Raspberry Pi serial port login (USB to TTL module to connect Raspberry Pi)

1.USB to TTL module connect to Raspberry pi board

We need to prepare three DuPont lines)

RXD--------TXD0(GPIO14)

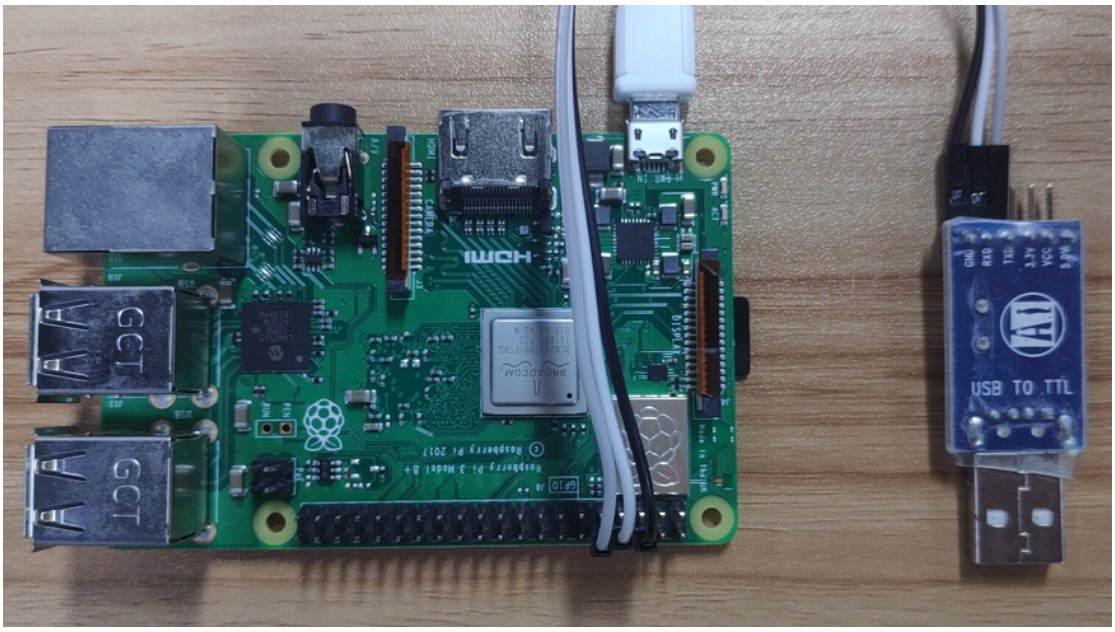
TXD--------RXD0(GPIO15)

GND--------Ground

Raspberry Pi pin distribution diagram:

Pin#	NAME		NAME	Pin#
01	3.3v DC Power		DC Power 5v	02
03	GPIO02 (SDA1 , I²C)		DC Power 5v	04
05	GPIO03 (SCL1 , I²C)		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 (I²C ID EEPROM)		(I²C 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

Physical connection diagram:



After the wiring is completed, power on the Raspberry Pi, and plug the USB to TTL module into the USB port of the computer, and check the corresponding port number on the computer device management.

