Setting up the Raspberry Pi Zero 2 W to use SSH

Hostname: rpiw2,

Username: Pi,

Password: ????

ssh pi@rpiw2

SSID ???

SSID Password ???

Set up a simple web browser to download samples:-

http://rpiw2/

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The manual seems to suggest it is possible to get it to stream selected readings at a regular time interval. It should be possible to set up the Raspberry Pi Zero to capture these and log to a file.

This file can be downloaded to a PC , using SCP or a simple web server.

M48	Entry to linearity correcting data inputs. By using of this function, the non-linearity of flow meter will be corrected. Correcting data shall be obtained by careful calibration.
M49	Displays the input contents for the serial port. By checking the displays, you can know if the communication is ok.
M50	Switches for the built-in data logger. There are as many as 22 different items can be chosen. To turn this function, select 'YES' the system will ask for selecting the items. There are 22 items available. Turn on all those items you want to output
M51	Window to setup the time of scheduled output function (data logger, or Thermo-printer). This includes start time, time interval and how many times of output. When a number great than 8000 entered for the times of output, It means the output will be keeping always. The minimum time interval is 1 second and the maximum is 24 hours.
M52	Data logging direction control. (1) If 'Send to RS485' is selected, all the data produced by the data logger will be transmitted out through the RS-232/RS485 interface (2) If 'To the internal serial BUS is selected, the data will be transmitted to the internal serial bus which allows a thermal printer, or a 4-20mA analog output module, to be connected to it.

Pragmatic logging commands

Once set up these commands can possibly be used:

```
sudo shutdown
```

#== the RS485 device could be /dev/ttyACM0 or /dev/ttyUSB0

```
cat /dev/ttyACM0
```

```
mkdir www
```

```
date >> ~/www/capture.csv
```

```
cat /dev/ttyACM0 >> ~/www/capture.csv
```

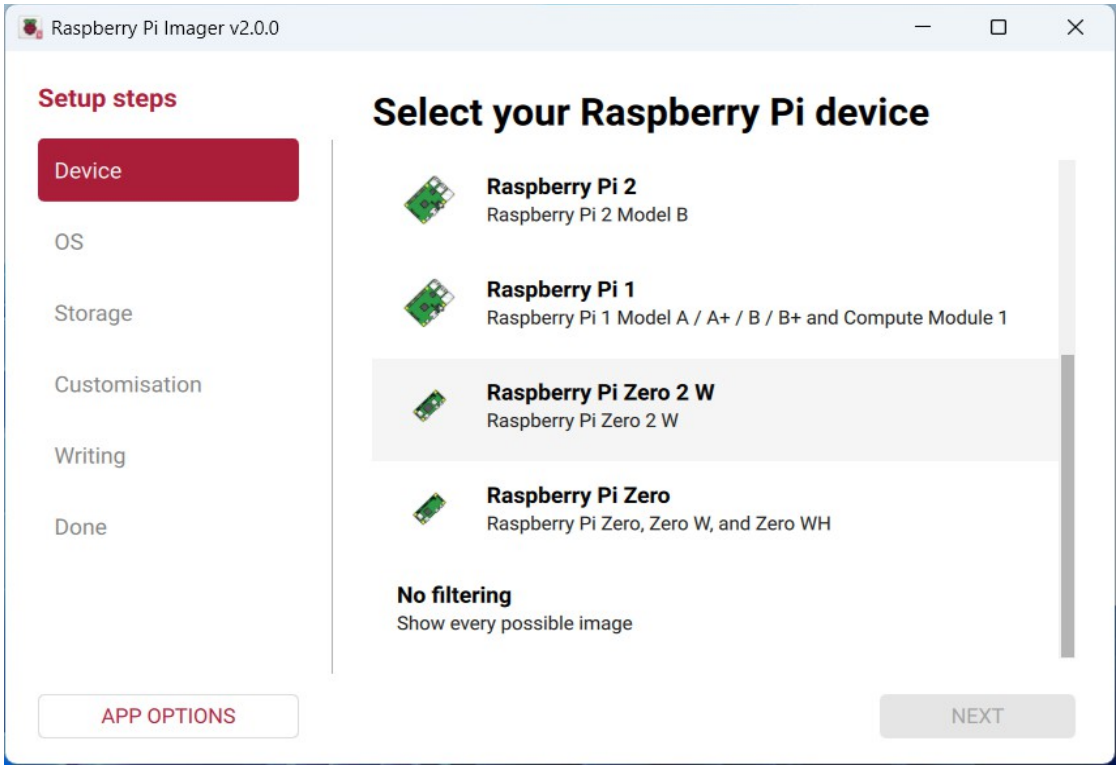
Use STTY to check device:

