

Environmental preparation before the development of the Raspberry Pi camera

1. Environmental requirements:

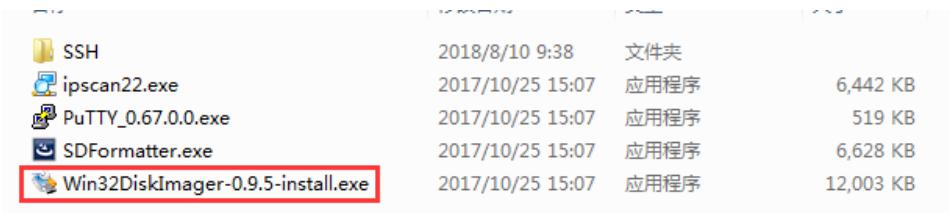
1. Burned the system image of the Raspberry Pi;
2. Opened the SSH service of the Raspberry Pi;
3. The Raspberry Pi board can connect to the network;
4. It is possible to transfer files cross the file system by SSH software;

2. Steps

2.1) Write system image

You need to use [Win32DiskImager](#) to write the Raspberry Pi system image.

(Note : This software in the Tools folder)



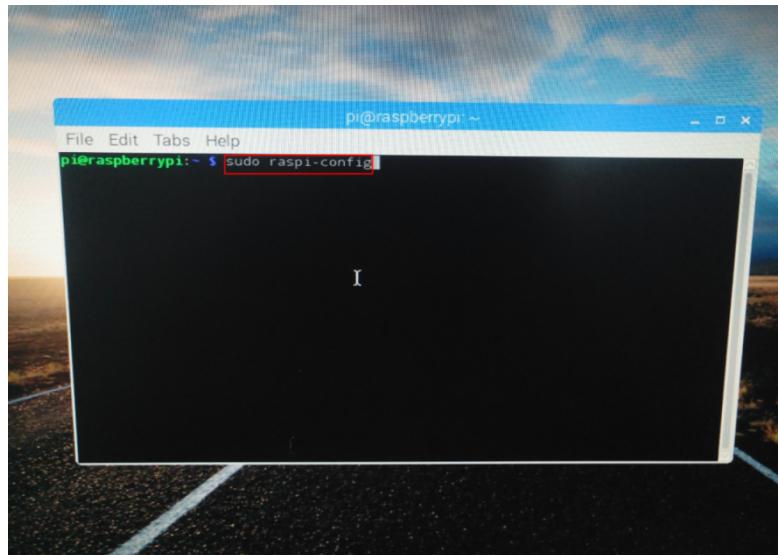
2.2) Opening SSH service:

Case1: (Suitable for users with display screen)

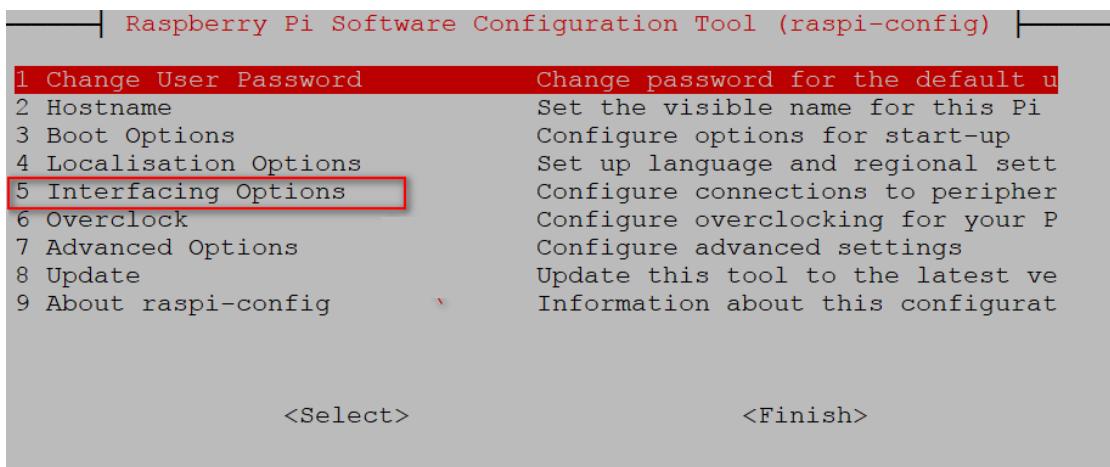
After the system image is written, you should insert the SD card directly into the Raspberry Pi to run. we need to connect the monitor, mouse and keyboard.

