



TRIBUTO

5G Dongle

**User manual**

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## 1. Foreword

### 1.1 Introduction

This document describes the APAL® Tributo 5G Dongle product detail specification and user manual. It helps you quickly retrieve product specifications, electrical, product functions and product usage details.

### 1.2 Safety Information

The following safety precautions must be observed during all phases of operation, such as usage, service or repair of any cellular terminal or mobile incorporating with 5G Dongle. Manufacturers of the cellular terminal should send the following safety information to users and operating personnel, and incorporate these guidelines into all manuals supplied with the product. If not so, APAL assumes no liability for customers' failure to comply with these precautions.



Full attention must be given to driving at all times in order to reduce the risk of an accident. Using a mobile while driving (even with a hands free kit) causes distraction and can lead to an accident. Please comply with laws and regulations restricting the use of wireless devices while driving.



Switch off the cellular terminal or mobile before boarding an aircraft. The operation of wireless appliances in an aircraft is forbidden to prevent interference with communication systems. If the device offers an Airplane Mode, then it should be enabled prior to boarding an aircraft. Please consult the airline staff for more restrictions on the use of wireless devices on boarding the aircraft.



Wireless devices may cause interference on sensitive medical equipment, so please be aware of the restrictions on the use of wireless devices when in hospitals, clinics or other healthcare facilities.



Cellular terminals or mobiles operating over radio signals and cellular network cannot be guaranteed to connect in all possible conditions (for example, with unpaid bills or with an invalid (U) SIM card). When emergent help is needed in such conditions, please remember using emergency call. In order to make or receive a call, the cellular terminal or mobile must be switched on in a service area with adequate cellular signal strength.



The cellular terminal or mobile contains a transmitter and receiver. When it is ON, it receives and transmits radio frequency signals. RF interference can occur if it is used close to TV set, radio, computer or other electric equipment.



In locations with potentially explosive atmospheres, obey all posted signs to turn off wireless devices such as your phone or other cellular terminals. Areas with potentially explosive atmospheres include fueling areas, below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles such as grain, dust or metal powders, etc.

### 1.3 Device information

Tributo 5G Dongle embedded with COMPAL® 5G RXM-G1 Module is a highly integrated 5G NR FR1 wireless communication module that adopts standard USB 3.1 type-C interface as the dongle device and backward supports with LTE/WCDMA system. It is applicable to most broadband communication networks of the mobile operator across the world.

Specification		
Platform	QCT SDX55 Cortex-A7 up to 1.5 GHz	
Memory	4Gb NAND Flash (ONFI) with 4Gb LPDDR4X(1.8GHz) MCP	
Operating Band	TW	5G : n1, n3, n7, n8, n28, n38, n41, n78, n79 4G : B1, B3, B7, B8, B28, B38, B41 3G : B1, B8
	JP	5G : n77,n78, n79 4G : B1, B3, B8, B18, B19, B26, B28, B41, B42 3G : B1,B8, B9, B19
	EU	5G : n1, n3, n20, n28, n78 4G : B1, B3, B7, B8, B20, B28, B38, B46 3G : B1,B2,B4,B5,B8
	NA	5G : n2, n5, n41, n66, n71 4G : B2, B4, B5, B7, B12, B13, B14, B25, B26, B29, B30, B41, B46, B48, B66, B71 3G : B2,B4,B5,B8
Network option	SA	Option 2
	NSA	Option 3x/3a
Downlink	LTE	LTE CAT 16
	5G sub-6	1CC; Max BW 100MHz; MIMO 4x4
Uplink	LTE	LTE CAT 13
	5G sub-6	1CC; Max BW 100MHz; MIMO 2x2
Carrier aggregation	ULCA, DLCA and EN-DC	
SRS antenna switching	n77/n78/n79 : 1T2R(NSA) + 2T4R(SA)	
Power Supply	5V ±5%	
Temperature	Operating temperature <sup>[1]</sup> : -10°C ~+50°C	
	Storage temperature: -40°C ~+85°C	

Physical characteristics	Interface: USB Type C, Nano-Sim
	Dimension: 87.5 x 38.9 x 21 mm
	Weight: 75g
Software	
Driver	Microsoft Windows 10, Mac, 10.15, Ubuntu14.04, Linux 3.13 and later
AT commands	3GPP TS 27.007 and 27.005



## 2. Device ID & IO Positions

### 2.1 Device LED Status

Tributo Dongle have 2 LEDs for below connection situations shows by tow.



Situations	Red	Green
Power On	Keep On	Off
Search Network	Slow Flash	Off
Connected	OFF, Network connected	Keep On
Data transmit	Off	Slow Flash
Data transmit > 200Mbps	Off	Fast Flash
Firmware update	Keep On	Flashing
Error	Keep On	Keep On

### 3. Connectivity

Tributo Dongle use USB 3.1 Type C to Type C cable to link dongle & various host. Need to use the certificated cable in box to retrieve the best performance.

Step 1: Insert Nano-SIM (Push In; Push out)



Step 2: USB Cable



Step 3: Link to Host ex. PC, Notebook, Router...etc



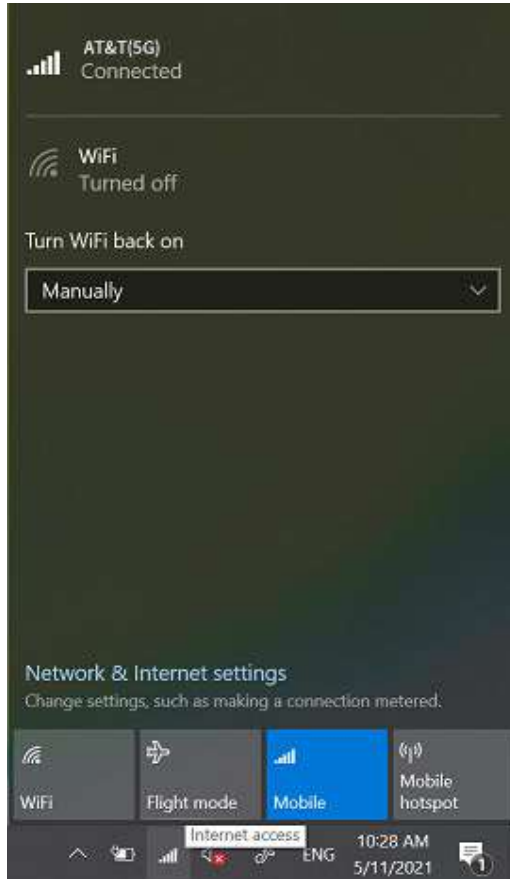
Notice: Make sure the cable is well-plugged in device side before connected to host I/O.



