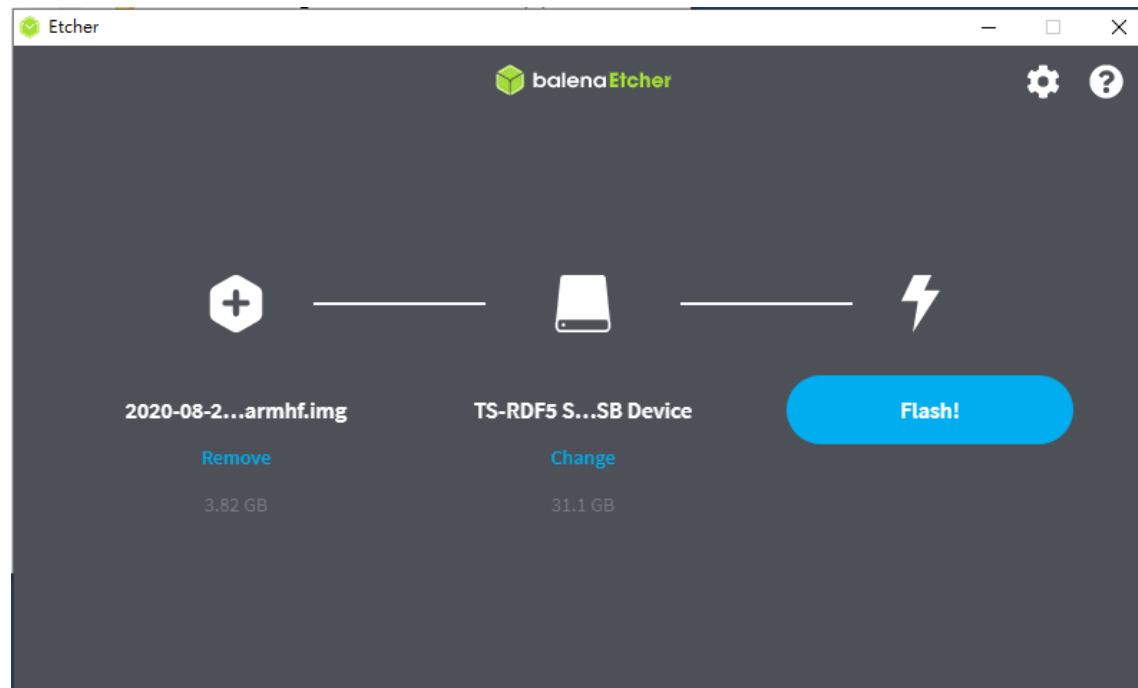
- Write the image file into your SD card
 - Download balenaEther, a tool that allows you to write image files to an SD card on Mac OS, Linux, and Windows.

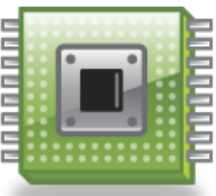




Build up System(5/6)

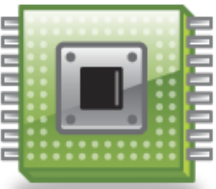
- Write the image file into your SD card
 - **SD CARD MUST BE PLUGGED IN YOUR PC**
 - Select the image file we just downloaded
 - Flash (**May take long time**)





Build up System(6/6)

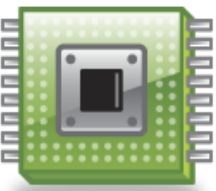
- **A monitor, HDMI cable, keyboard, and mouse** should be ready before the following step.
- **Wi-fi hotspot utilization is recommended in your initial setup.**
- **Plug the SD card into your raspberry pi and power up the development board.**
- **Set your Raspberry PI**



Set your Raspberry PI (1/2)

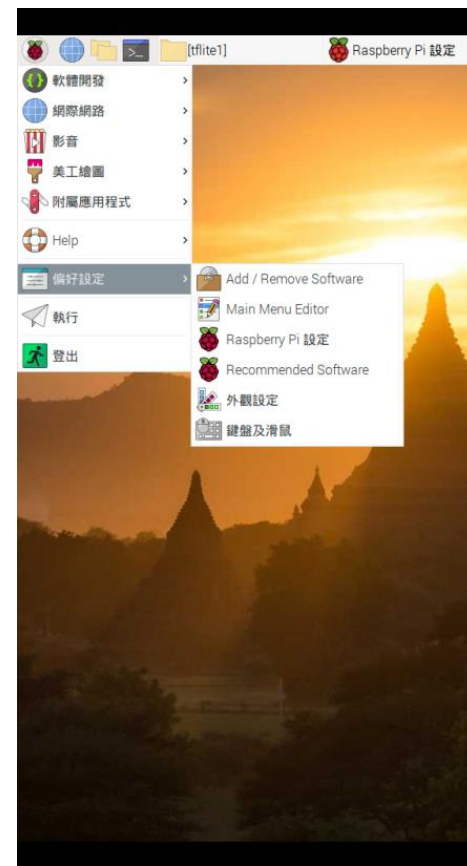
- **Wi-fi connection is recommended in this step**
- **Set user, language, and location of your system**
- **Now you can see your desktop**

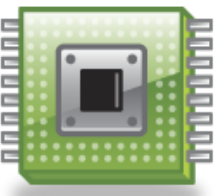




Set your Raspberry PI (2/2)

