

HOW TO USE

Single Channel Gateway

Raspberry Pi Image

by



M2M Shop

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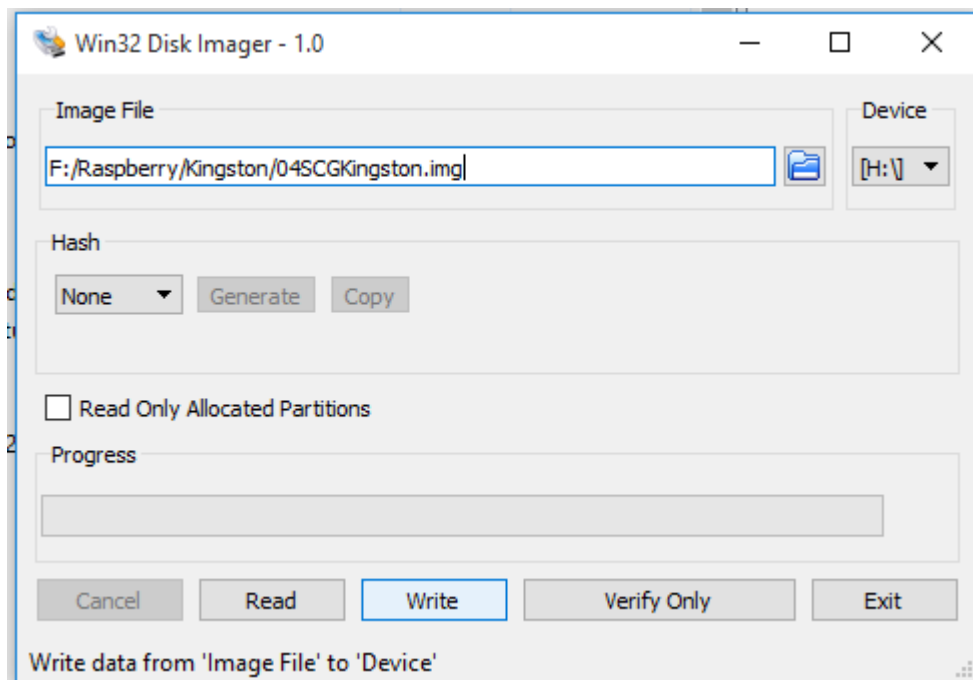
First Draft

V.04

For Windows User

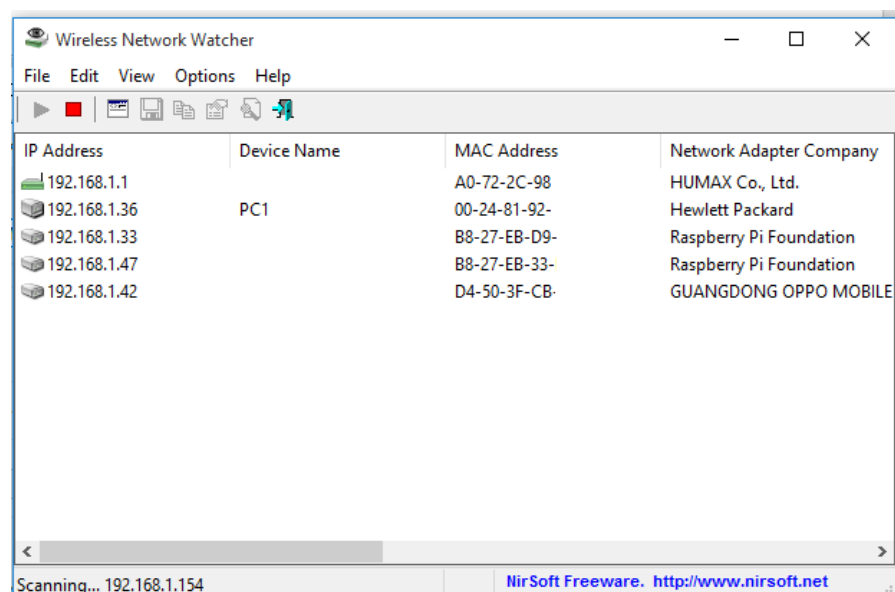
On your PC, Download 3 items :