(Note: Official original system image of the Raspberry pi without SSH service, so we need to open this service by ourself.)

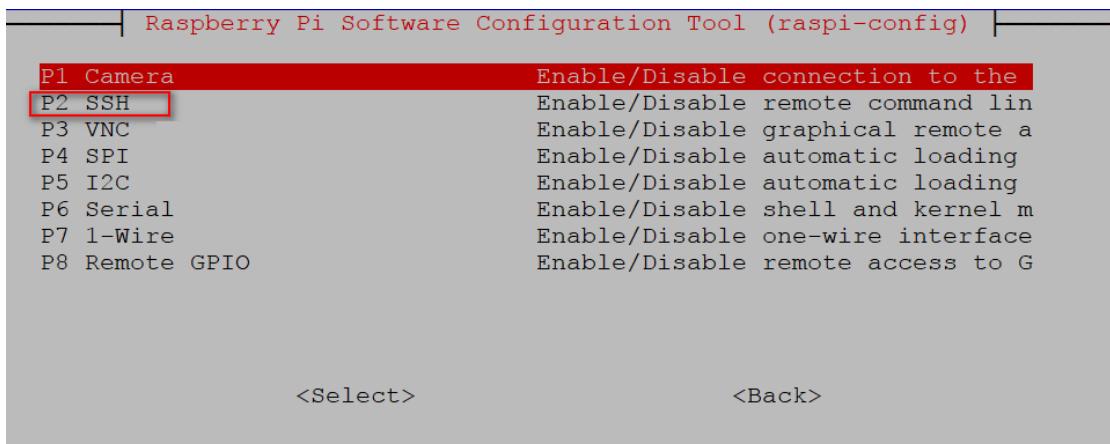
① You need to open the command line terminal in the Raspberry Pi system and input:[sudo raspi-config](#) ,as shown in the figure below.



② You should choose :[5 Interfacing Options](#),as shown in the figure below.



③ You should choose :P2 SSH, as shown in the figure below.



After the above steps, we have opened the SSH service successfully.

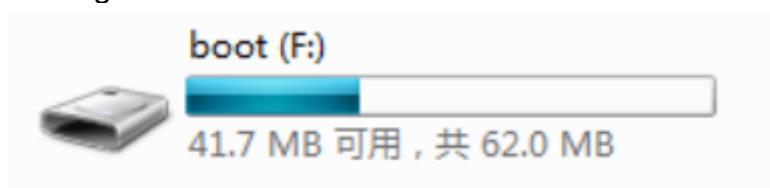
Method to start root:

- 1) You need to input: **sudo passwd root**
- 2) You need to input the root password twice
input: **sudo passwd --unlock root**
You can switch root privileges for development.
- You need to input: **su**
Then you need to input password of root privileges.

Case2: If you don't possess a monitor

You need to connect the SD card to the computer with a card reader and create a new SSH file(without any format) in this disk.

As shown in the figure below.



2.3)Connect to internet

Case 1: (Suitable for users with display screen)

After entering the system, For users who use the screen, you can directly click on the network icon in the upper right corner of the screen to connect to the currently available WIFI(Raspberry Pi 3 Mode B+ can be connected to 5G WIFI). Then, you need to open the command line terminal in the Raspberry Pi system and input: **ifconfig** to search the IP address of the Raspberry Pi, as shown in the figure below.