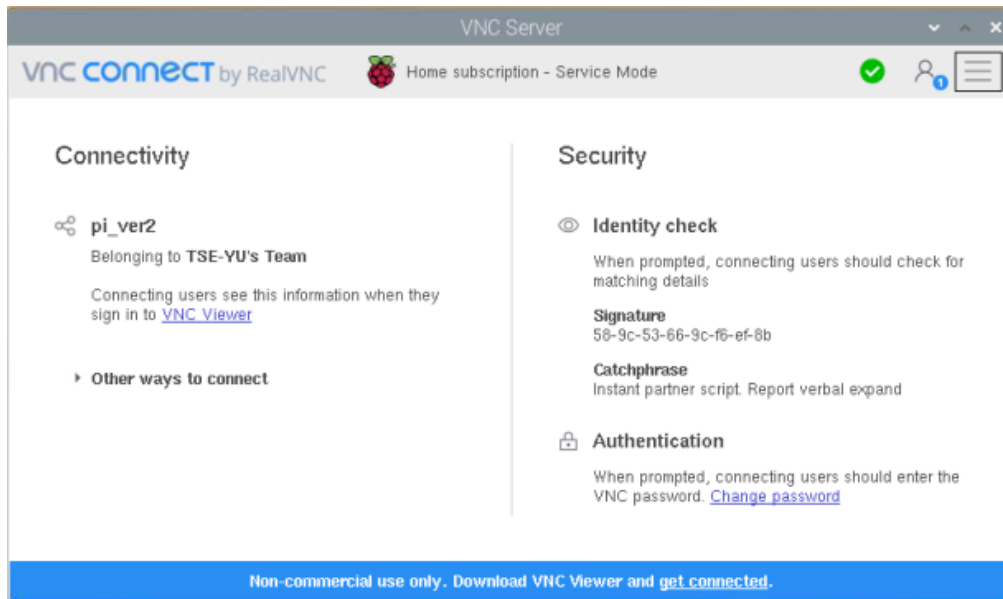
- Preferences > Raspberry Pi Configuration > Interfaces
- Enable Camera, VNC
- Reboot





VNC viewer (1/2)

- By using VNC viewer, you can remote your development board from your PC.
 - Click VNC icon on the right up tool bar
 - Register your own account to use VNC viewer
 - Give name of your VNC account

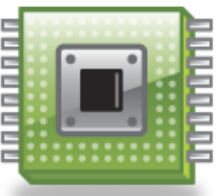


click this



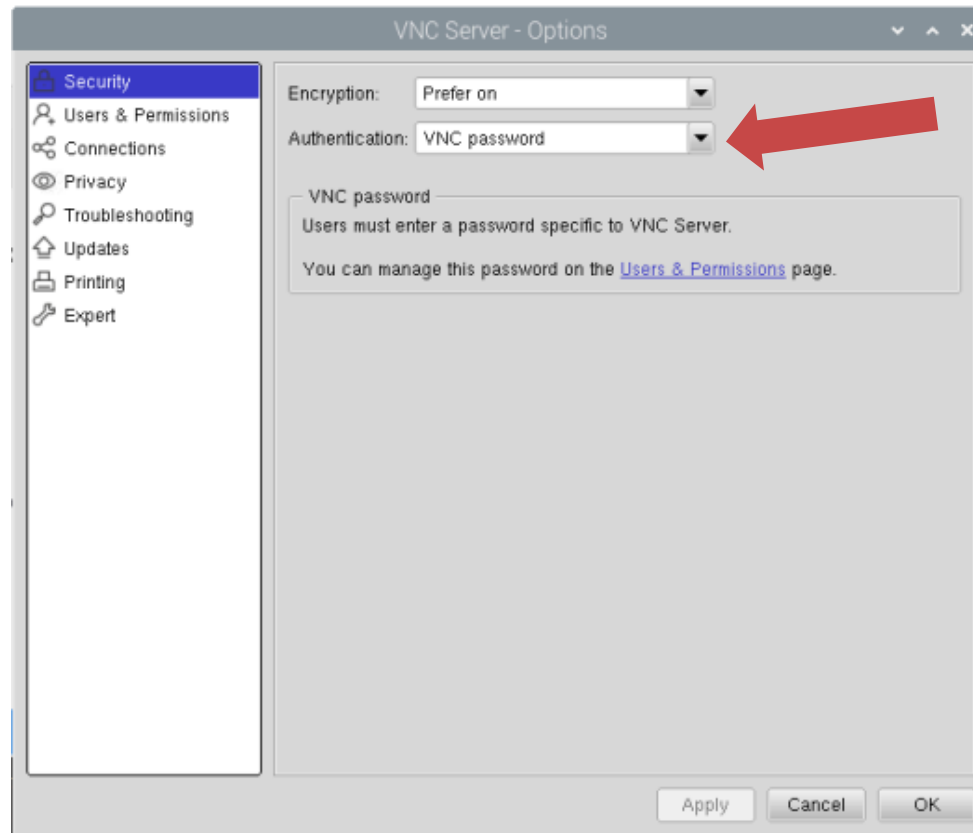
click this

<https://www.realvnc.com/en/connect/download/viewer/>

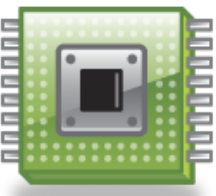


VNC viewer (2/3)

- Menu>Options>Security>Authentication>choose “VNC password”



change this



VNC viewer (3/3)

- Use the username and password you've just set and login in your raspberrypi