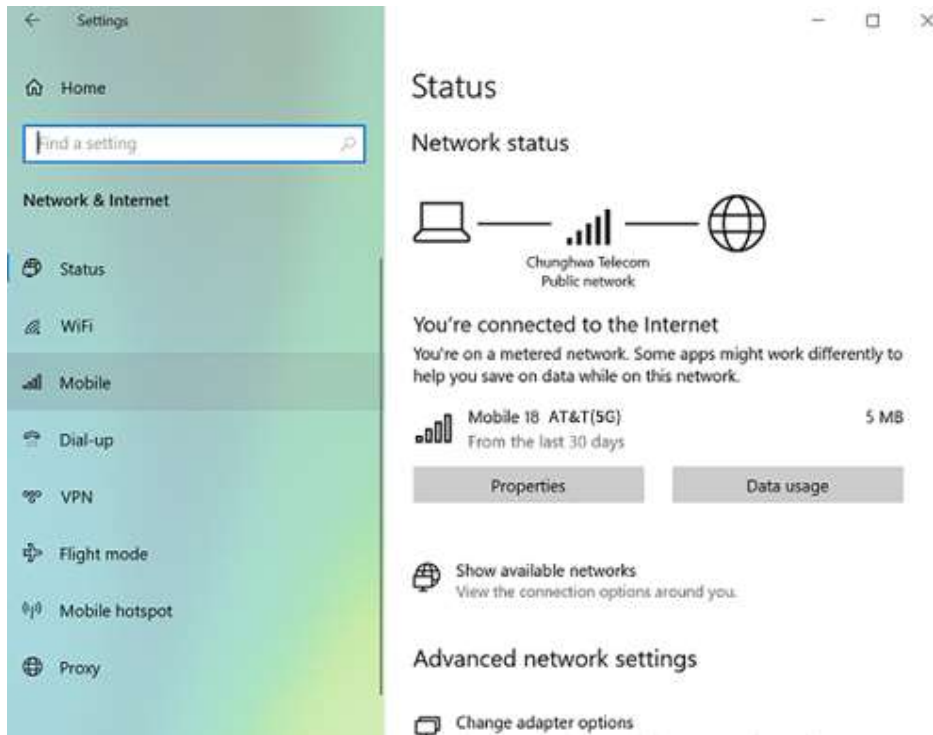
### 3.1 Host OS by Windows

#### 3.1.1 Windows UI & Setting

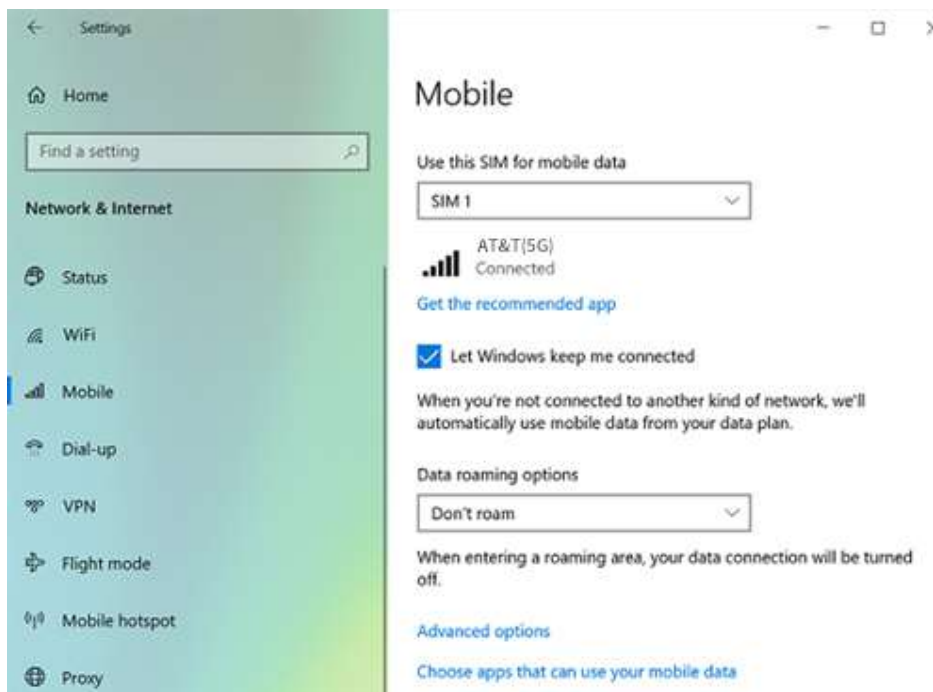
Tributo Dongle will boot and register to network automatically after connect to host. You can check the network status by click “internet access” icon.



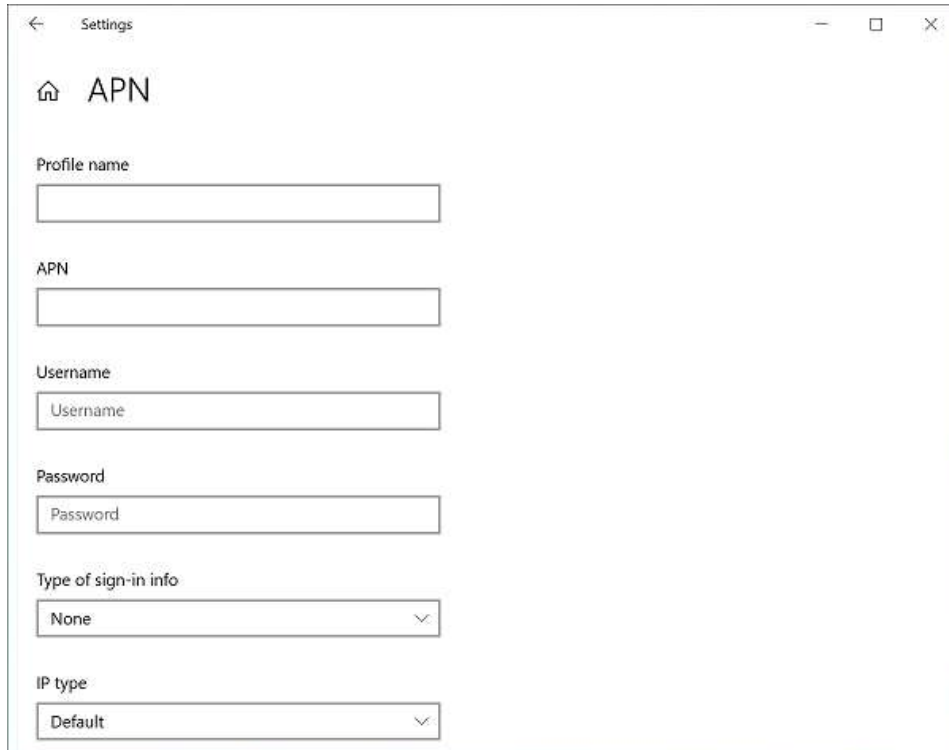
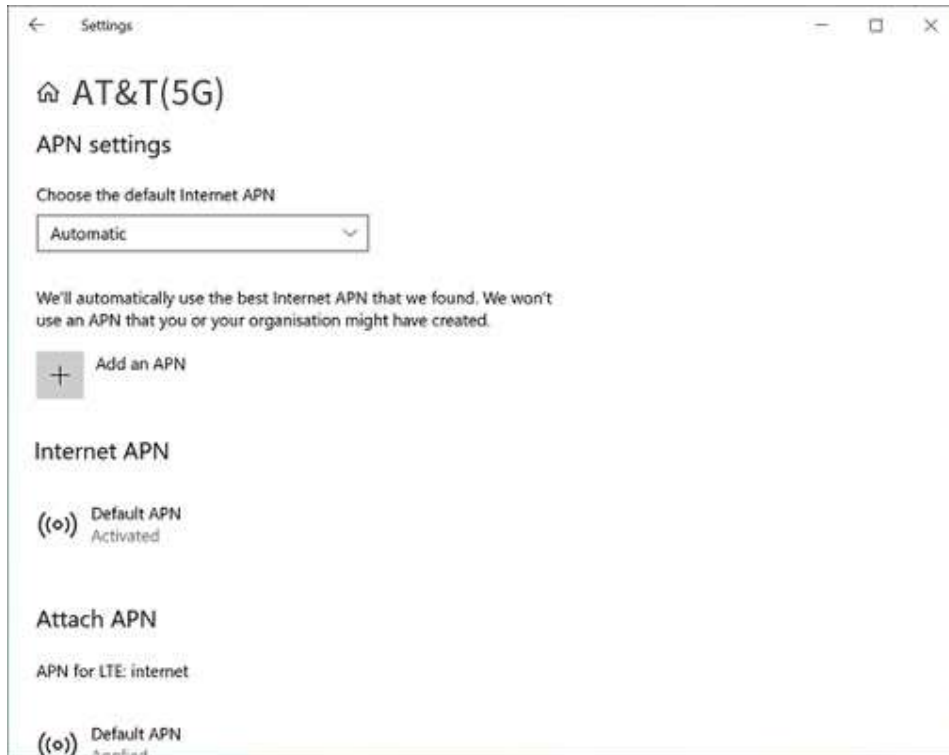
In the Network & Internet Settings, you can see the overview of network status.

