



2023

Three 5G Hub NR5103e – Self-Install User Guide



Three Ireland

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Objectives

The objective of this document is to provide the Users with an overview of the Three 5G Hub NR5103e, general setup, and troubleshooting guidelines.

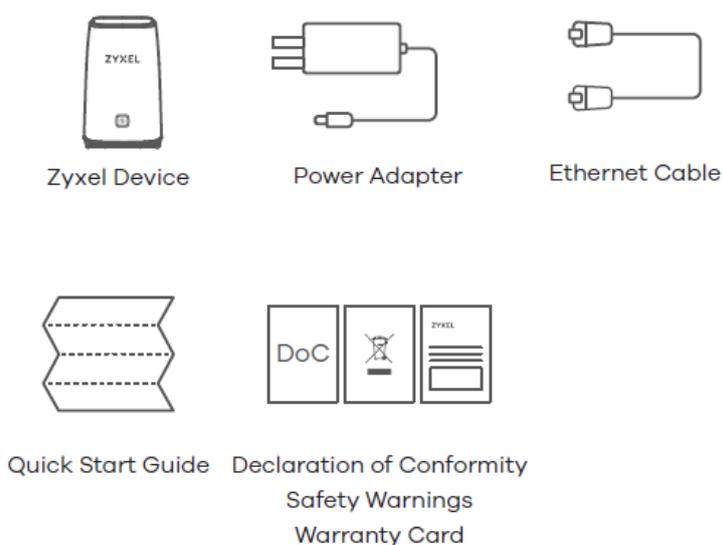
1. Overview

Three 5G Hub NR5103e Smart Hub is a 5G wireless router, that works on the 5G, and 4G networks. You can connect your devices to them via network cables or Wi-Fi for data service.

The following figure shows the appearance of the device. It is only for your reference. The actual device may be different.



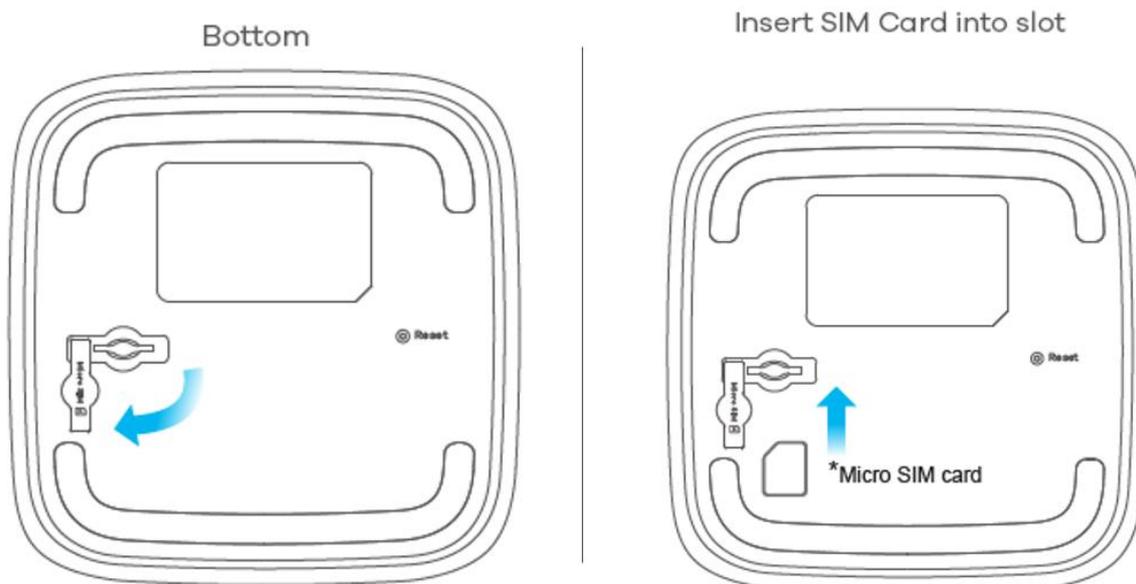
Package Contents



1.1 Inserting the SIM

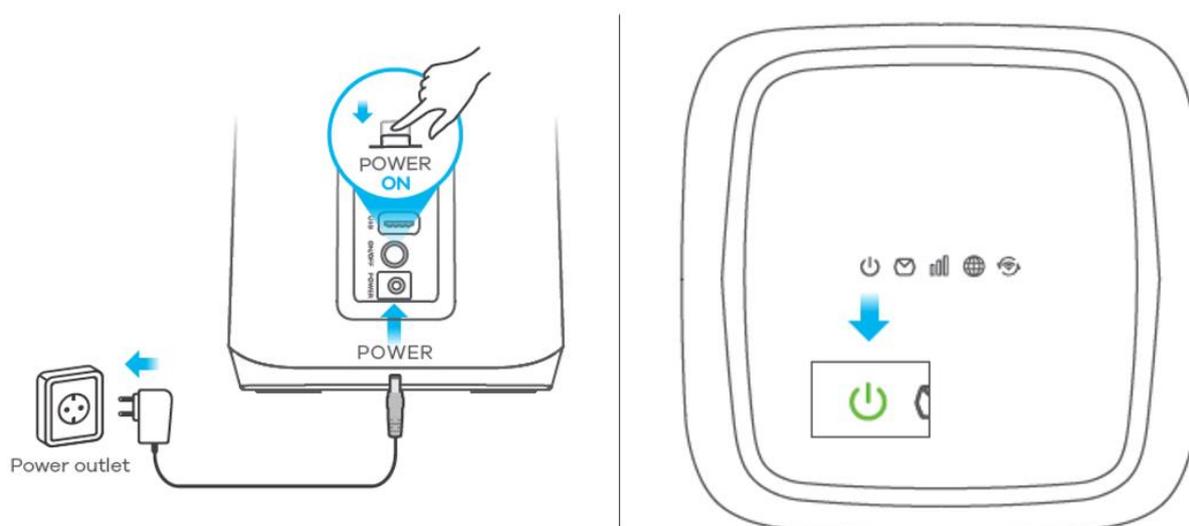
To access the Internet through the cellular network from the Smart Hub, you need to install a valid micro-SIM card first.