(Note:just for example:my IP address of the Raspberry Pi is 192.168.0.119)

```
root@raspberrypi:/# ifconfig
eth0      Link encap:Ethernet HWaddr b8:27:eb:8c:fc:4f
          inet6 addr: fe80::6e5:5863:be3c:1f57/64 Scope:Link
          UP BROADCAST MULTICAST MTU:1500 Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

lo       Link encap:Local Loopback
          inet addr:127.0.0.1 Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING MTU:65536 Metric:1
          RX packets:200 errors:0 dropped:0 overruns:0 frame:0
          TX packets:200 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1
          RX bytes:16656 (16.2 KiB)  TX bytes:16656 (16.2 KiB)

wlan0    Link encap:Ethernet HWaddr b8:27:eb:d9:a9:1a
          inet addr:192.168.0.119 Bcast:192.168.0.255 Mask:255.255.255.0
          inet6 addr: fe80::32f8:a30e:b396:fe6c/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
          RX packets:12670 errors:0 dropped:8551 overruns:0 frame:0
          TX packets:659 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2598051 (2.4 MiB)  TX bytes:87043 (85.0 KiB)

root@raspberrypi:/#
```

Case 2: If you don't possess a monitor

You need to insert the Internet cable into the Raspberry Pi board, and the indicator light of the Raspberry Pi network port will flash. You can get the IP address of the Raspberry Pi by IP SCAN software.

(Note : This software in the Tools folder)

| | | |
|-----------------------------------|------------------|----------------|
| SSH | 2018/8/10 9:38 | 文件夹 |
| ipscan22.exe | 2017/10/25 15:07 | 应用程序 6,442 KB |
| PUTTY_0.67.0.0.exe | 2017/10/25 15:07 | 应用程序 519 KB |
| SDFormatter.exe | 2017/10/25 15:07 | 应用程序 6,628 KB |
| Win32DiskImager-0.9.5-install.exe | 2017/10/25 15:07 | 应用程序 12,003 KB |

You can double-click to use it.

| Status | Name | IP | / | Manufacturer | MAC address |
|-------------------|------|---------------|---------------------------|-------------------|-------------|
| + 192.168.0.1 | | 192.168.0.1 | | BC:46:99:ED:50:C3 | |
| + ROOMS | | 192.168.0.66 | | FC:AA:14:57:A9:41 | |
| + 192.168.0.100 | | 192.168.0.100 | | 58:7F:66:F5:AB:0B | |
| + EN46T88DGUDPI19 | | 192.168.0.101 | | 2C:4D:54:56:F6:71 | |
| + DESKTOP-F4FAVSJ | | 192.168.0.103 | | 08:57:00:9B:28:A0 | |
| + EN46T88DGUDPI19 | | 192.168.0.105 | | 2C:4D:54:56:F6:71 | |
| + MS-20160304UNEO | | 192.168.0.106 | | 2C:20:0B:21:9E:76 | |
| + MS-20160304UNEO | | 192.168.0.107 | Liteon Technology Corp... | 44:6D:57:33:26:0C | |
| + MS-20160229WKOH | | 192.168.0.108 | | 3C:46:D8:7D:08:44 | |
| + 192.168.0.109 | | 192.168.0.109 | | E0:DD:C0:43:88:36 | |
| + ROOMS | | 192.168.0.112 | | 68:3E:34:80:A5:22 | |
| + DESKTOP-F4FAVSJ | | 192.168.0.114 | | 74:23:44:E7:8C:1B | |
| + ADMIN-PC | | 192.168.0.115 | | 2C:4D:54:F0:9A:50 | |
| + 192.168.0.116 | | 192.168.0.116 | | 6C:5C:14:B7:1B:FD | |
| + EN46T88DGUDPI19 | | 192.168.0.117 | Raspberry Pi Foundation | B8:27:EB:D9:A9:1A | |
| + XZSCUMWJ6VGJL9V | | 192.168.0.118 | GIGA-BYTE TECHNOLOG... | 00:1F:D0:B7:11:73 | |
| + MS-20160219C | | | Intel Corporate | 40:8D:5C:82:2A:32 | |
| + Rooms | | | | 4C:EB:42:6E:F0:32 | |
| + MS-20160219C | | | | F8:A4:5F:84:04:BC | |
| + MS-20150803NLGC | | 192.168.0.123 | Intel Corporate | 74:E5:0B:49:8E:38 | |
| + MS-20160111FUEO | | 192.168.0.125 | Raspberry Pi Foundation | B8:27:EB:D9:A9:1A | |

Then you can remote login into the system with this IP address.