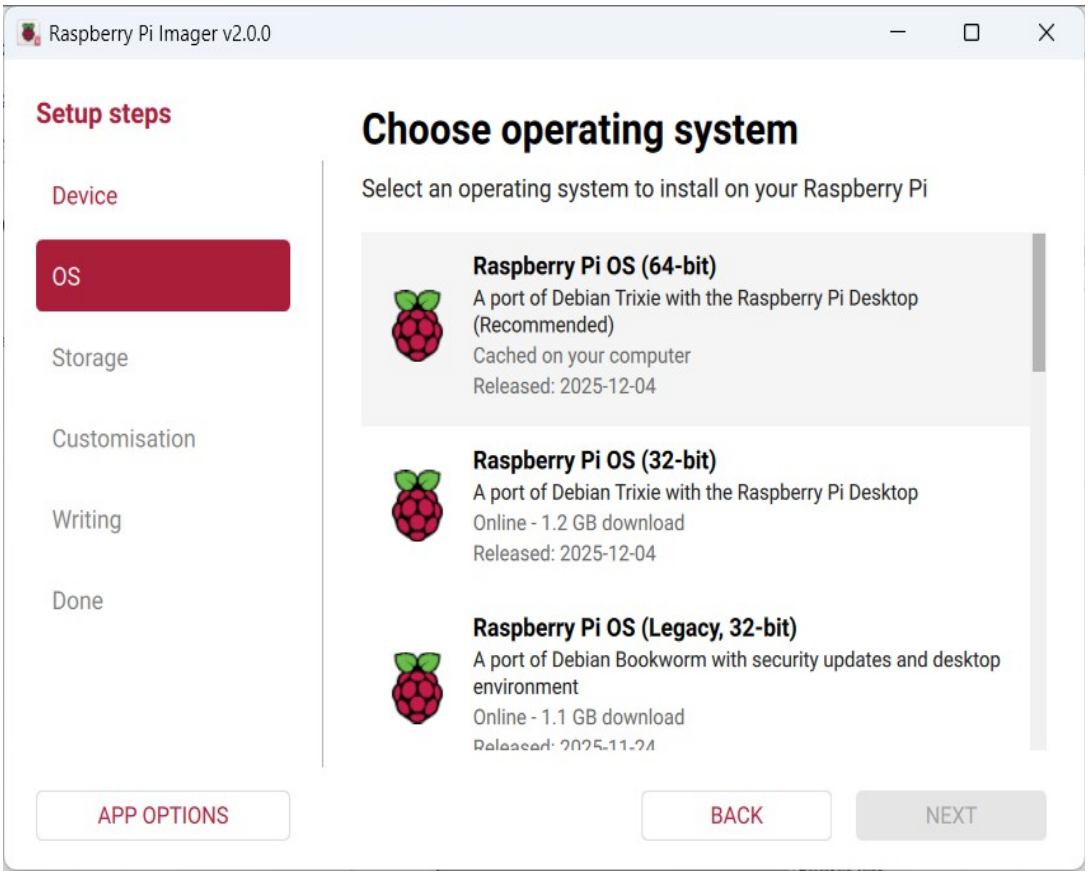
```
stty –help
stty -F /dev/ttyACMO -a
stty -F /dev/ttyACM0  speed 9600
use this command to capture

nohup cat /dev/ttyACM0 >> ~/www/capture.csv &

tail -f ~/www/capture.csv
sudo busybox httpd -p 0.0.0.0:80 -h /home/pi/www
http://rpiw2/capture.csv
in Windows command Prompt get the file using scp.
scp pi@rpiw2:~/www/capture.csv

#for the XY-MD01 MODBUS , send AUTO to get it to stream
echo 'AUTO' > /dev/ttyACM0
sleep 1
cat /dev/ttyACM0
echo 'STOP > /dev/ttyACM0
cat /dev/ttyACM0
```