1. Turn over the Smart Hub to get access to the base. Open the slot cover.
2. Insert the micro-SIM card as shown.



1.2 Powering On/Off Your Device

Connect the AC adapter/power cable from the Smart Hub to a wall power outlet. Press the power button on the back of the device. The switch should be switched to the Internal Antennae. Check the power LED is ON.



Note: To power off without disconnecting the cable or the adapter, press the power button. Press the power button again to switch on the device and monitor the LEDs on the top of the device.

1.3 Indicator Lights

When the Smart Hub is powered on, the following indicators may light up on the top of the device.

LEDs

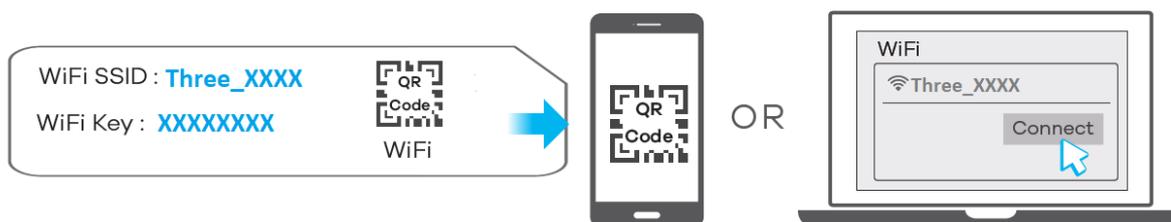
| | |
|--|--|
|  Power | Green Blink - Zyxel Device is booting On - Power On Off - Power Off Red On - Zyxel Device error, need to take action |
|  SMS | Green On - There is one or more unread SMS Blink - Inbox is full Off - No unread SMS |
|  Cellular Signal Strength | Blue On - Good Blink - No or invalid SIM card is inserted Green On - Medium Red On - Poor Blink - Weak |
|  Internet | Blue On - Internet connected using 5G Green On - Internet connected using 4G, or Ethernet WAN is connected Red On - Internet is unavailable |
|  WiFi/WPS | Blink - Establishing WPS connection Green On - WLAN interface is enabled Off - WLAN interface is disabled |
|  WiFi/WPS (front) | Blink - Establishing WPS connection Green On - WLAN interface is enabled Off - WLAN interface is disabled |

2. Connecting to the Smart Hub

You have two options to connect to the Smart Hub from your client devices, via Wi-Fi or a LAN cable. Once you are connected, test your connection by opening the 5G CPE Admin UI web page.

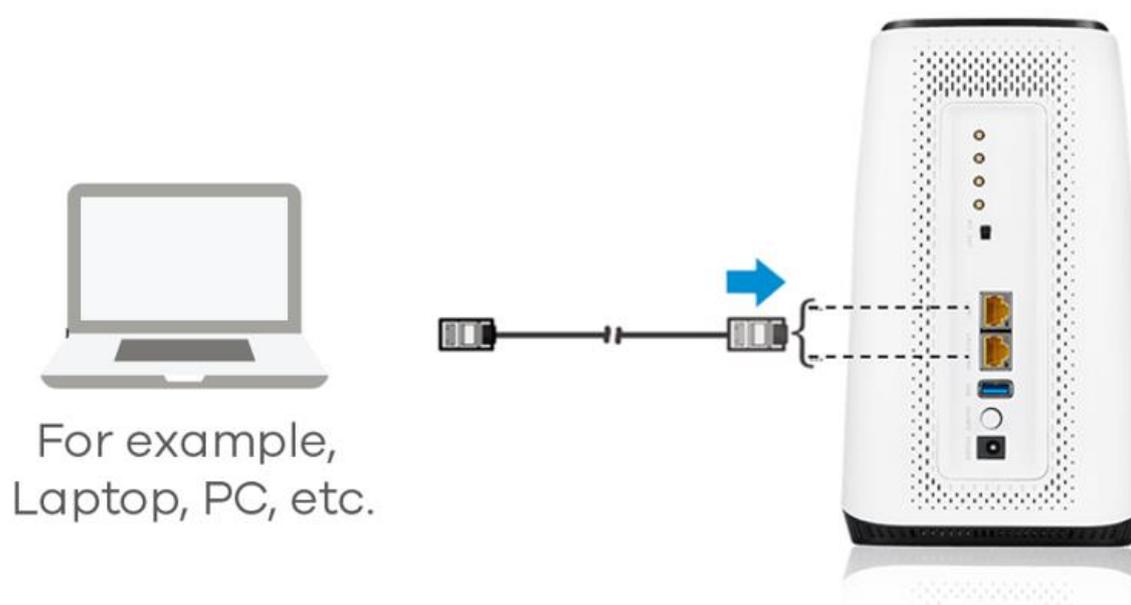
2.1 Connecting via Wi-Fi

1. Find the default Wi-Fi name (SSID) and password on the label at the base of the Smart Hub.
2. On your Wi-Fi-enabled devices, turn Wi-Fi on and view the list of available Wi-Fi networks.
3. Choose the SSID from the label, enter the password, and select connect.
4. OR Scan the QR code on the label from the Wi-Fi-enabled devices (only applicable when the SSID and password are set to default).