1. Download Raspbian Image (010405M2M.zip) from Link <https://bit.ly/2xIAoia>
2. Download Win32diskImager <https://bit.ly/2xHkbK4>
3. Download Wireless Network Watcher <https://bit.ly/2OHGeYd>
 - Unzip 010405M2M.zip to get file 010405M2M.img.
 - Use Win32diskImager to write Image (010405M2M.img) on SDCard (Kingston 16G Class10)

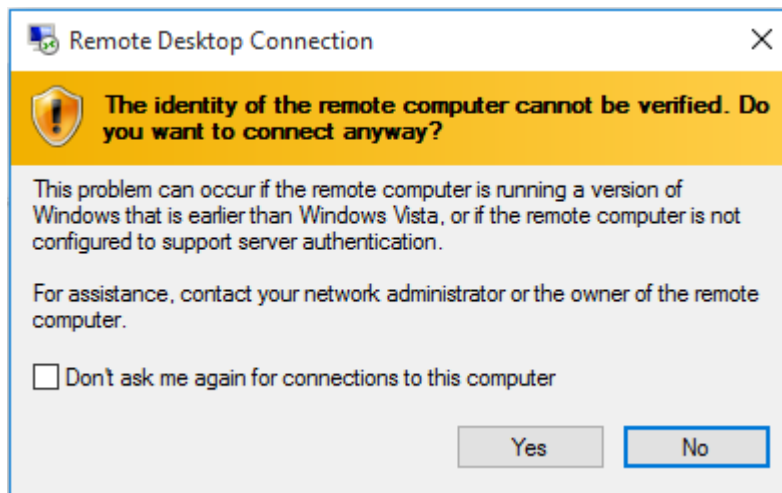
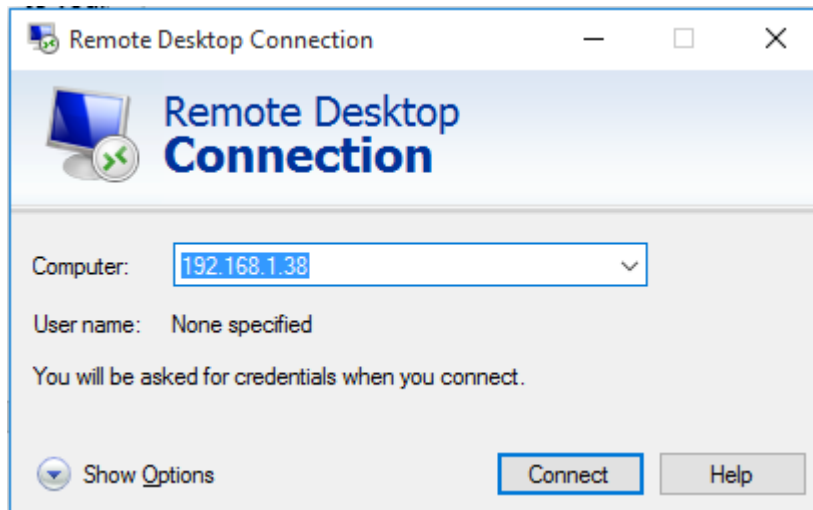


Notice! Make sure you choose the right Device name.