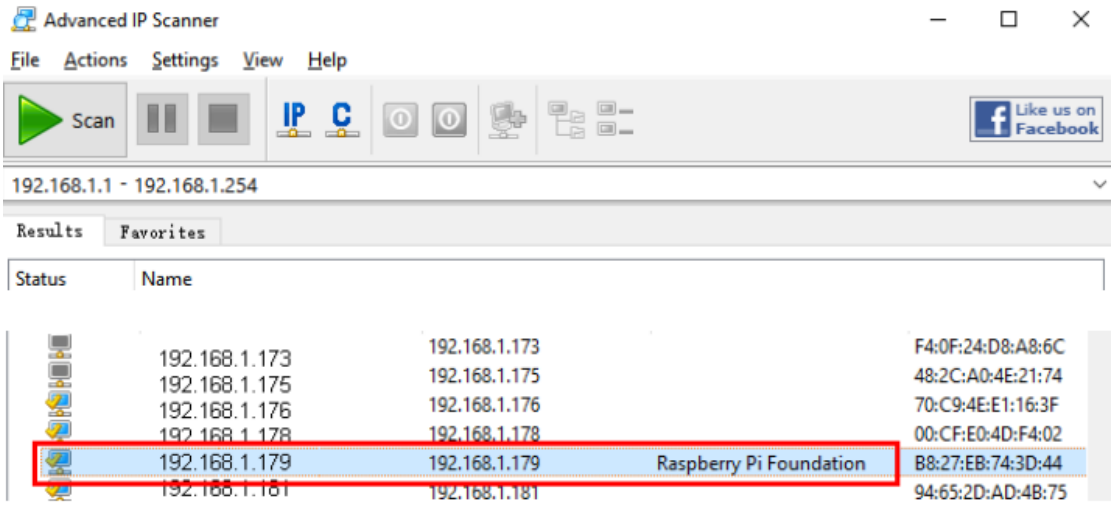
2. Login Raspberry Pi by serial port

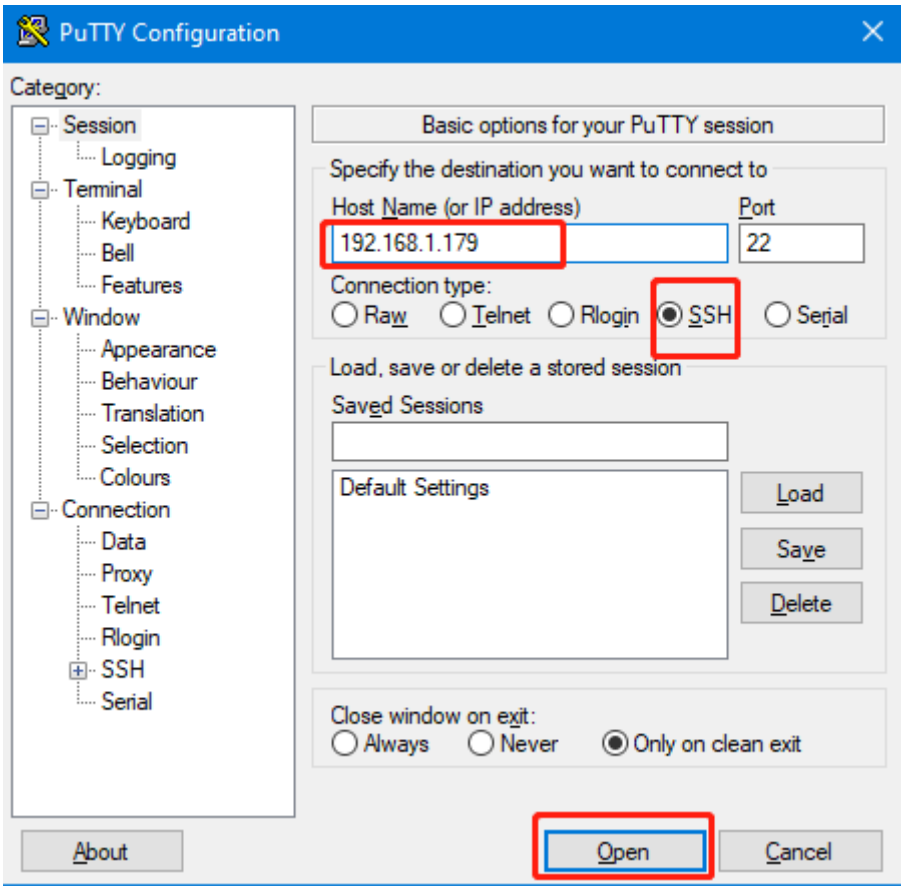
2.1 Connect Raspberry Pi

First, we can open a WiFi hotspot via a mobile phone, then modify the Raspberry Pi configuration file to connect to the mobile network and open the SSH service.

!!! Note: that the laptop should also be connected to the WiFi hotspot of the phone.