2.2 Connecting via a Network/LAN Cable

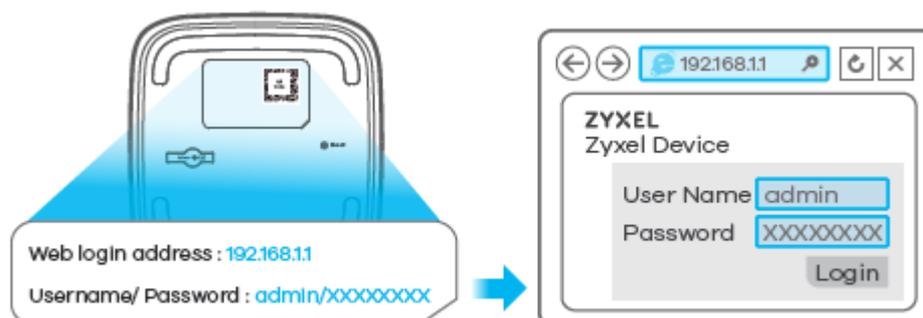
Connect one of the LAN ports on the Smart Hub and the LAN port on your computer/PC/Laptop or smart devices with a LAN cable.



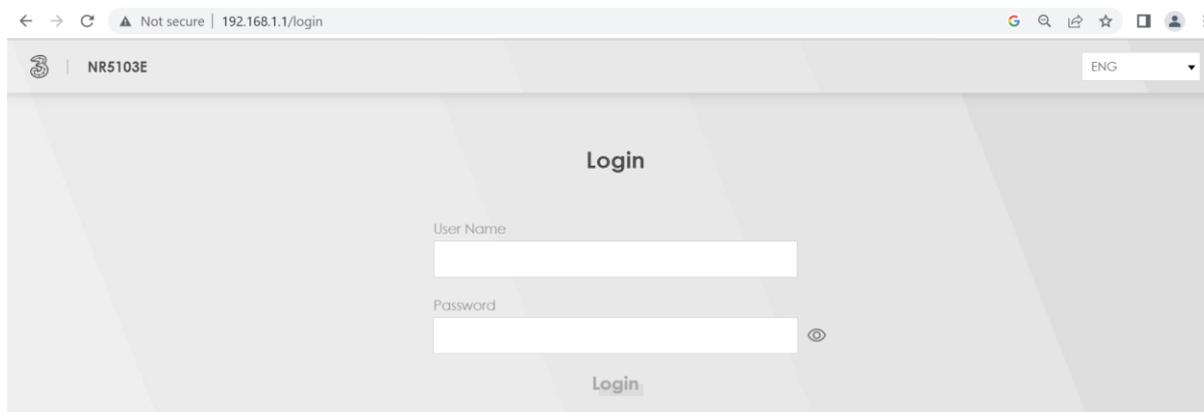
2.3 Accessing the 5G CPE Admin UI Web Page

Visit the 5G CPE Admin UI web page to configure the Smart Hub settings, such as passwords, and Wi-Fi SSID/Name.

1. View the label at the base of the Smart Hub to get the default Web login address and username/password. (Default URL: <http://192.168.1.1/>)



2. Launch the Internet browser from a device connected to the Smart Hub and enter the URL in the address bar to load the login page as below, Enter the username and password and select **Login**.



2.4 Best Placement in the Home

For the best connection from the Smart Hub to the cellular network:

- Place your Smart Hub in a central location close to a window where there is also a power source. Concrete walls and metal doors can reduce cellular signals from the tower. Placement in basements should be avoided.

For the best Wi-Fi connection between the Smart Hub and the clients:

- Minimize interference by trying to keep the following items no closer than 2~3 meters from your Smart Hub: Cordless telephone base stations, microwaves, baby monitors, Bluetooth devices, and wireless speaker systems.
- Avoid congestion since adding additional devices to your Wi-Fi network may reduce the speed for all devices on that network.
- Make sure you have a good Wi-Fi signal on your client devices.

3. Troubleshooting Guide

3.1 Forgot the admin <http://192.168.1.1/login> page password

Resolution:

Resetting your modem will default to factory settings. If your device is reset any customized settings would need to be reconfigured

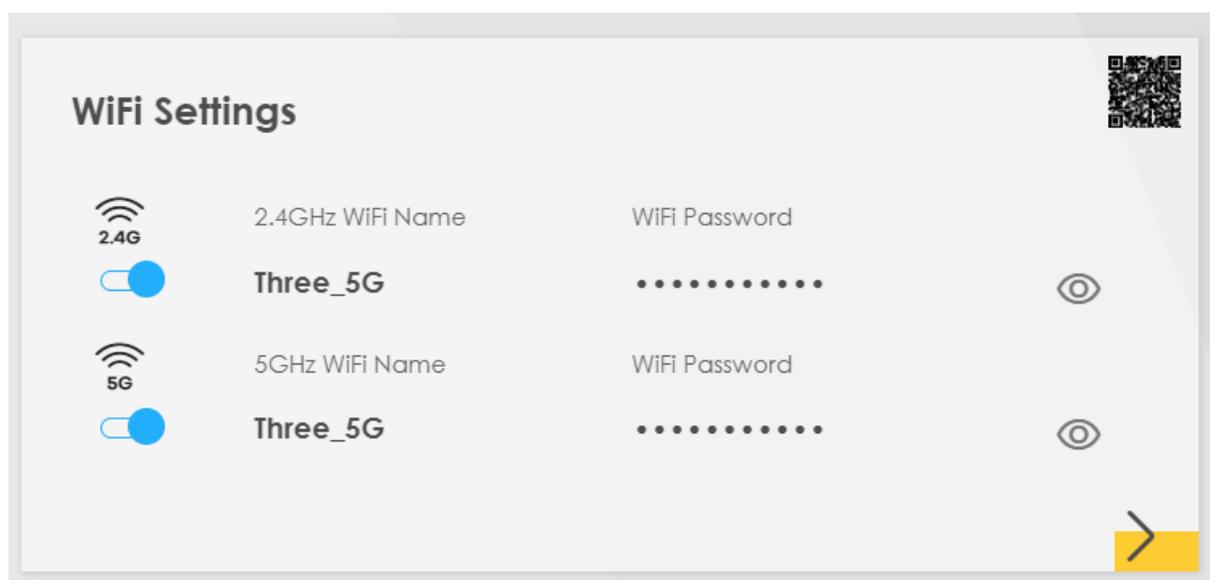
- a. Locate the reset button/hole
- b. The reset hole is located on the bottom of the 5G Hub
- c. Press the reset button using a SIM ejector tool or a pin for more than 5 seconds
- d. The indicator lights will turn off/rapidly blink and the device will restore to factory setting in a few minutes
- e. You can use the credentials printed on the bottom label of the device to login
- f. It is recommended to change the default password after first login