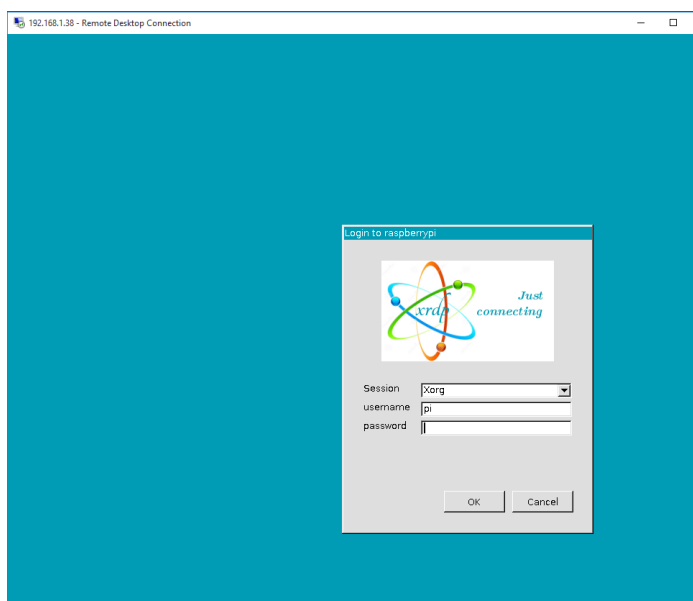
- Put SDCard in RPi and plug in your LAN Cable to RPi.
- Power on RPi.
- Run Wireless Network Watcher on PC and find out what IP no is assigned to your RPi.



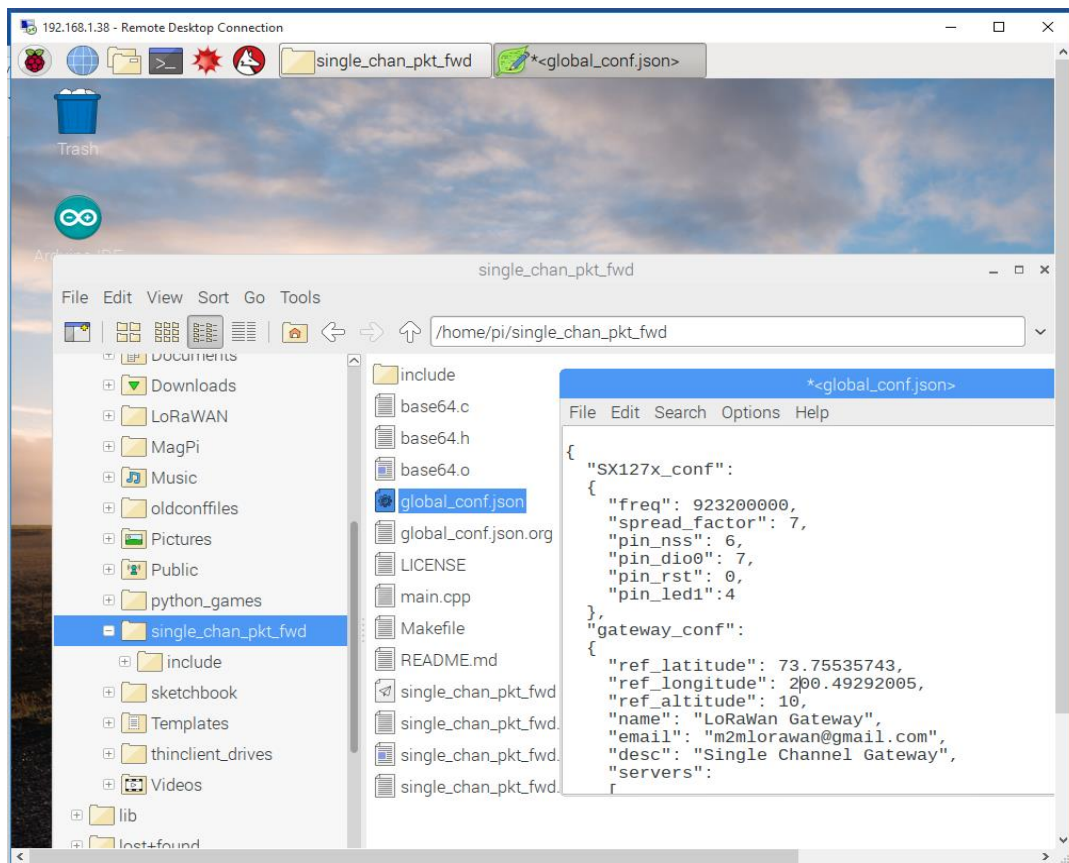
- Use windows Remote Desktop Connection and IP no. for remote connection.