Setting up the Raspberry Pi Zero 2 W

Download the imager from https://www.raspberrypi.com/software/

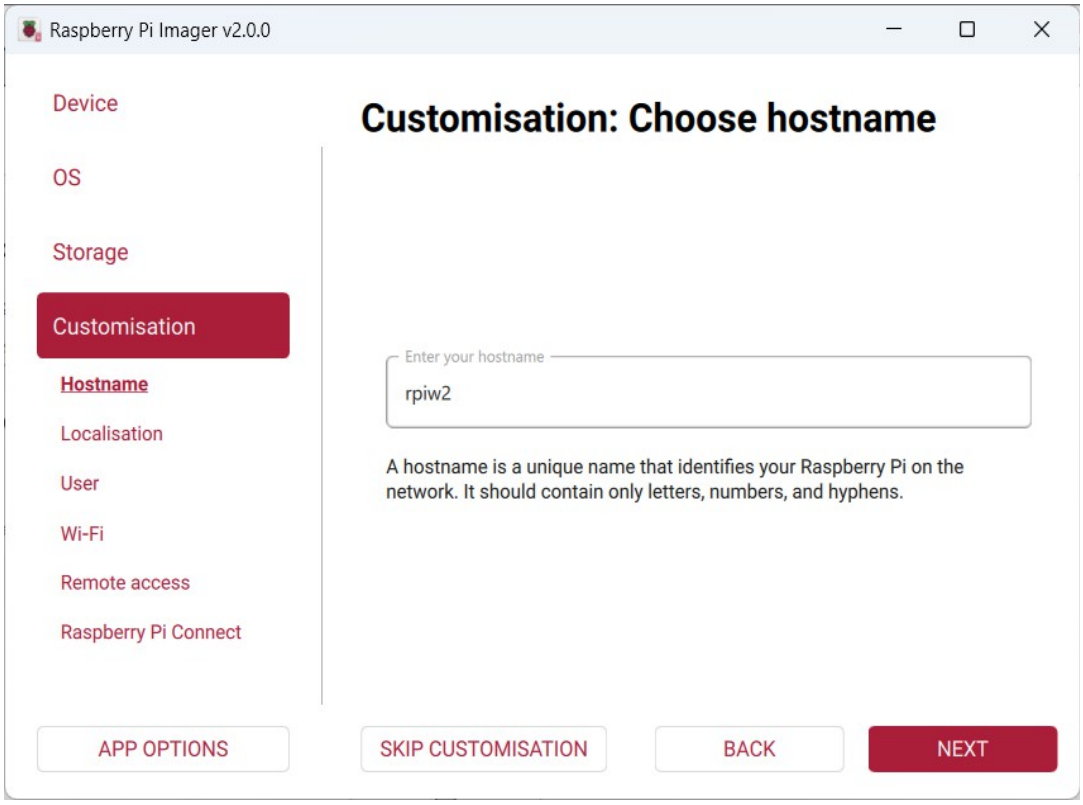
and open it. Select Raspberry Pi Zero 2W , check the Pi Zero to see what you have.



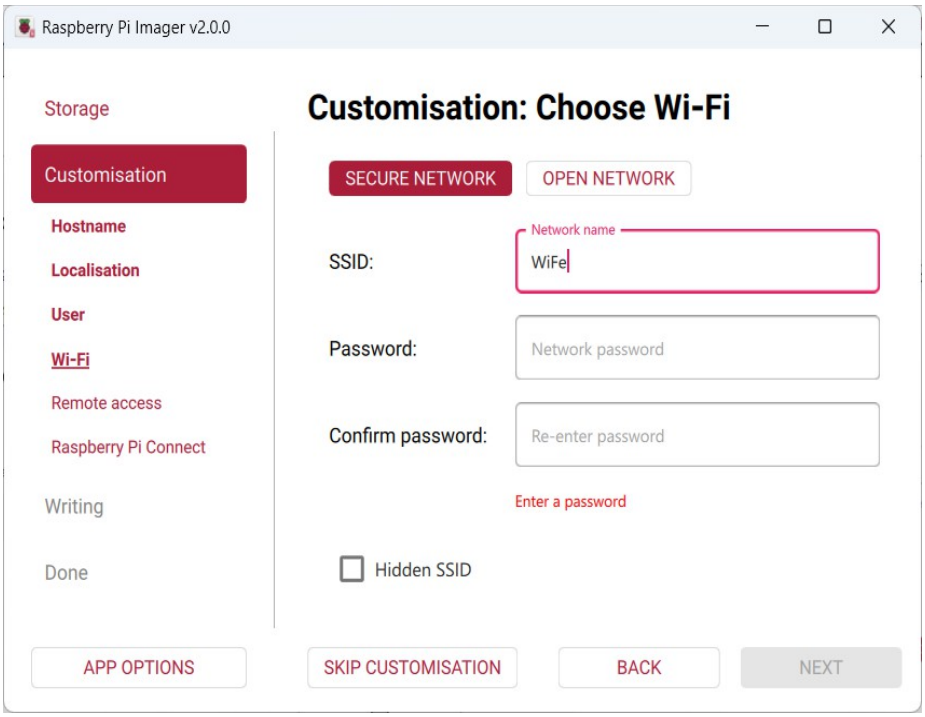


Might as well install the recommended version.