3.2 Change the Wi-Fi Name/SSID: Name of the device to connect to (e.g., you do not want Three_XXXX and wants to rename it to e.g., MyHouse)

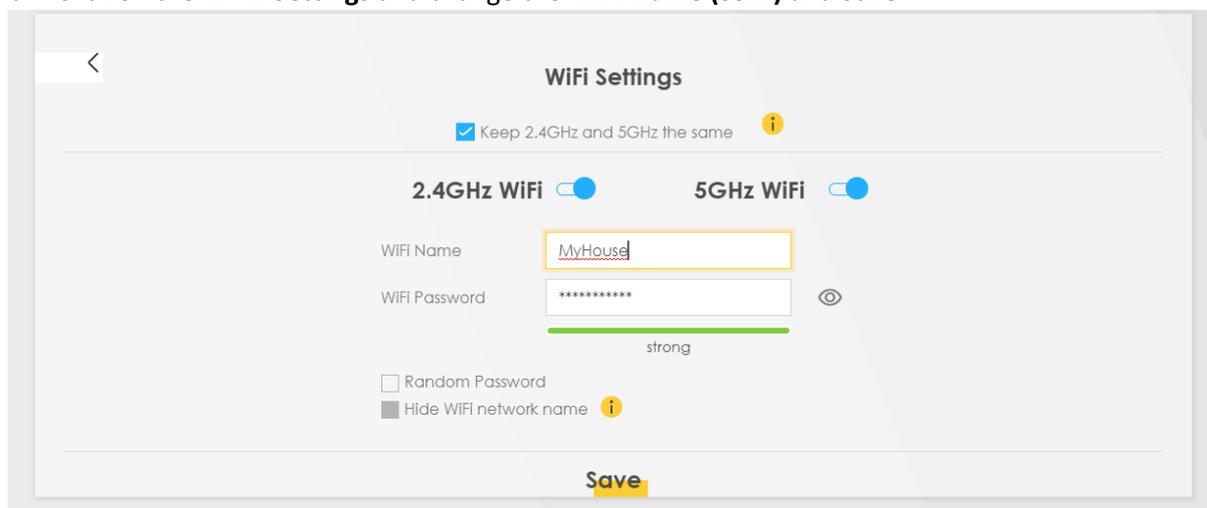
Resolution:

Performing the below action will disconnect all connected devices to the Wi-Fi. You must manually reconnect the devices to the new Wi-Fi Network Name.

- Login to the Admin UI web page <http://192.168.1.1>, and locate the **Wi-Fi Settings** on the home page as below



- Click on the **Wi-Fi Settings** and change the **WiFi Name (SSID)** and **Save**