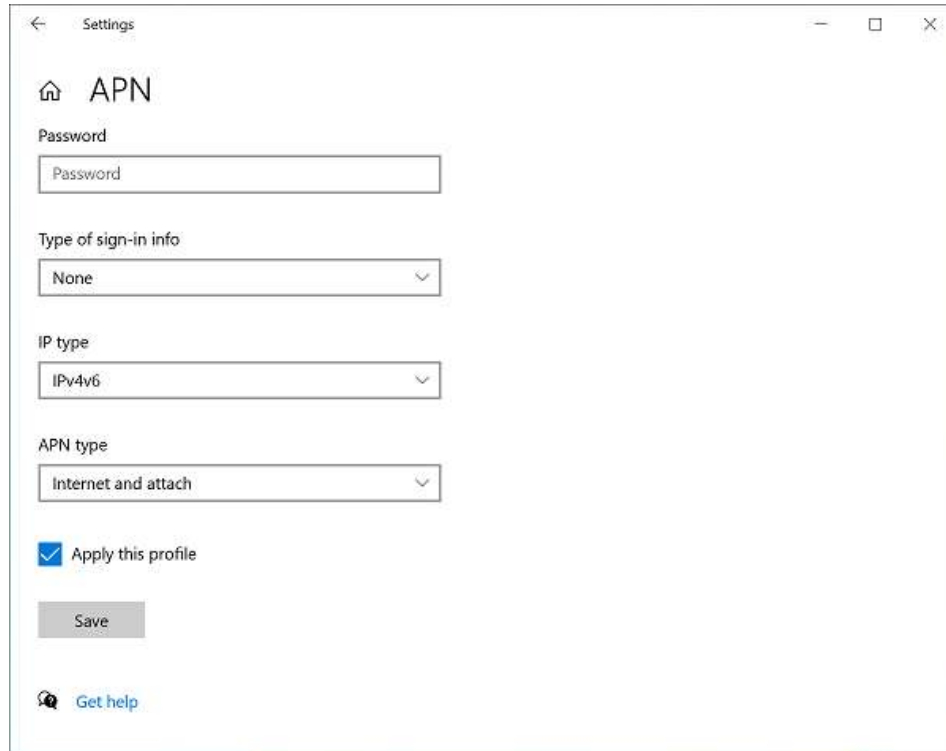


If you want to create a new APN setting, you can go to “Mobile” -> “Advanced options” to see APN settings.



If you want to add a new APN profile, click “Add an APN” and enter profile data. Remember to “Save” when finished input.





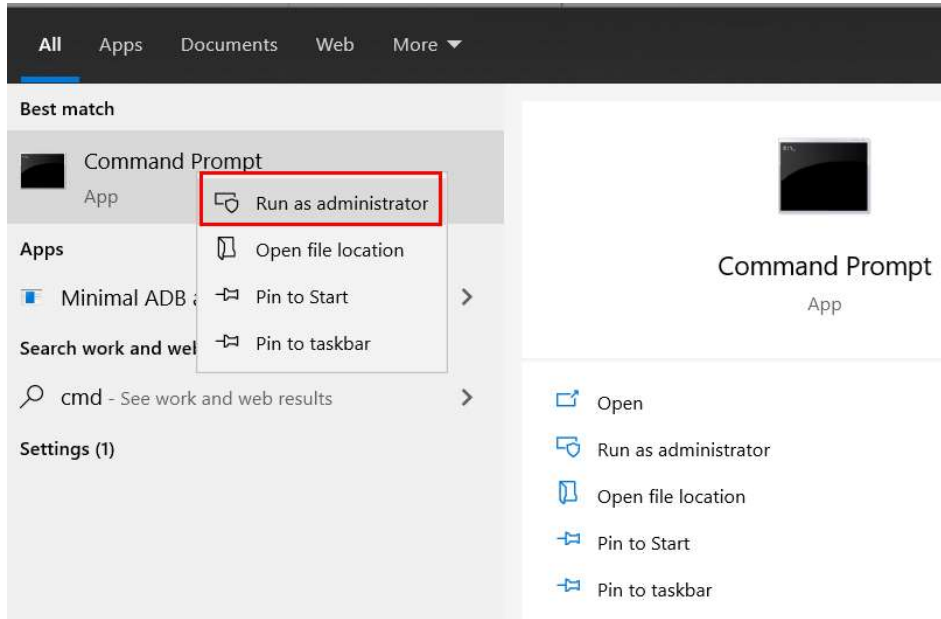
### 3.1.2 Firmware update

You can use “Windows Update” to find latest firmware for update.

Or manually find fota package from <https://www.apaltec.com/support/> and follow SOP below.

#### 3.1.2.1 Find your dongle firmware

Open command prompt by typing cmd in the search window and open as administrator mode



Use “netsh mbn show int” for current module firmware information

```
Command Prompt
Microsoft Windows [Version 10.0.18363.1379]
(c) 2019 Microsoft Corporation. All rights reserved.

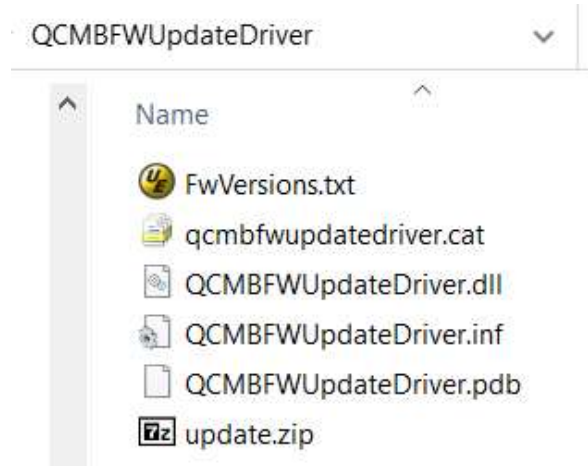
C:\Users\robert_yu>netsh mbn show int

There is 1 interface on the system:

Name                : 行動電話 1315
Description          : Generic Mobile Broadband Adapter #1310
GUID                 : {1B240119-DFDF-4058-A787-A19E22282E21}
Physical Address     : 80:8d:85:52:58:59
Additional PDP Context : No (Physical interface)
Parent Interface Guid : No parent
State                : Connected
Device type          : This is a remote device
Cellular class       : GSM
Device Id            : 359047100167467
Manufacturer         : Microsoft
Model                : Generic Mobile Broadband Adapte
Firmware Version     : RXMG1.27.00.356_OR09
Provider Name        : Far BasTone
Roaming              : Not roaming
Signal               : 22%
RSSI / RSCP          : 7 (-99 dBm)
```

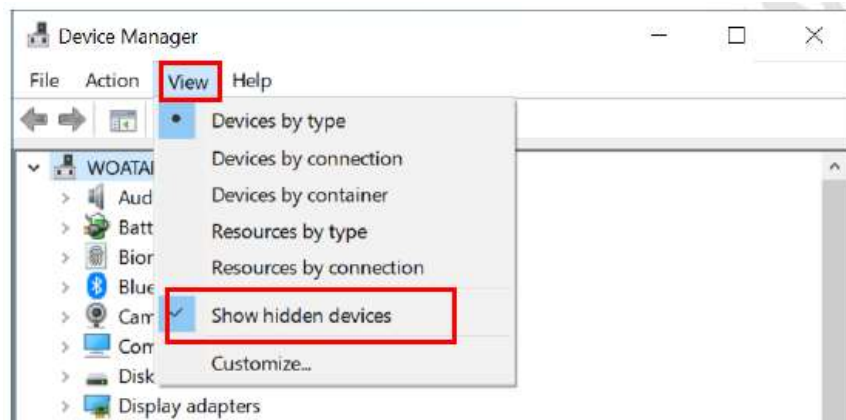
### 3.1.2.2 Download fota package

You can find firmware update driver package from <https://www.apaltec.com/support/>  
e.g. latest firmware is v358, just find v356 to v358 0R09 firmware update driver package.  
Download and unzip it to local directory.