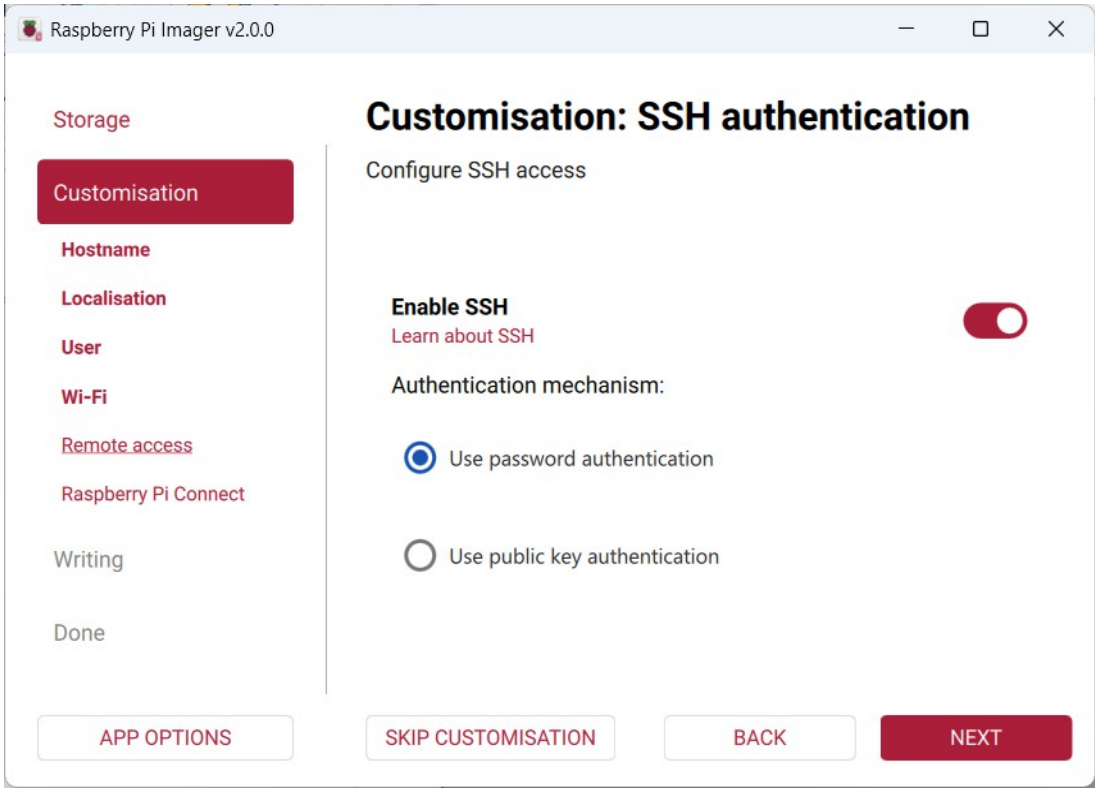
Plug in MicroSD car to be used. The imager should list one device to write to.