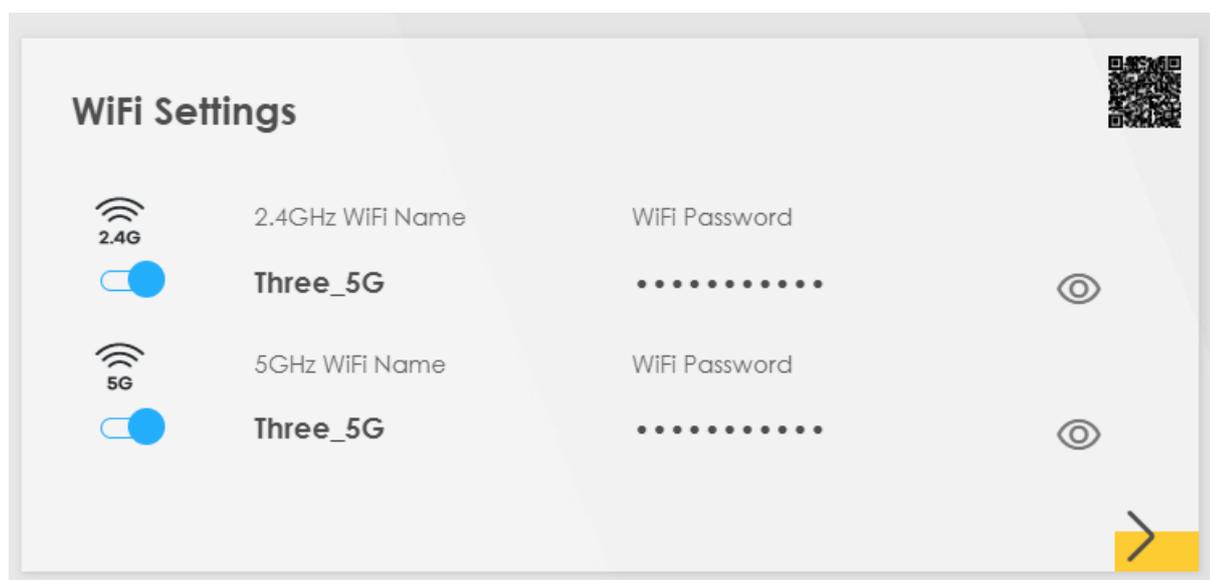


3.3 Forgot the Wi-Fi Password/Key

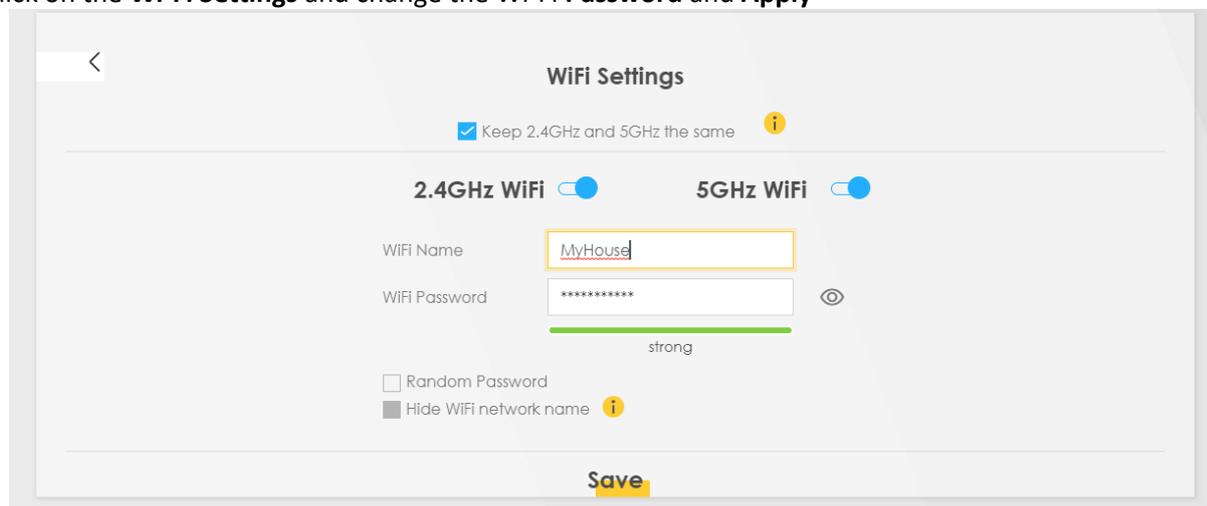
Resolution:

Performing the below action will disconnect all connected devices to the Wi-Fi. You must manually reconnect the devices to the new Wi-Fi Network using a new password.

- Login to the Admin UI web page <http://192.168.1.1>, and locate the **Wi-Fi Settings** on the home page as below



- Click on the **Wi-Fi Settings** and change the Wi-Fi Password and Apply



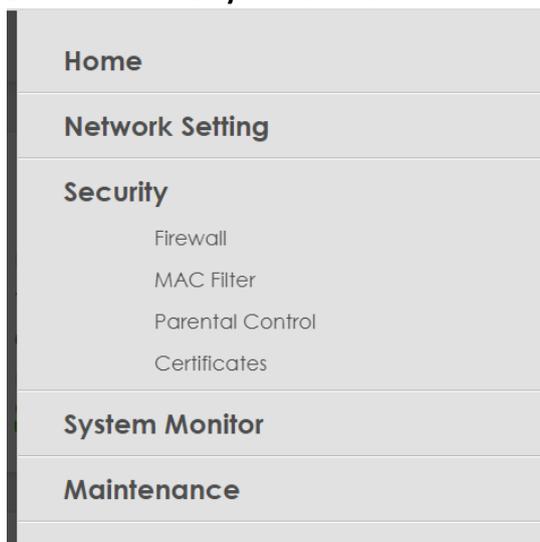
- The new Wi-Fi password can be used to connect to the Wi-Fi network

3.4 Parental Control: How to restrict a child from connecting to the network (Parent can stop children from connecting to the internet within specified date/time)

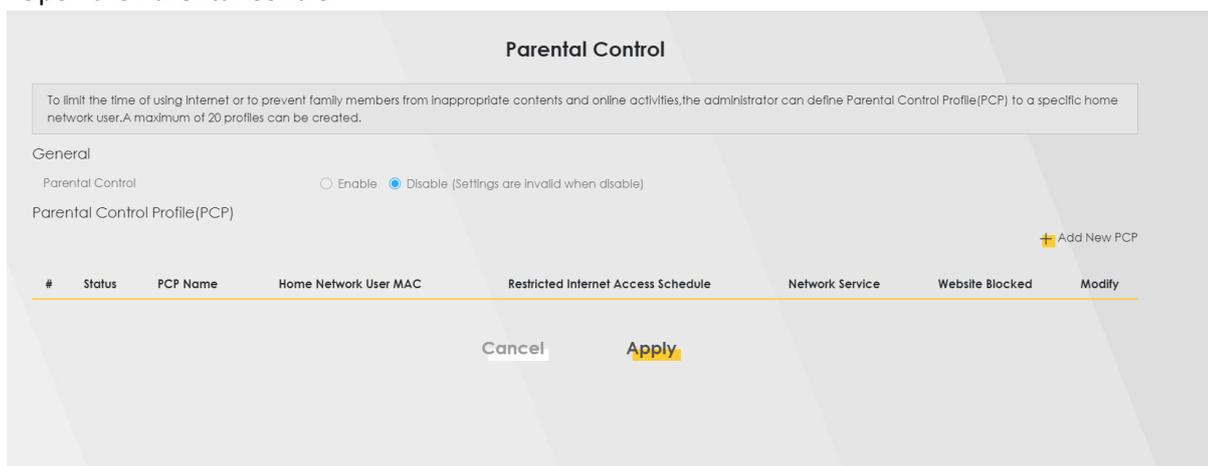
Resolution:

- Login to the Admin UI <http://192.168.1.1>
- Select the Hamburger menu on the top right