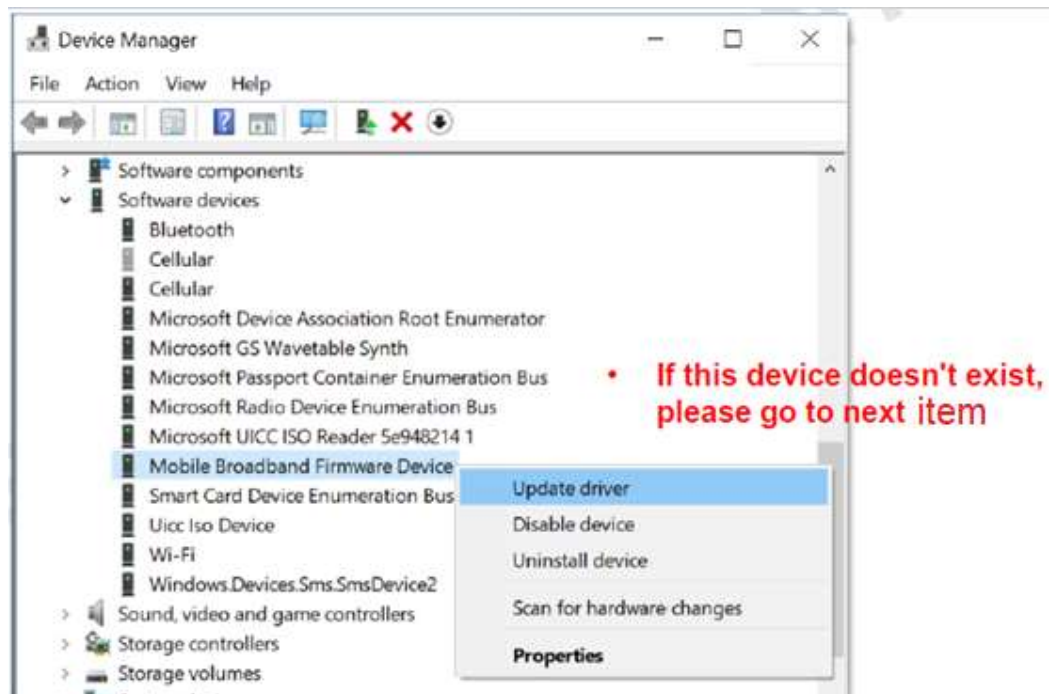


### 3.1.2.3 Setup firmware update driver package

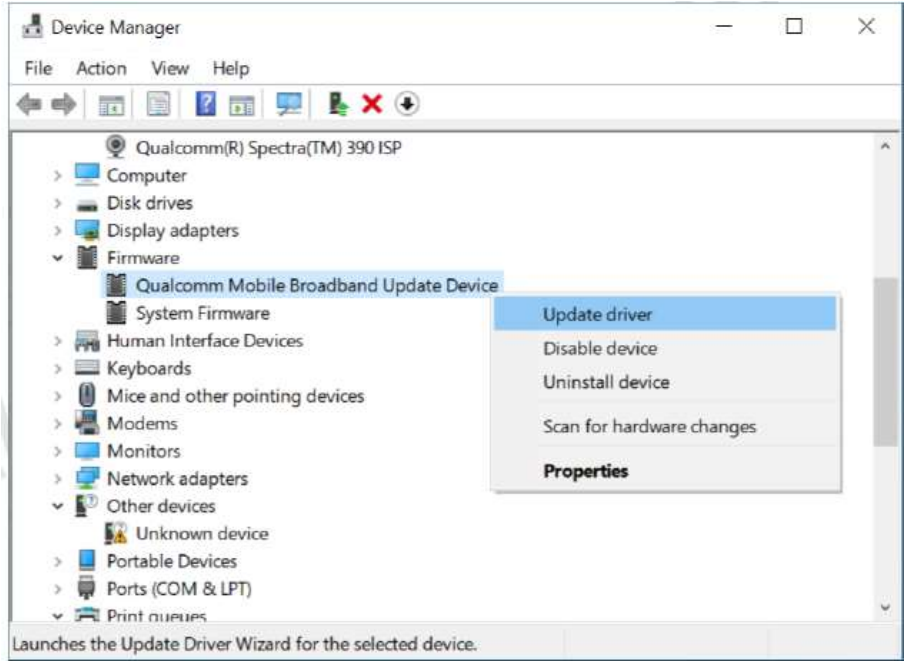
Open Device Manager, click “View” to select “Devices by type” and click “Show hidden devices”



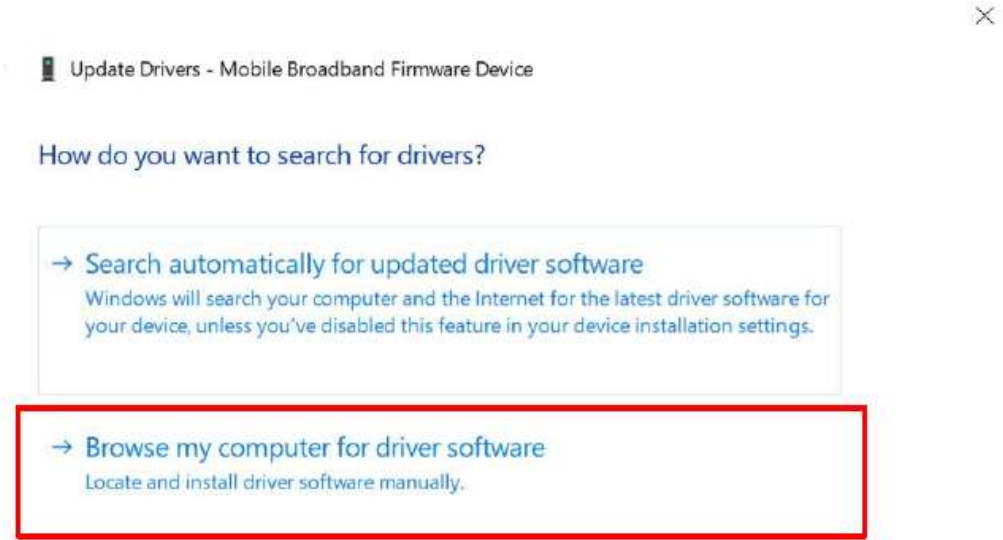
Go to “Software devices” session, right click on the “Mobile Broadband Firmware Device” and select “Update driver”.



If “Mobile Broadband Firmware Device” doesn’t exist, please go to “Firmware” session, right click on the “Qualcomm Mobile Broadband Update Device” and select “Update driver”.

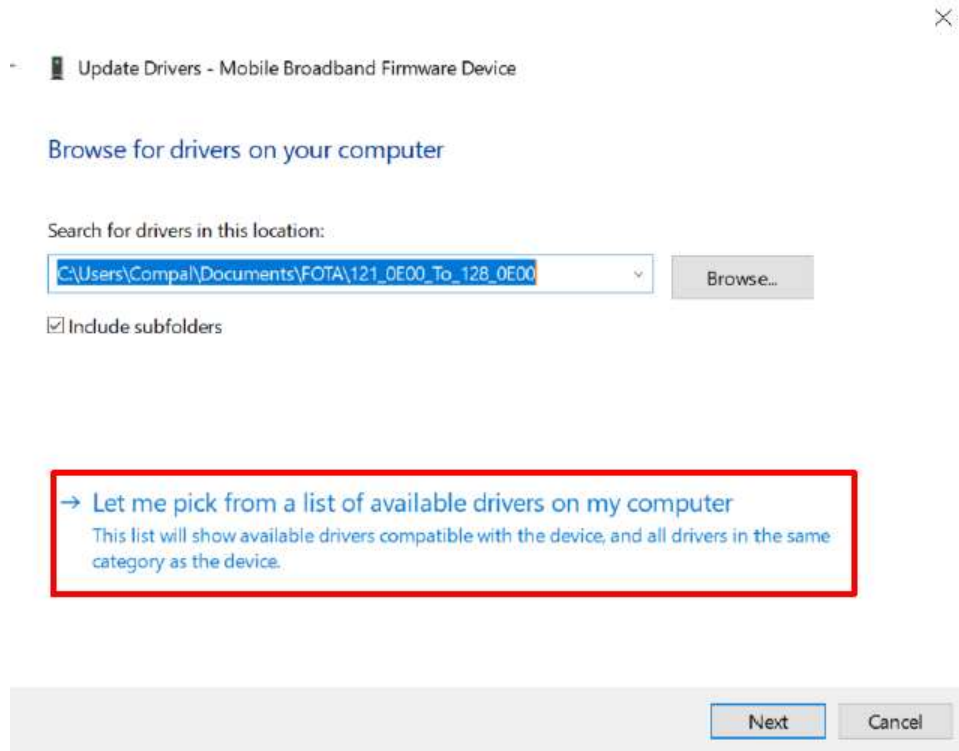


Select “Browse my computer for driver software”.