Click Yes

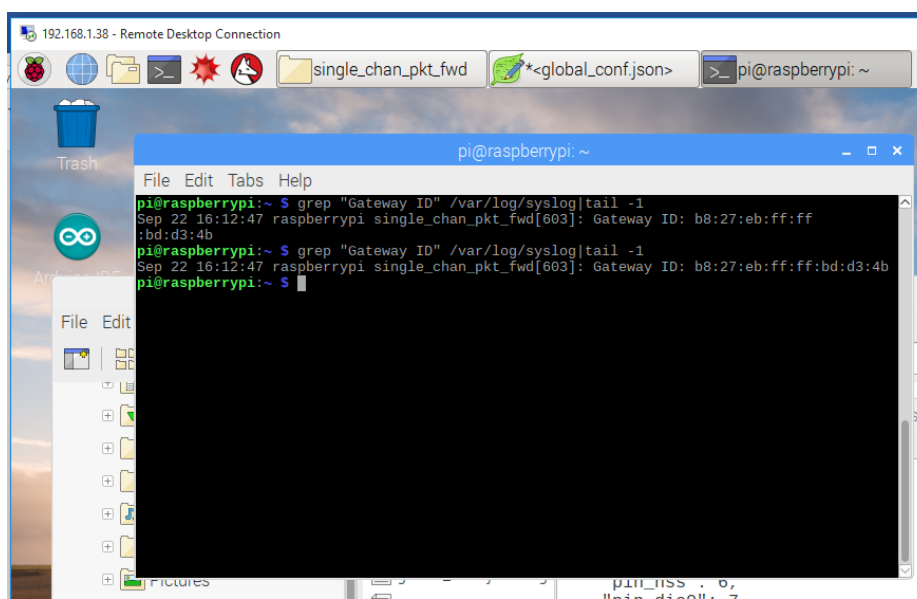


Login Name: pi Password: raspberry



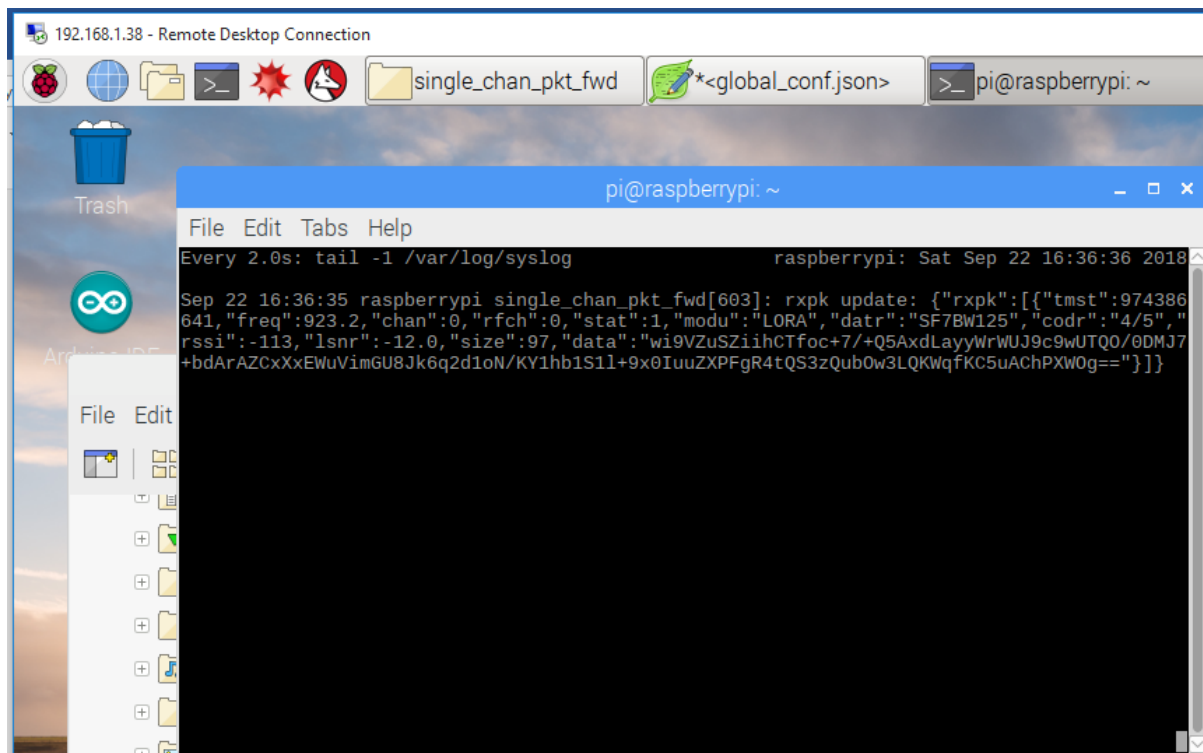
Edit file `/home/pi/single_chan_pkt_fwd/global_conf.json`