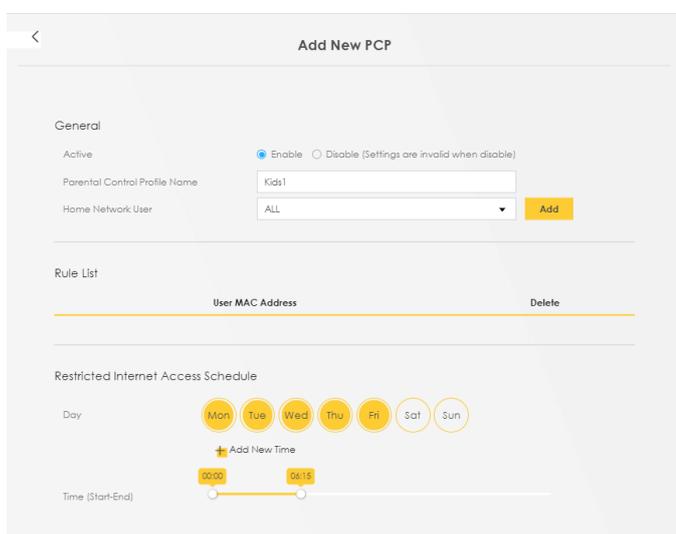
- c. Locate the **Security** → **Parental Control**



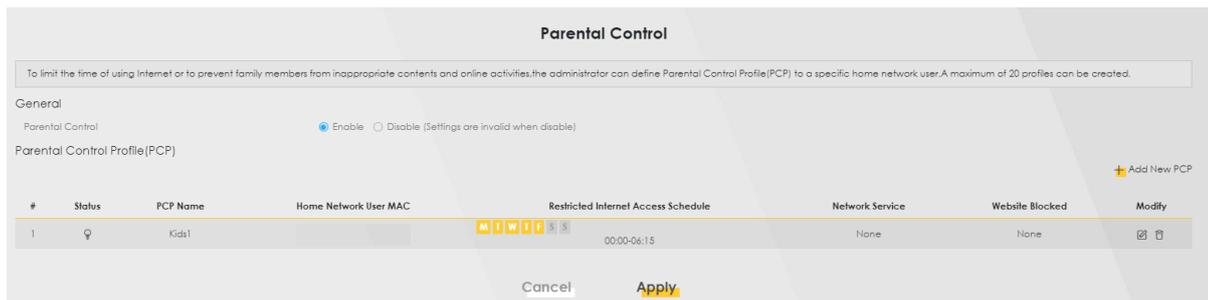
- d. Open the **Parental Control**



- e. Click on **Add New PCP** button to add a relevant device for further configuration
 f. Select **Enable**, enter desired **Profile Name**, Select Kids device (**Home Network User**) → **Add**
 g. Select the desired **Restricted Internet Access Schedule** → **OK**



h. Enable the Parental Control setting under the **General section as below and **Apply****



For removing or deleting the rule

- i. Click on the **Delete icon** to remove the specific rule **OR Disable** the rule under the **General** section and **Apply**

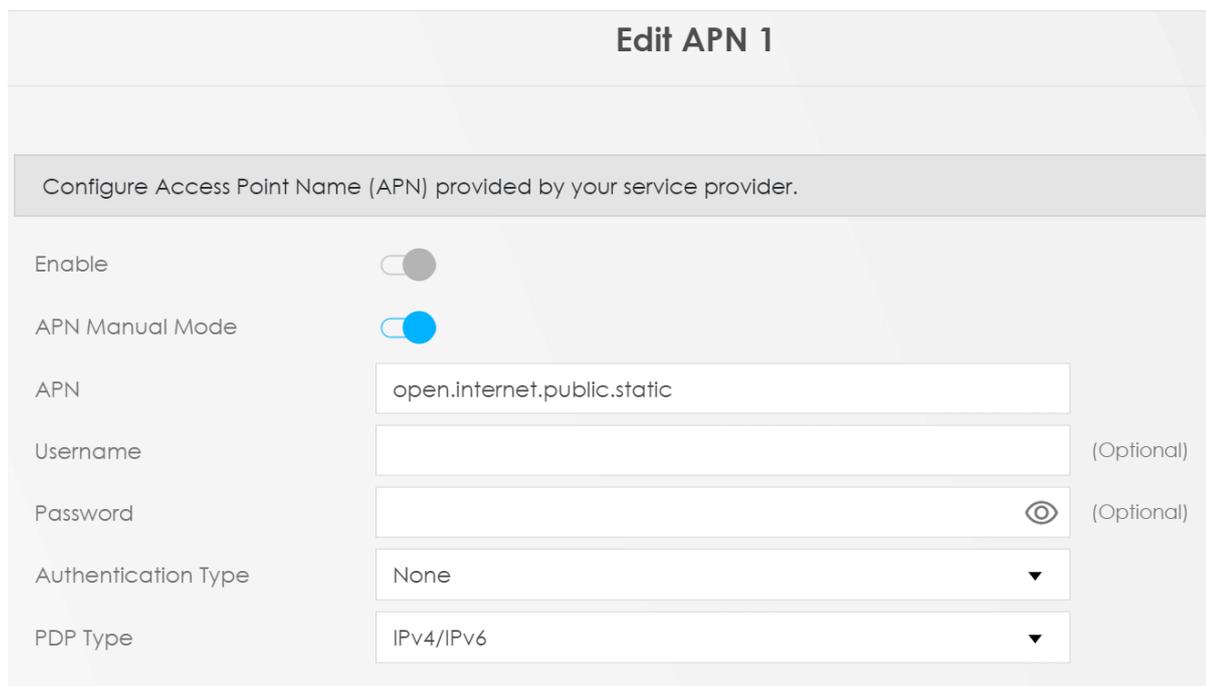
3.5 Provisioning or Setting up a Static IP

Note: Static IP addresses are only available for users on specific business broadband plans.