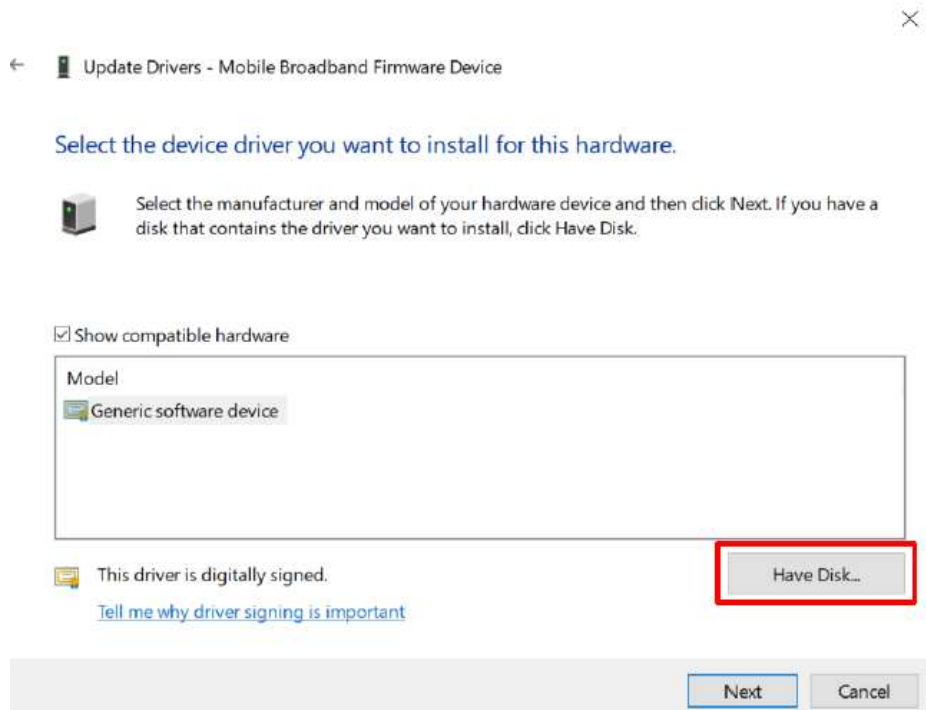




Select “Let me pick from a list of available driver on my computer”.



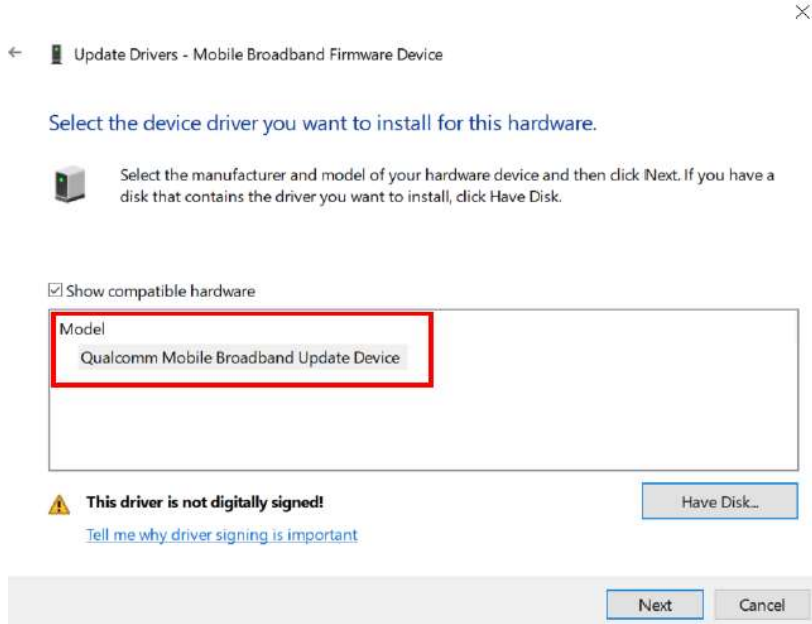
Select “Have Disk...”.



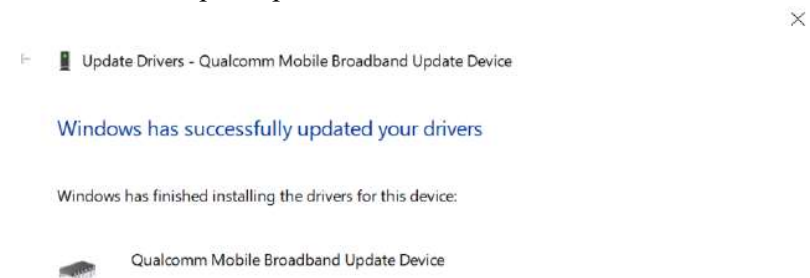
Select “Browse...” to Firmware Update Driver package path.



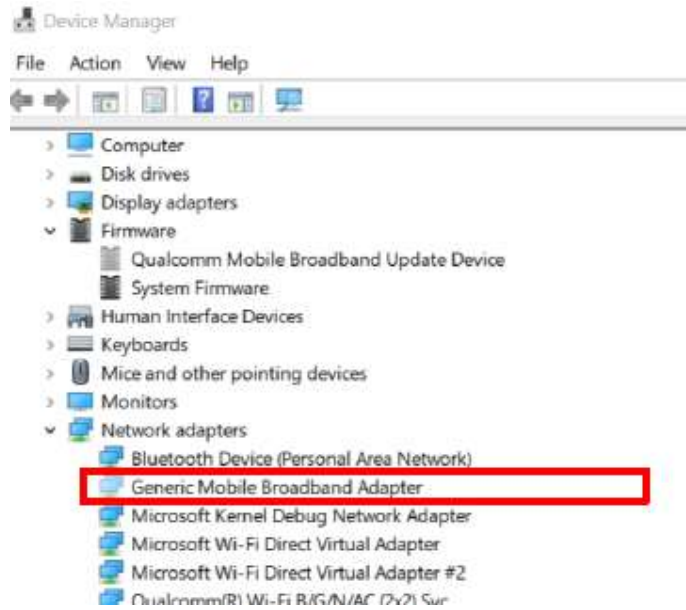
Select “Qualcomm Mobile Broadband Update Device” and click Next.



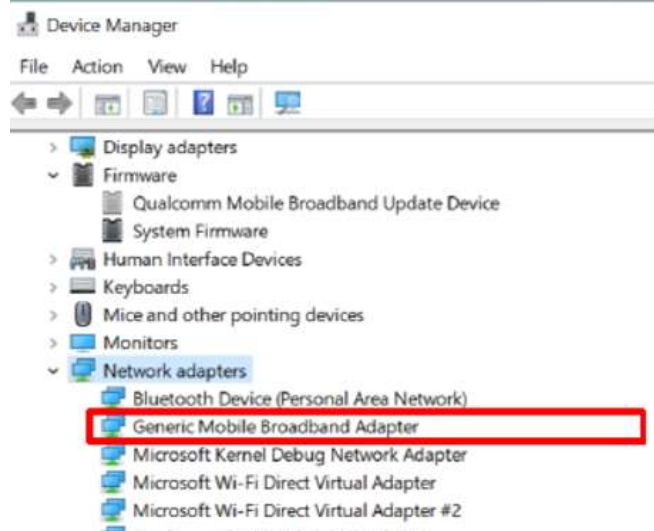
Wait for firmware update process to finish.