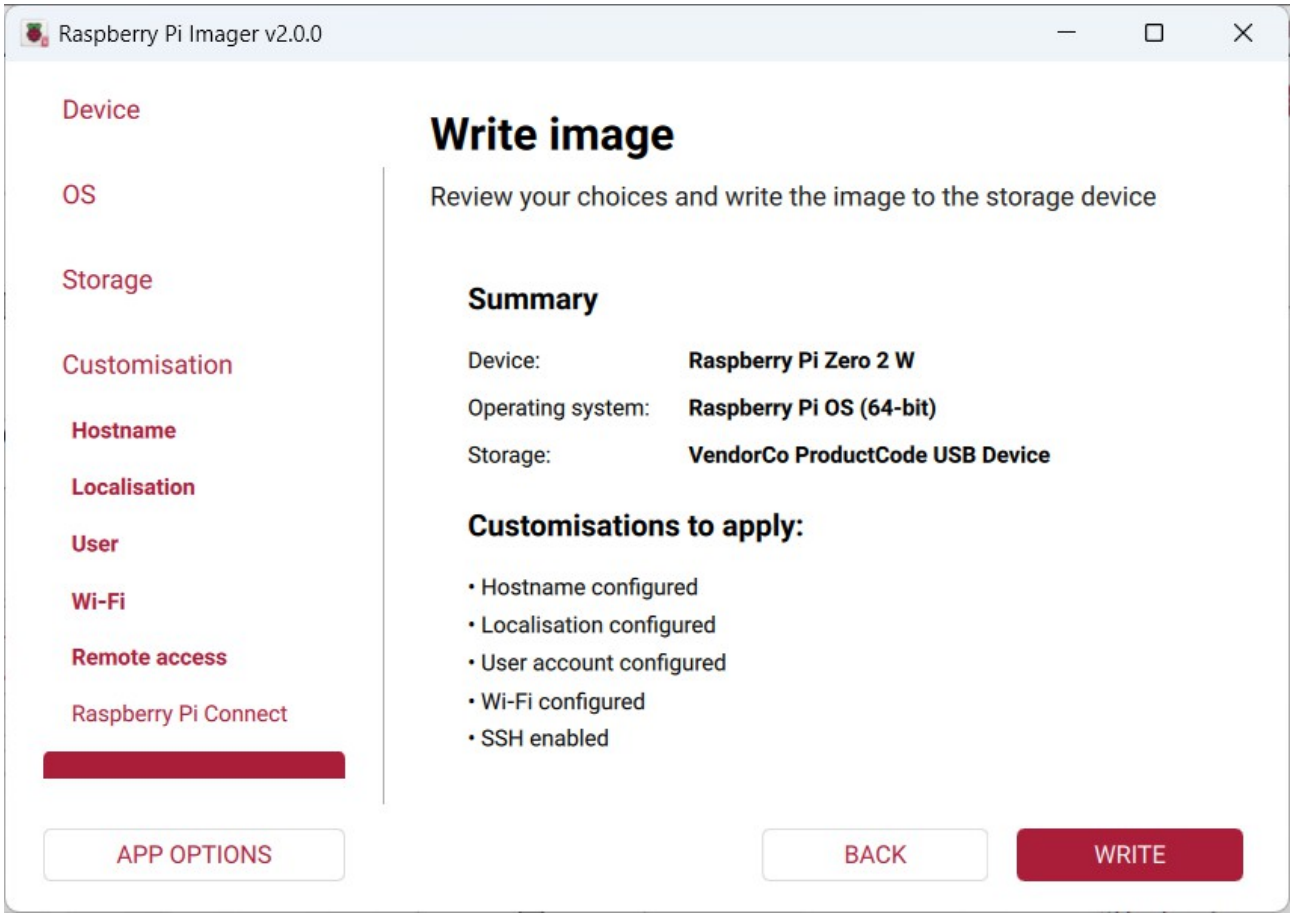


Set up the WiFi SSID and password - IMPORTANT



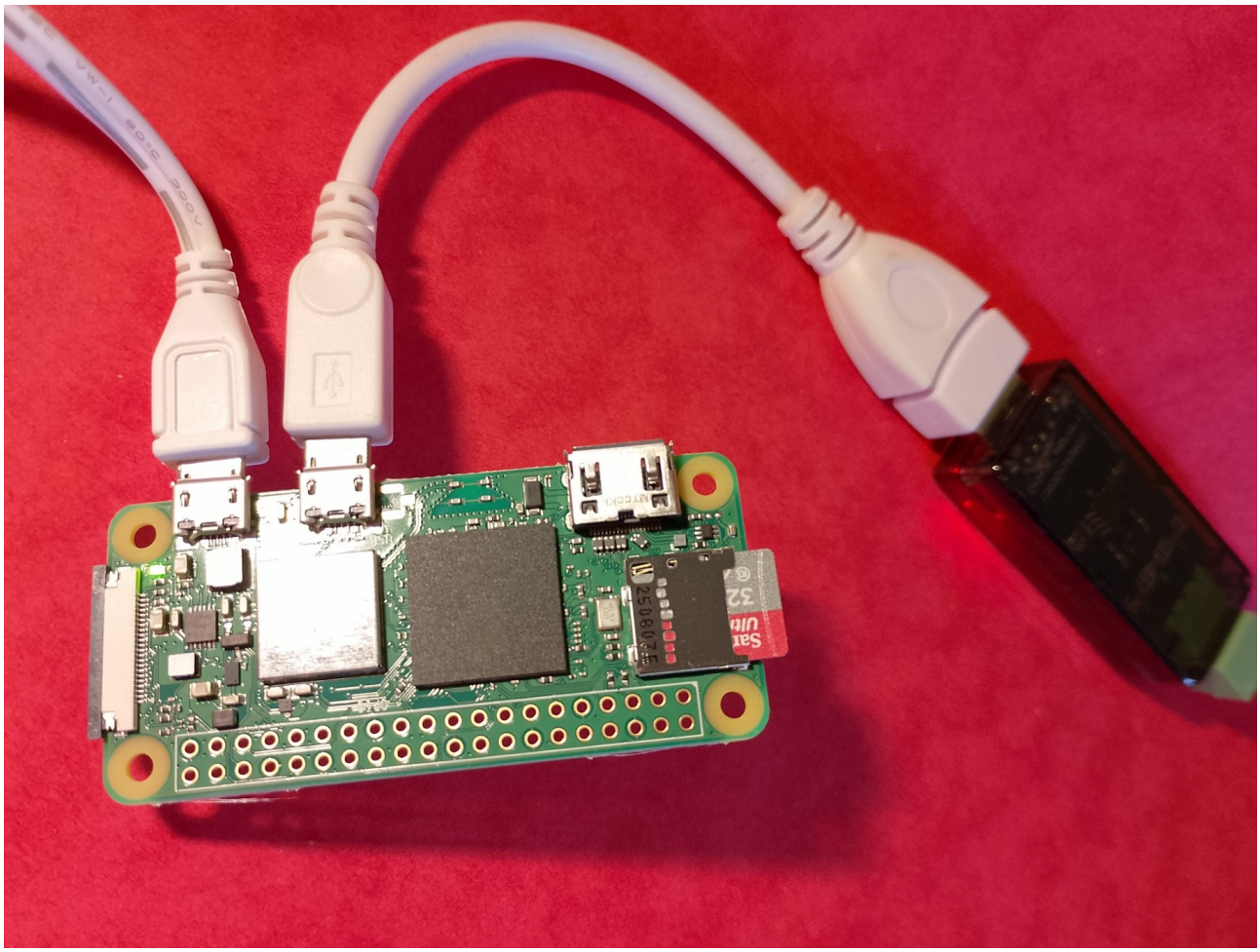
Important: Enable SSH



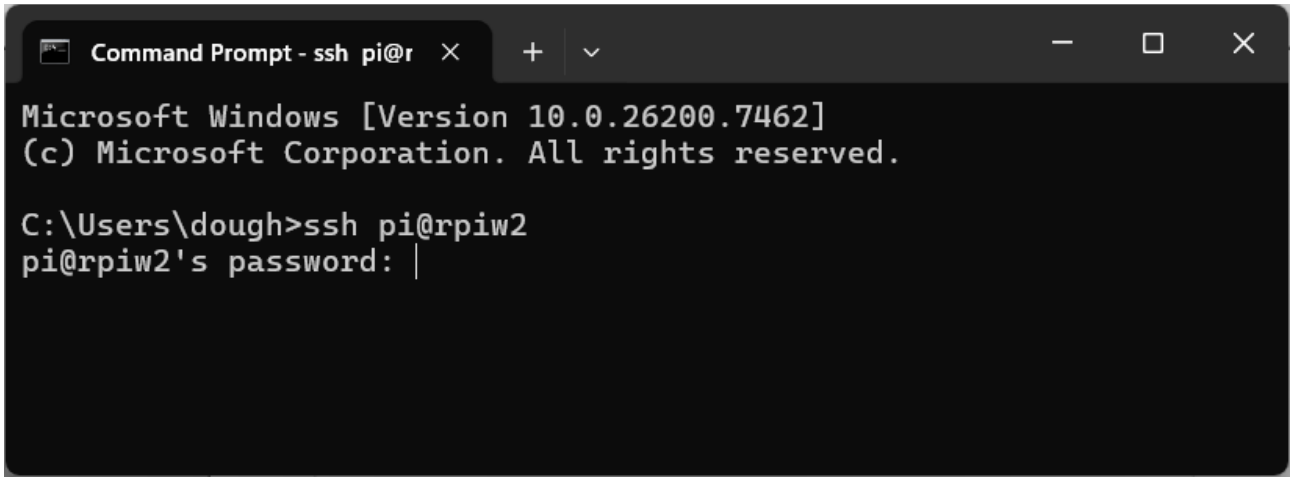