You can search for the IP address of the Raspberry Pi by installing IPscanner on your computer, and then log in to the Raspberry Pi using putty.





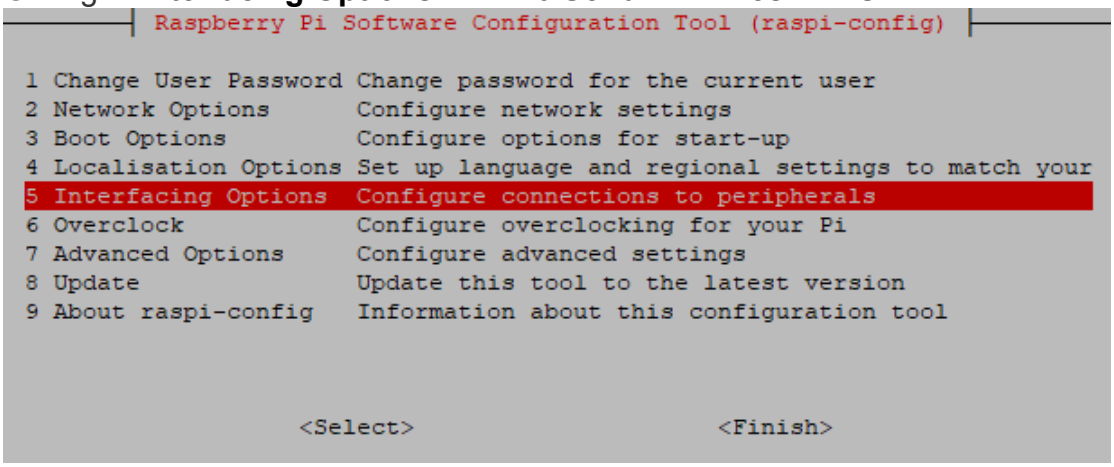
!!Note:IP address just for example: user need input your own IP address.