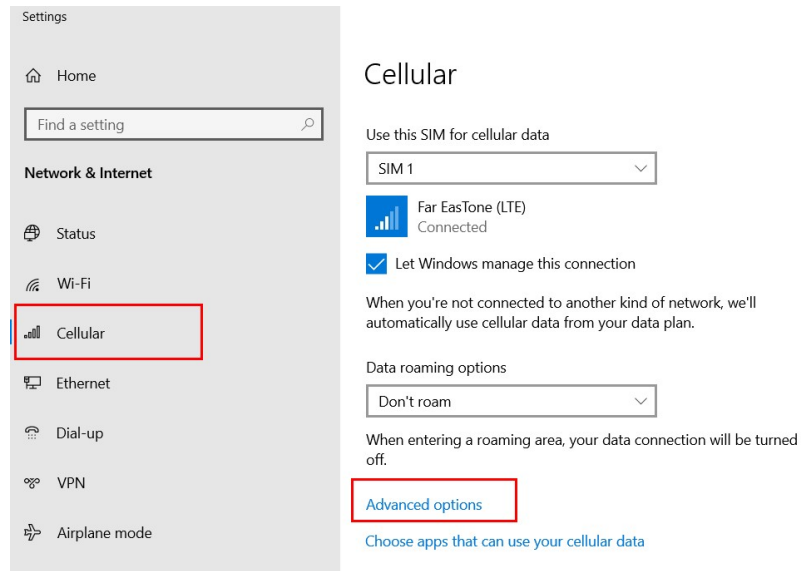
Open Device Manager, click “Network adapters”. Wait for Generic Mobile Broadband Adapter becomes hidden device.



Wait around 120s Generic Mobile Broadband Adapter will back to normal device and then please reboot PC. During firmware update, you can find red led on and green led blinking.



You can check the updated firmware version through windows UI like below



## Properties

Manufacturer: Microsoft  
Model: Generic Mobile Broadband Adapte  
Firmware: RXMG1.27.00.358\_0R09  
Network type: GSM  
Data class: UMTS, HSDPA, HSUPA, LTE, 1xRTT, 3xRTT, 1xEVDO, 1xEVDO-A, 1xEVDO-B, 5G/TDS  
IMEI: 359047100167467  
IMSI: 466011801951928  
SIM ICCID: 89886018157709442671

Copy

### 3.2 Host OS by Linux

Dongle will boot and register to network automatically after connect to host. You can see “Connection Established” after dongle boot up and see the connection detail by checking “Connection Information”.



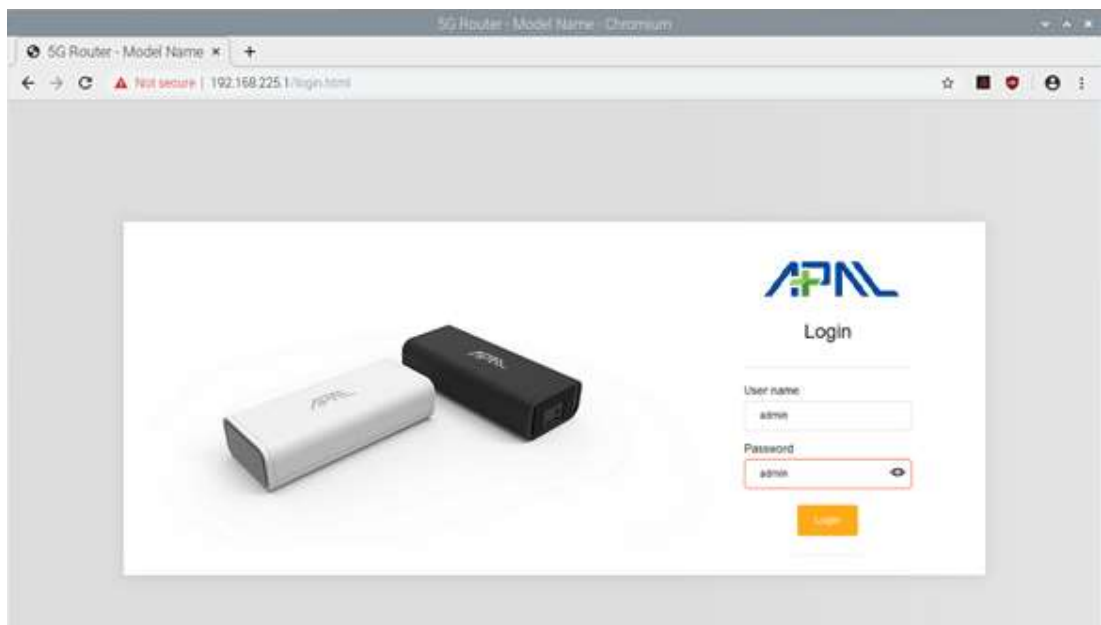
### 3.2.1 Configuration Utility

For connection management, we provide a WEB based configuration utility for users to customize connection configuration.

To access the configuration utility, open a web browser (such as Internet Explorer) and enter the IP address of the router, which is 192.168.225.1 by default.

Once you have reached the configuration utility through your web browser, you will need to log in. Enter admin as the username, and then enter the password. By default, the password is admin.

**Click Login to continue**

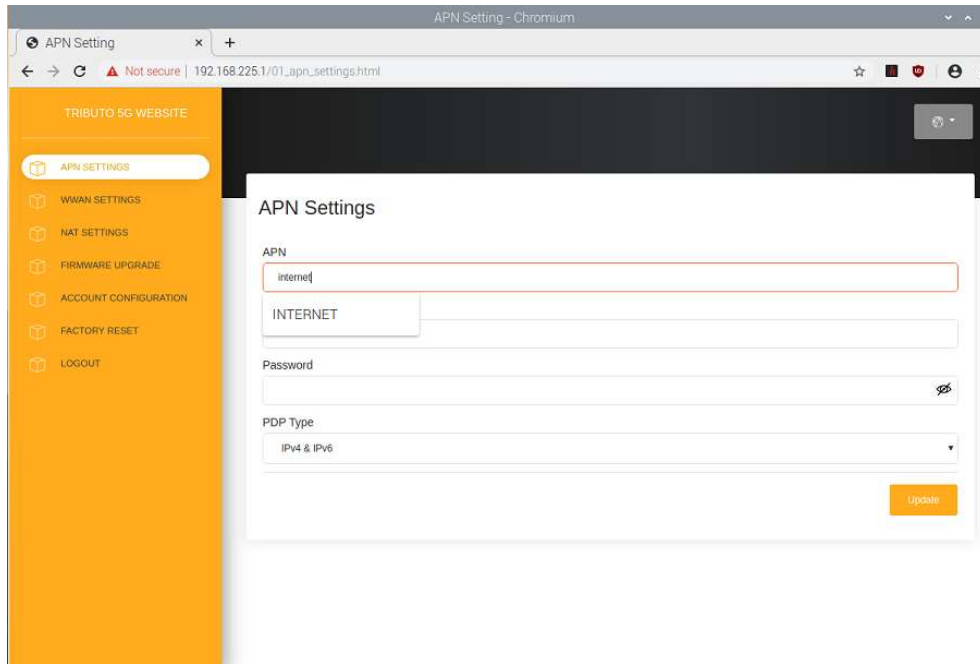


### 3.2.1.1 APN Settings

APN: Enter your service provider's APN.

User Name/Password: Enter the username and password provided by your service provider.