Using the new MicroSD in the Raspberry Pi Zero 2 W

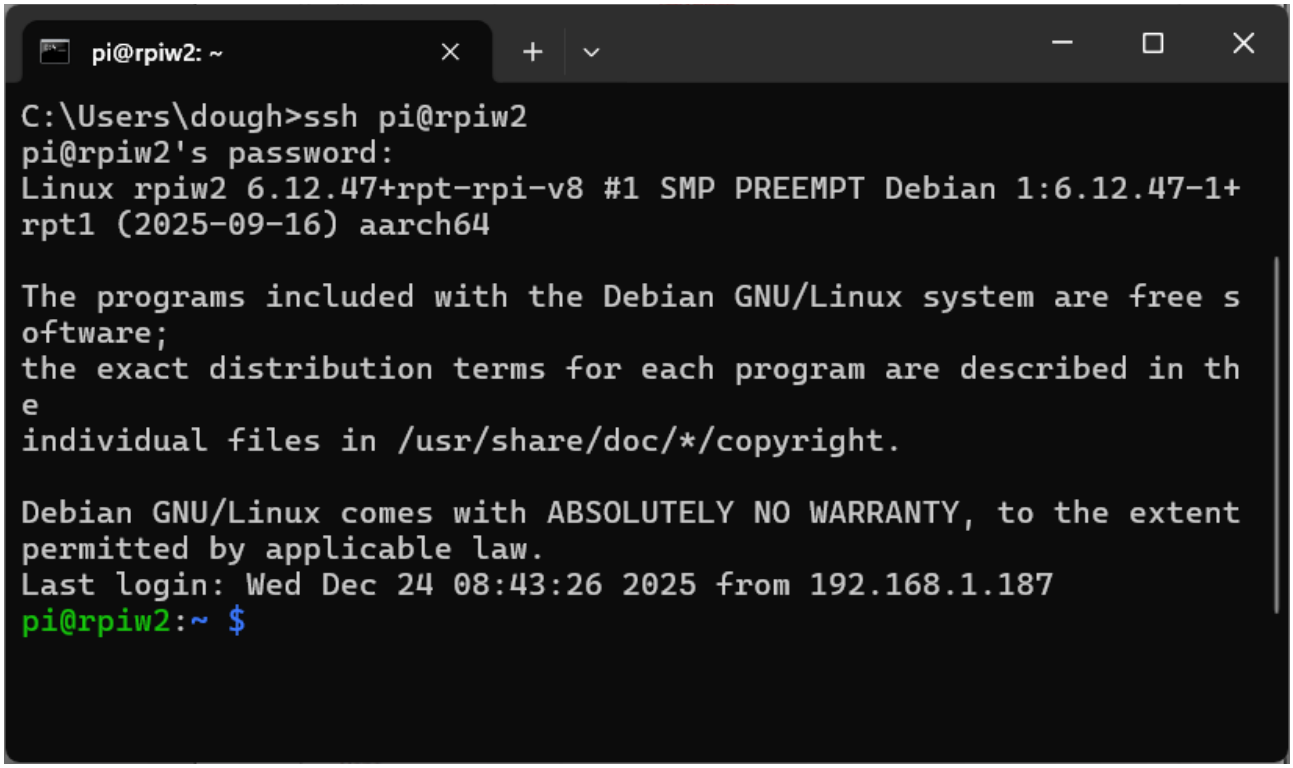
Once the MicroSD card has been written and verified, remove it and put it into the Raspberry Pi Zero 2 W