By default, the modem dynamically assigns a local IP address to the devices you connect to your local network. You may need a static IP address for devices that will need to be accessed very reliably by other systems or devices on your network, such as a printer, data server, etc.

Steps:

- a. Login to the Admin UI Web Page <http://192.168.1.1>
- b. Select the **Hamburger menu** → **Network Settings** → **Broadband** → **Cellular APN**
- c. Click on **pencil icon** under **Modify** header → **Enable APN Manual Mode**
Set Below Parameters
APN: open.internet.public.static
PDP Type: IPv4/IPv6
Select **OK**



Steps Static IP for Business Users with Private Static IP assigned:

- Log in to the Admin UI Web Page <http://192.168.1.1>
- Select the Hamburger menu → **Network Settings** → **Home Networking** → **Static DHCP**
- Select **+Static DHCP Configuration** → enable **Active** and enter desired settings → **OK**

Static DHCP Configuration

Active

IP Type IPv4

Select Device Info Manual Input

MAC Address - - - - -

IP Address . . .

Cancel OK

Static Routing (if required)

- Login to the Admin UI Web Page <http://192.168.1.1>
- Select the **Hamburger menu** → **Network Settings** → **Routing** → **Static Route**
- +Add Static Router** → and enter desired setting → **OK**

Add New Static Route

Configure the required information for a static route.

Active

Route Name

IP Type IPv4

Destination IP Address . . .

Subnet Mask . . .

Use Gateway IP Address

Gateway IP Address . . .

Use Interface Default

3.6 Update Firmware

Updating the firmware will not change any customized settings.

Steps:

- The device will check for an upgrade every night between 02:00 and 04:00 and will auto-upgrade (follow the below steps to manually check if any upgrades are available)
- Log in to the Admin UI Web Page <http://192.168.1.1>
- Select the **Hamburger menu** → **Maintenance** → **Firmware Upgrade** → **Online Upgrade**
- Click **Check for Latest Firmware Now**
- If the update is available upgrade the device (The indicator lights will turn off/rapidly blink and the device will upgrade to the latest firmware in a few minutes)

3.7 Diagnosis

Steps:

- Log in to the Admin UI Web Page <http://192.168.1.1>
- Select the **Hamburger menu** → **Maintenance** → **Diagnostic**
- Enter the IP in the text field and select Ping or Telnet to test the connectivity

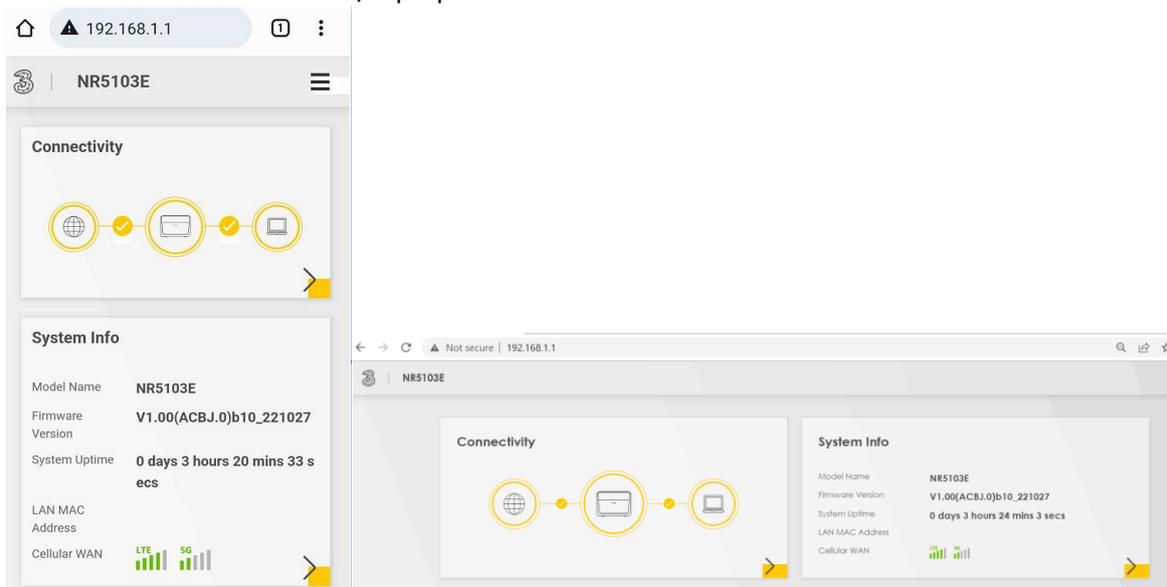
4. Troubleshooting – Additional Queries

4.1 Mobile and Desktop view of the dashboard?

There are two different views.

The default view on the handset is the Mobile view.