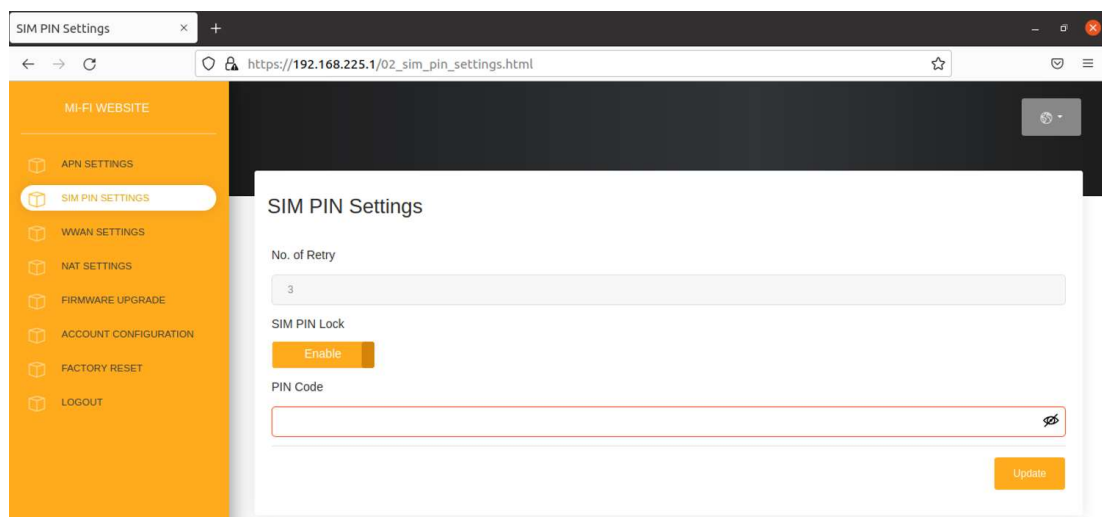
PDP Type: Select PDP type (IPV4/IPV6/IPV4 & IPV6) that provided by your service provider.



### 3.2.1.2 SIM PIN Setting

Enter SIM PIN code if your SIM is protected by PIN code

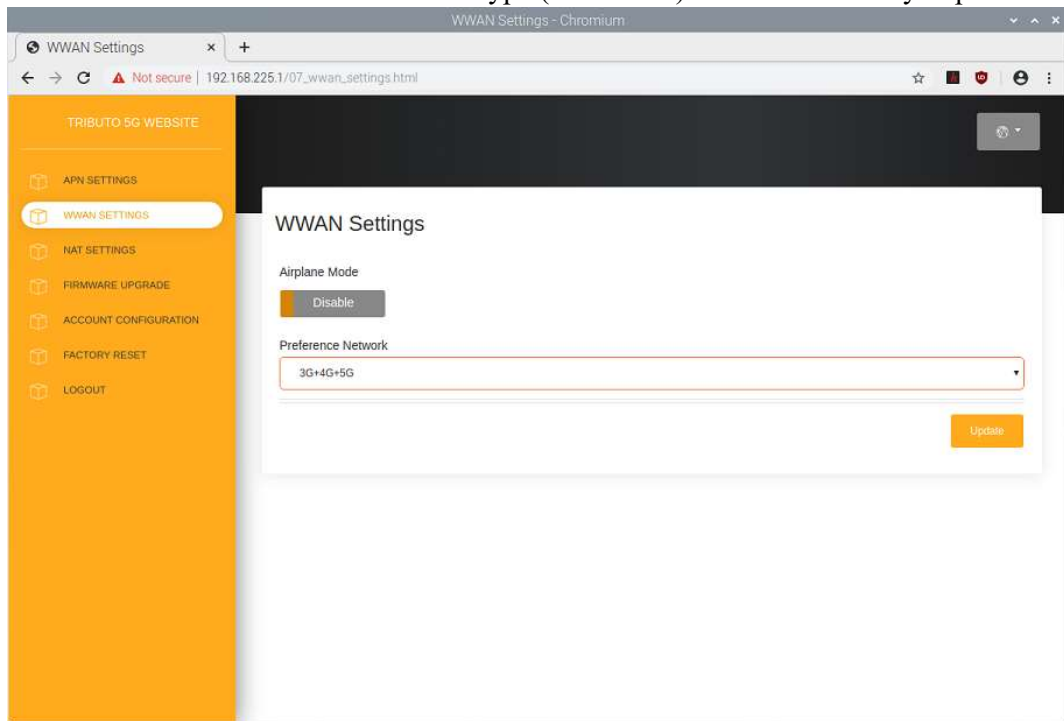
You can Disable SIM PIN Lock if you don't need this feature



### 3.2.1.3 WWAN Settings

**Airplane Mode:** Move the toggle to enable airplane mode.

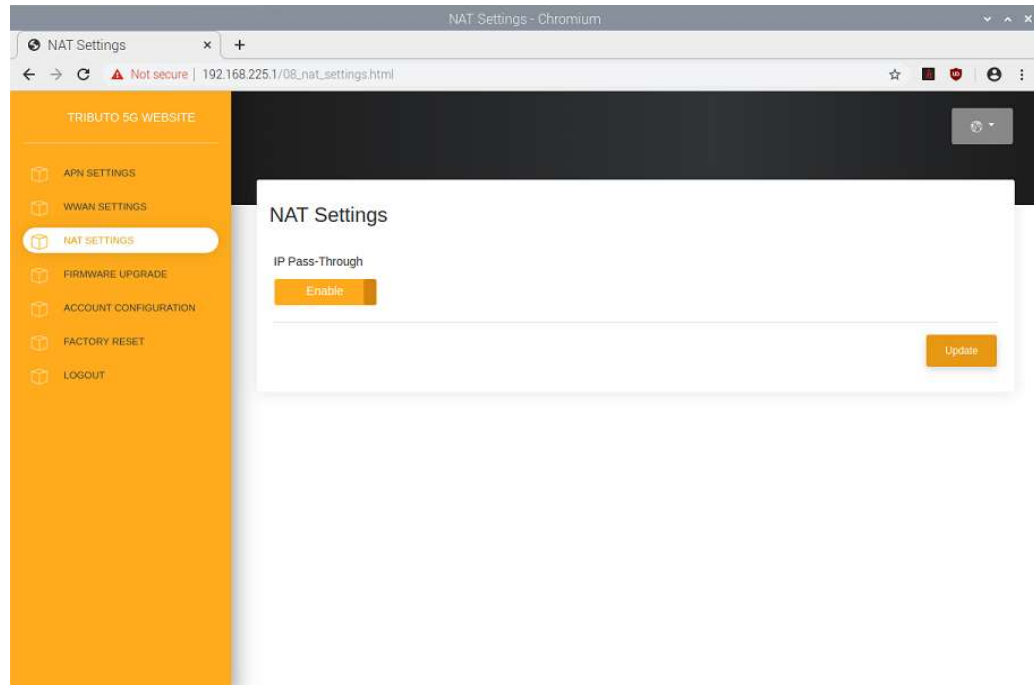
**Preference Networks:** Select network type (3G/4G/5G) combination that you prefer to use.



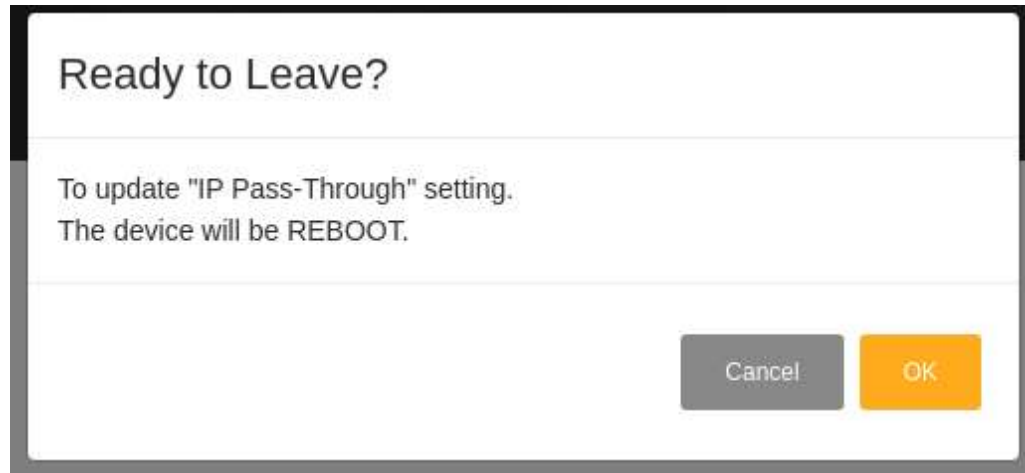


### 3.2.1.4 NAT Settings

**IP Pass-Through:** Move the toggle to enable IP Pass-Through.



Dongle will reboot after enabled IP pass-through.