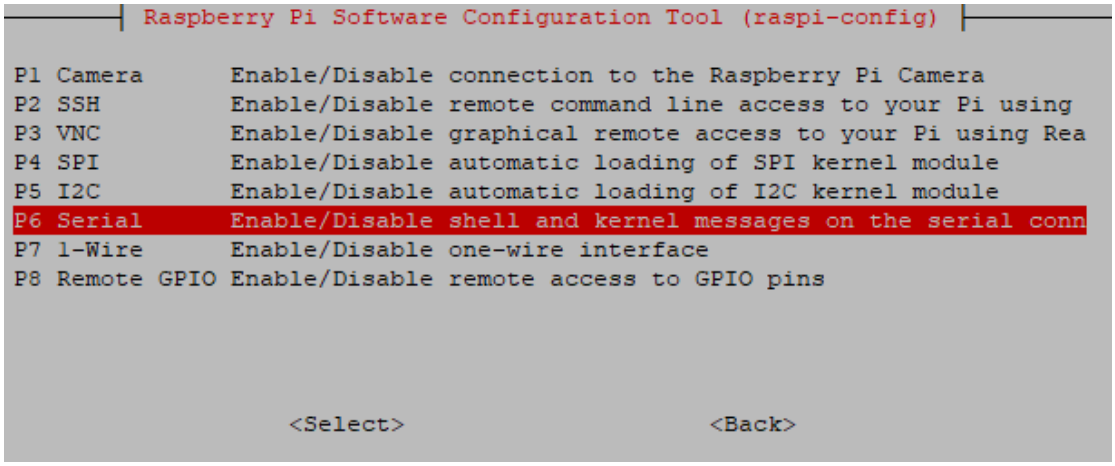
2.2 Configure the serial port

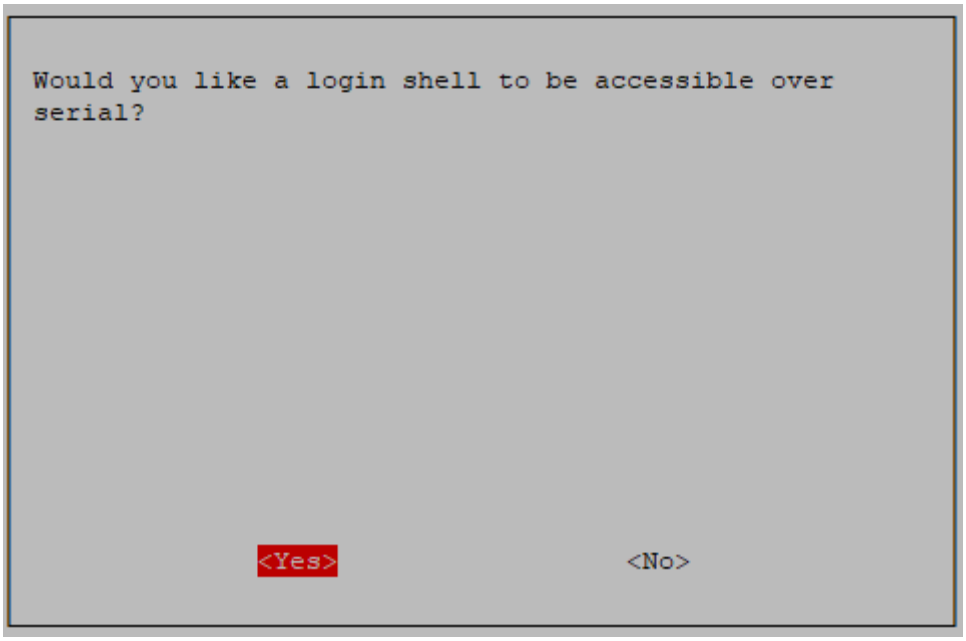
We need to enter the command shown below at the command terminal:

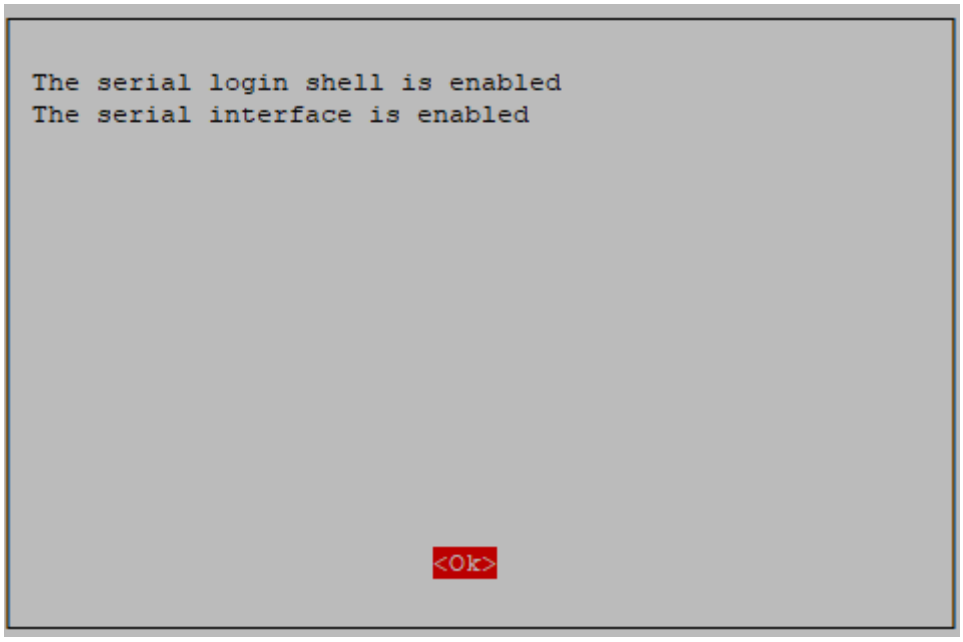
sudo raspi-config

Change **“Interfacing Options” -> “P6 Serial” -> “Yes” ->”OK”**









Next, we can exit the setup and restart the Raspberry Pi.