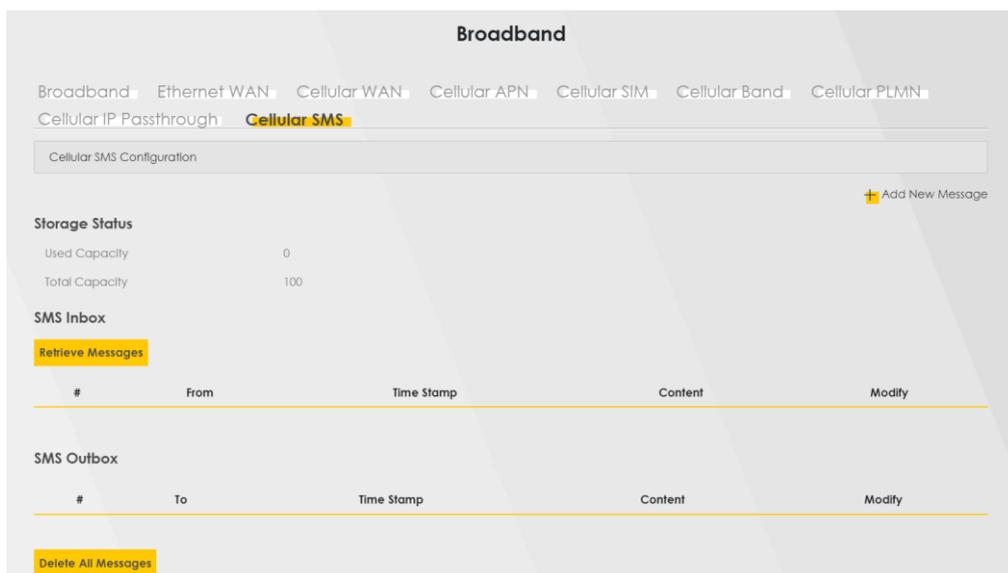
The default view on PC/Laptop is PC View.



4.2 How to send or receive SMS via the Admin UI?

You can access SMS (send/receive) via the Admin UI.

- Log in to the Admin UI <http://192.168.1.1>
- Select the **Hamburger menu** → **Network Settings** → **Broadband** → **Cellular SMS**

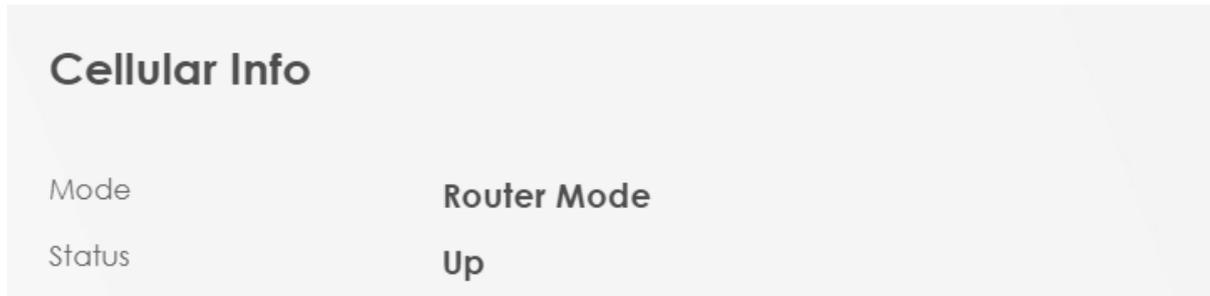


4.3 What steps does a user take if they have a “red light” – not registered on the Network?

Steps

Follow Sections 1 and 2.

Check if the SIM was inserted properly, and the Device Status information is visible on the Admin Dashboard.



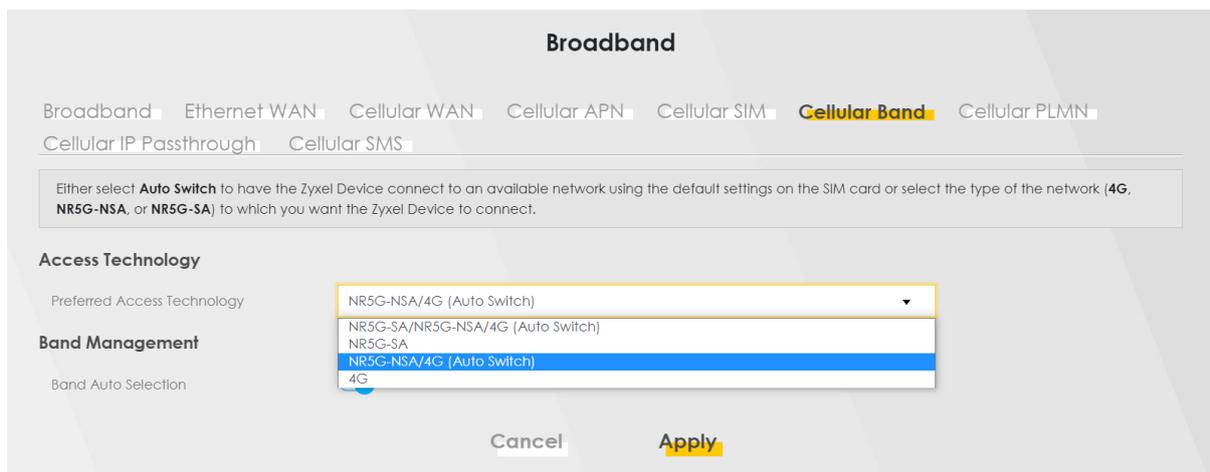
If the Cellular Info card displays No SIM Card detected, then re-insert the SIM card correctly.

4.4 Does this hub pick up the 3G signal? If so, how to toggle between 5G/4G/3G – useful when there is a 5G outage.

Steps

The device supports 5G and 4G only.

Log in to Admin UI <http://192.168.1.1> → Hamburger Menu → Broadband → Cellular Band
Select the desired Technology and Apply



4.5 How to check how much data is being used, so where is data usage found on the dashboard?

Steps

Log in to Admin UI <http://192.168.1.1> → Hamburger Menu → System Monitor → Traffic Status

Traffic Status

WAN LAN

Figures about data that have been sent out to and received from the Internet are displayed in the following table.

Status

Sent

71236606 Byte



Received

964949000 Byte

Refresh Interval:

| Connected Interface | | | Disabled Interface | | | |
|---------------------|--------|--------------------|--------------------|--------|------------------------|------|
| | Data | Packets Sent Error | Drop | Data | Packets Received Error | Drop |
| Cellular WAN 1 | 147344 | 0 | 0 | 791253 | 0 | 0 |
| Cellular WAN 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ETHWAN | 0 | 0 | 0 | 0 | 0 | 0 |