Connect the Power supply, and wait for the LED to settle down. Now use Command Prompt

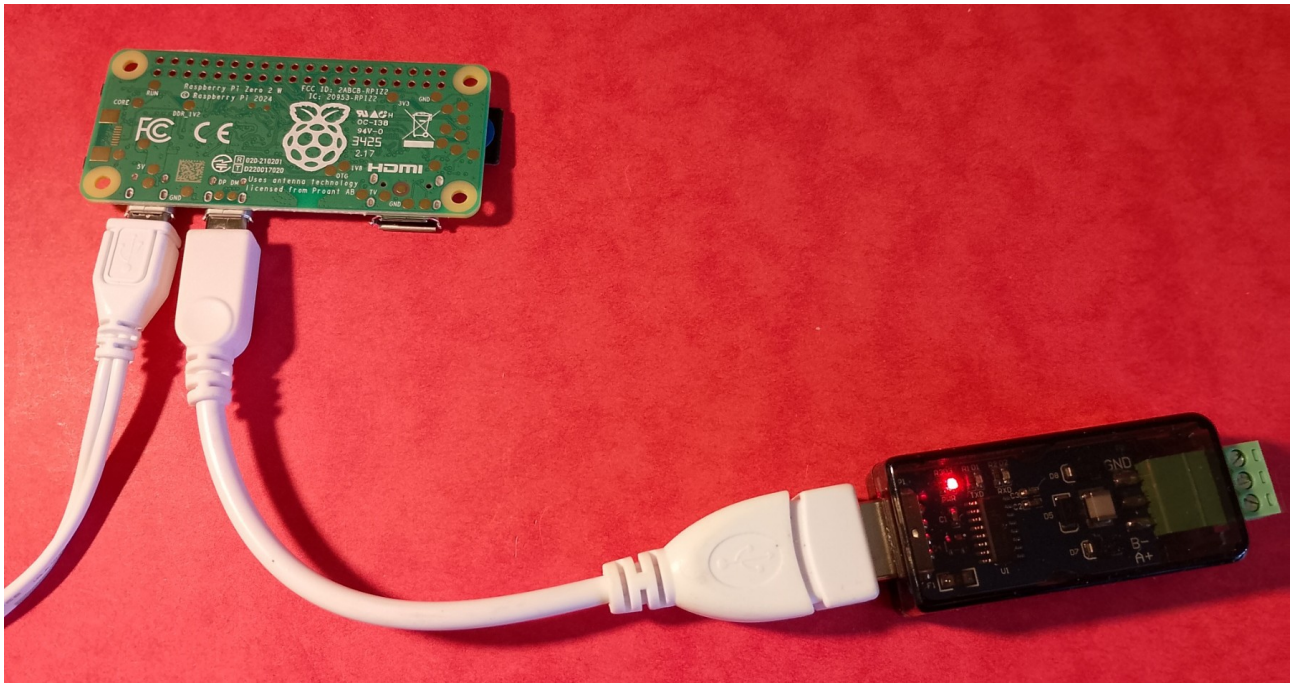


We should get to the command prompt.