2.3 Install ckermit

Enter the command shown below at the command terminal to install the **ckermit** tool

sudo apt-get install ckermit

Enter the command shown below at the command terminal to start kermit:

sudo kermit

Enter the following to set the serial port:

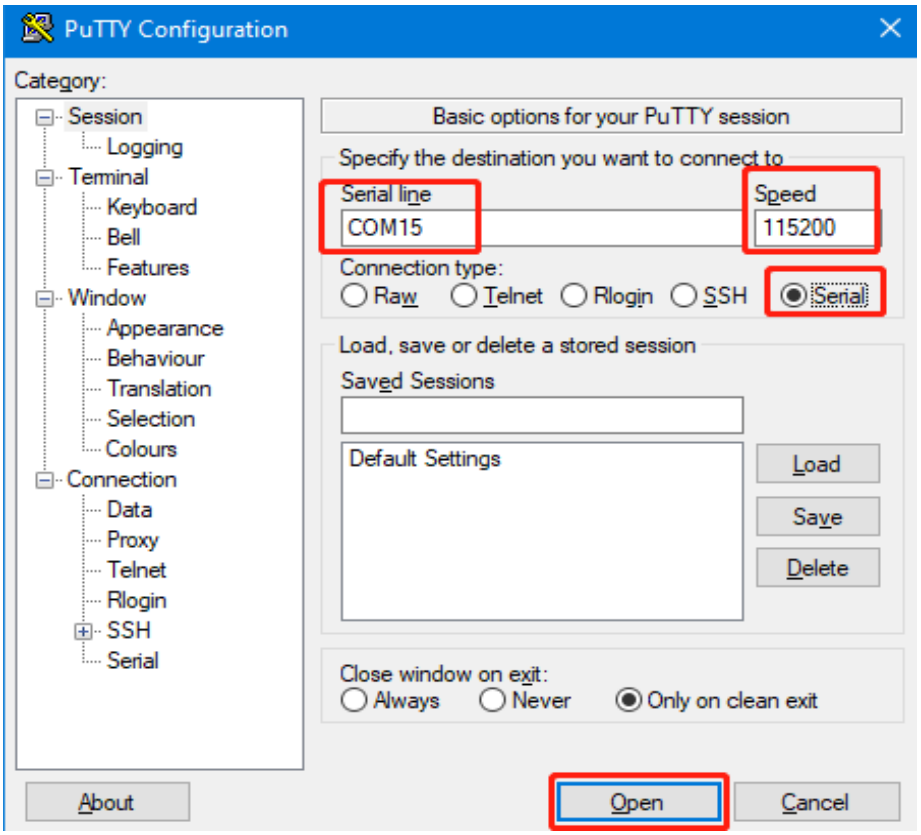
set line /dev/ttyS0
set speed 115200
set carrier-watch off
set handshake none
set flow-control none
set file type bin
set file name lit
set rec pack 1000
set send pack 1000

```
(/home/pi/) C-Kermit>set line /dev/ttyS0
(/home/pi/) C-Kermit>set speed 115200
/dev/ttyS0, 115200 bps
(/home/pi/) C-Kermit>set carrier-watch off
(/home/pi/) C-Kermit>set handshake none
(/home/pi/) C-Kermit>set flow-control none
(/home/pi/) C-Kermit>set file type bin
(/home/pi/) C-Kermit>set file name lit
(/home/pi/) C-Kermit>set rec pack 1000
(/home/pi/) C-Kermit>set send pack 1000
```

After the configuration is complete, enter **exit** to exit.

2.4 Serial remote login

Open the putty, select the Serial serial port, enter the corresponding port and baud rate, and finally click “open”.



Enter the user name pi and password.

If you make a mistake, you can re-enter it according to the prompt. However, if you cannot enter it, the configuration is unsuccessful. Please reconfigure.

```
pi
Password:
Last login: Mon Jul  8 12:26:44 CST 2019 from 192.168.1.162 on pts/0
Linux raspberrypi 4.19.50-v7+ #896 SMP Thu Jun 20 16:11:44 BST 2019 armv71

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
pi@raspberrypi:~$
```

The above interface indicates that the login is successful.