Change freq and SF as you want. You might correct lat long and alt number later. Then reboot `sudo reboot` after changing the config file.



`grep "Gateway ID" /var/log/syslog | tail -1`

This command will show your gateway id. Use this 8 Hex Numbers to register with TTN.



The screenshot shows a Raspberry Pi desktop environment accessed via a Remote Desktop Connection. The desktop has a blue background with icons for Trash, a file manager, and a terminal. A terminal window is open, displaying the command `watch tail -1 /var/log/syslog` and its output. The output shows a log entry from the `single_chan_pkt_fwd` process, which includes a LoRaWAN packet update with various fields like `rxpk`, `freq`, `chan`, `rfch`, `stat`, `modu`, `datr`, `codr`, `rssi`, `lsnr`, `size`, and `data`. The `data` field contains a long hexadecimal string representing the packet data.


```
pi@raspberrypi: ~  
File Edit Tabs Help  
Every 2.0s: tail -1 /var/log/syslog  
Sep 22 16:36:35 raspberrypi single_chan_pkt_fwd[603]: rxpk update: {"rxpk":[{"tmst":974386  
641,"freq":923.2,"chan":0,"rfch":0,"stat":1,"modu":"LORA","datr":"SF7BW125","codr":"4/5","  
rssi":-113,"lsnr":-12.0,"size":97,"data":"wi9VZuSZiihCTfoc+7/+Q5AxdLayyWrWUJ9c9wUTQ0/0DMJ7  
+bdArAZCxxEWuVimGU8Jk6q2d1oN/KY1hb1S11+9x0IuuZXPfGR4tQS3zQub0w3LQKWqfKC5uAchPXW0g=="}]}
```

```
watch tail -1 /var/log/syslog
```

If you have a LoRaWAN node nearby and it is sending packets, you can see info coming in by using above command.

Register Your Single Channel Gateway with TTN

Open your TTN web page and use your gateway ID to register.

 THE THINGS NETWORK

CONSOLE
COMMUNITY EDITION

ApplicationsGatewaysSupport

Gateways > Register

REGISTER GATEWAY

Gateway EUI
The EUI of the gateway as read from the LoRa module

AA BB CC DD 11 22 33 44 8 bytes

☒ **I'm using the legacy packet forwarder**
Select this if you are using the legacy [Semtech packet forwarder](#).

Description
A human-readable description of the gateway

SCG

Frequency Plan
The [frequency plan](#) this gateway will use

Europe 868MHz

Router
The router this gateway will connect to. To reduce latency, pick a router that is in a region which is close to the location of the gateway.

ttn-router-eu