We are at the command prompt:

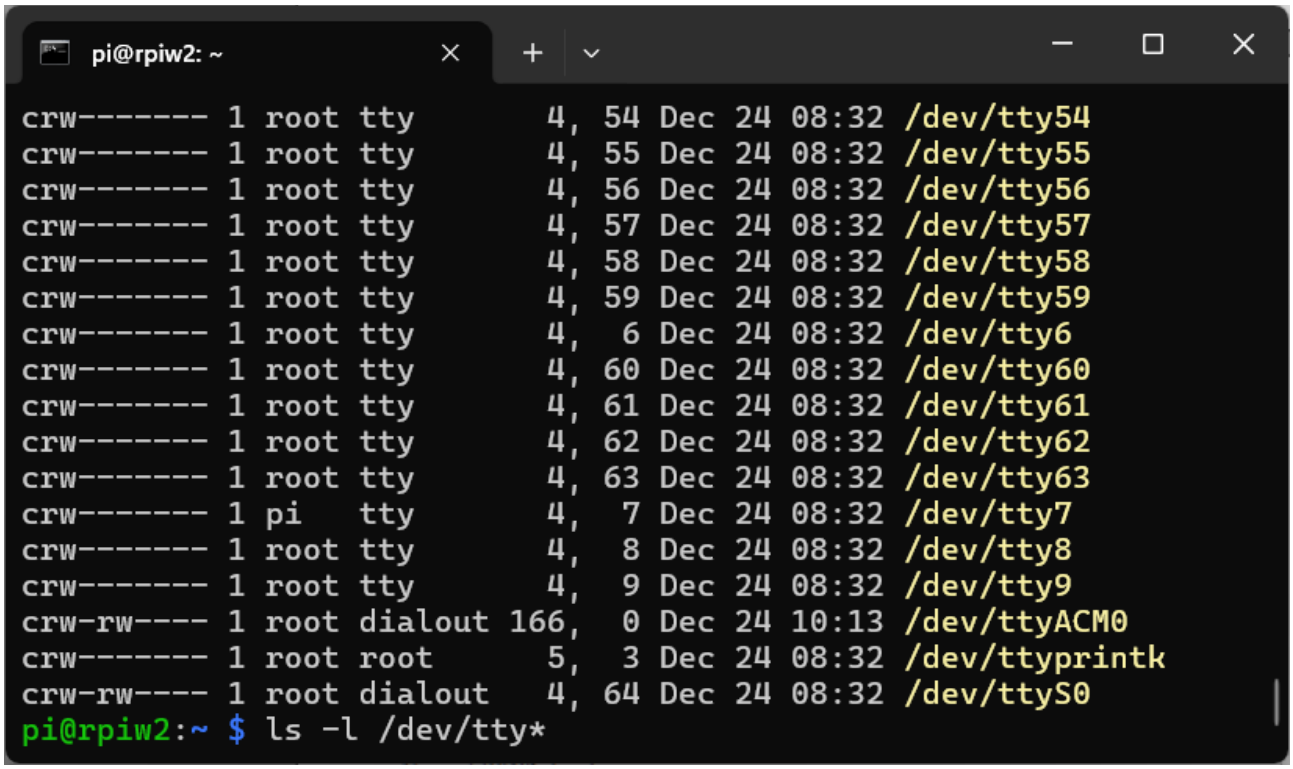
Connect RS485 dongle and later the TUF-2000M and use menu 50, 51,52 to get it to log to the RS-485 dongle



The RS-485 dongle is likely to be device /dev/ttyACM0 or /dev/ttyUSB0 check using

```
ls /dev/*
```

use :-
`ls -l /dev/tty* command`



it lists /dev/ttyACM0.

See if data is being received

```
 cat /dev/ttyACM0
```

Check port configuration using:-

```
stty -F /dev/ttyACM0
```

I have an Arduino programed to write to the Serial port /dev/USB0 every few seconds.

Connect the RS485 dongle to the TUF-2000M RS485 module and configure menu

#== the RS485 device could be /dev/ttyACM0 or /dev/ttyUSB0

```
cat /dev/ttyACM0
```

Set up a folder to

```
mkdir www
```

```
nohup cat /dev/ttyUSB0 > ~/www/capture.csv &
```

```
nohup cat /dev/ttyACM0 > ~/www/capture.csv &

tail -f ~/www/capture.csv
```

Add date and some CSV values to capture.csv

```
date >> ~/www/capture.csv

echo  "=== Comment" >> ~/www/capture.csv
```

Set up a simple web server and index page to help get data off the Raspberry Pi Zero

```
sudo busybox httpd -p 0.0.0.0:80 -h /home/pi/www

http://rpiw2/capture.csv
```

in Windows command Prompt get the file using scp.

```
scp pi@rpiw2:~/www/captive
```

On the Raspberry Pi Zero 2W:

```
cd ~/www
```

Use Nano to edit this webpage:

```
nano index.html

<!doctype html>
<html>
<body>
<P>Hello </P>
<P><a href=/capture.csv> CSV samples </a></P>
</body>
</html>
```

Using a web browser, open

http://rpiw2/

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Switches for the built-in data logger. There are as many as 22 different items can be chosen. To turn this function, select 'YES' the system will ask for selecting the items. There are 22 items available. Turn on all those items you want to output

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