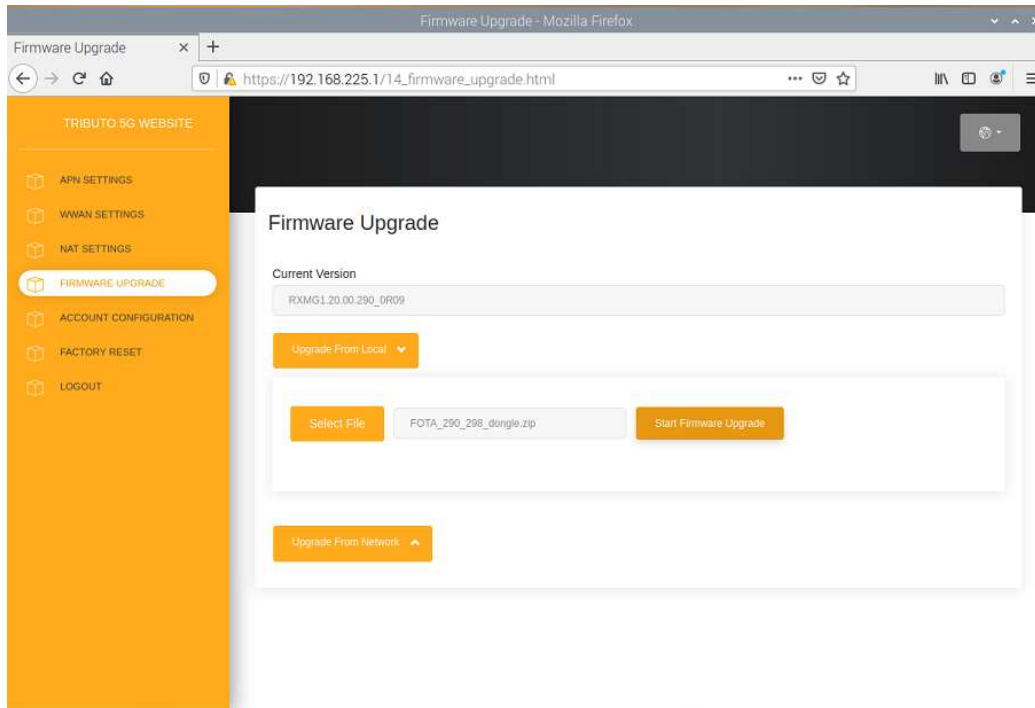
### 3.2.1.5 Firmware Upgrade

**Current Version:** Current Firmware version.

**Upgrade From Local:** Select a firmware update package from local.

**Upgrade From Network:** Checking server if there is new Firmware to upgrade. It will start to upgrade Firmware if there has a new version.

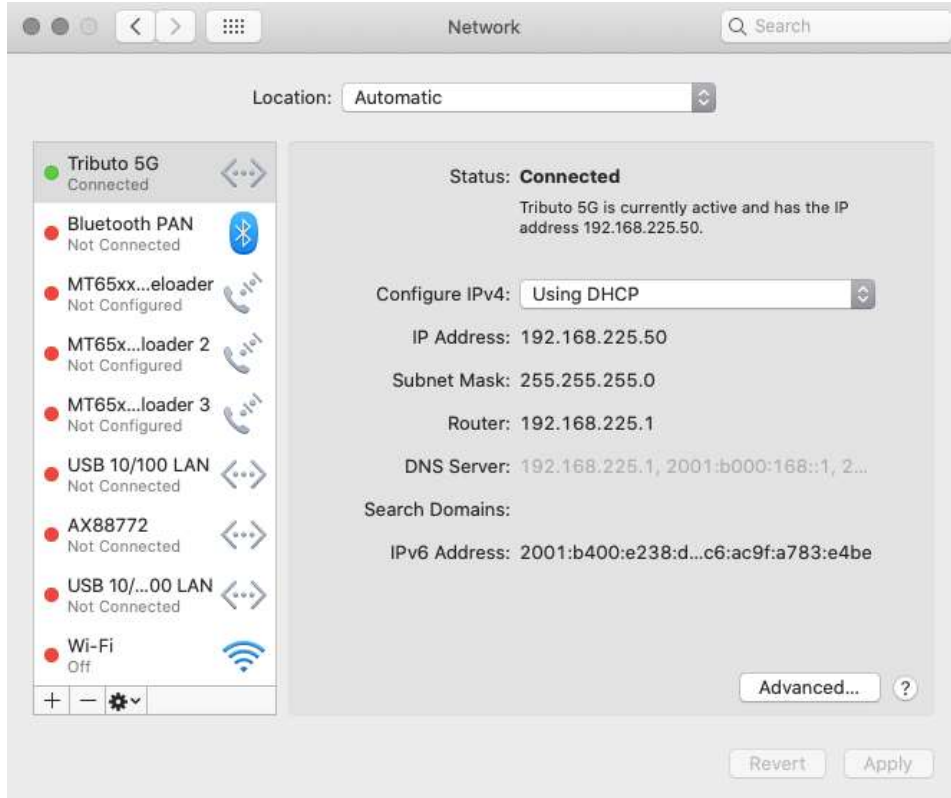
During firmware update, you can find red led on and green led blinking.

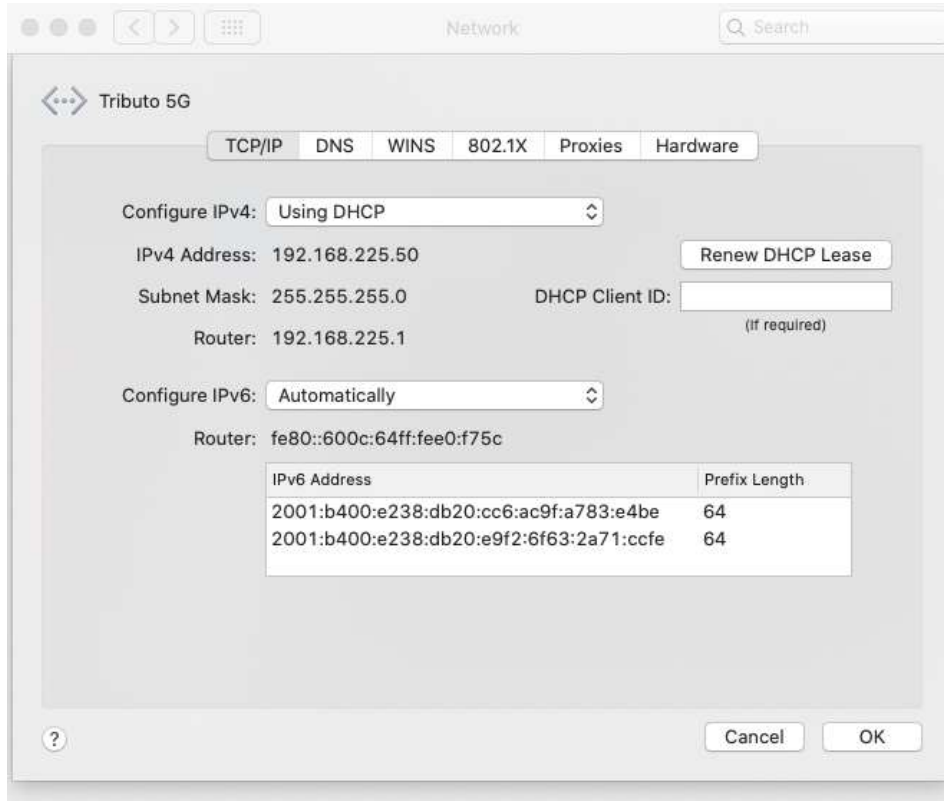


**Logout:** Logout Dongle settings

### 3.2.2 Host OS by Mac OS

Tributo Dongle will boot and register to network automatically after connect to host. You can see connection detail by checking “Network”, and check network configuration on “Advance”.





We provide WEB based configuration utility for Mac OS, you can refer to configuration utility section on Linux chapter for detail.