



Three 5G Hub NR5103e – Self-Install User Guide



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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.





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

U Power	Green Red	Blink - Zyxel Device is booting On - Power On Off - Power Off 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 Green Red	On - Good Blink- No or invalid SIM card is inserted On - Medium On - Poor Blink- Weak
) Internet	Blue Green Red	 On - Internet connected using 5G On - Internet connected using 4G, or Ethernet WAN is connected On - Internet is unavailable
WiFi/WPS	Green	Blink - Establishing WPS connection On - WLAN interface is enabled Off - WLAN interface is disabled
WiFi/WPS (front)	Green	Blink - Establishing WPS connection 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: <u>http://192.168.1.1/)</u>





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**.

← → C ▲ Not secure 192.168.1.1/login		G	Q 🖻 🖈 🖪 😩 🗄
3 NR5103E			ENG 🗸
	Login		
	er Name		
Р	issword	0	
	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.

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

WiFi Se	ttings		
() 2.4G	2.4GHz WiFi Name	WiFi Password	
	Three_5G	•••••	0
	5GHz WiFi Name	WiFi Password	
	Three_5G	•••••	0
			>

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

<	WiFi Settings	
	Keep 2.4GHz and 5GHz the same	
	2.4GHz WiFi 🤍 5GHz WiFi 🔍	
	WiFi Name MyHouse	
	WiFi Password 🖤	
	strong	
	Random Password Hide WiFi network name	
	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.

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

WiFi Se	ttings		
() 2.4G	2.4GHz WiFi Name	WiFi Password	
	Three_5G	•••••	0
(((59	5GHz WiFi Name	WiFi Password	
	Three_5G	•••••	0
			>
			/

b. Click on the Wi-Fi Settings and change the Wi-Fi Password and Apply

<	WiFi Settings
	✓ Keep 2.4GHz and 5GHz the same
	2.4GHz WiFi 🥌 5GHz WiFi 💶
	WiFI Name MyHouse
	WiFi Password 💿
	strong
	Random Password Hide WiFi network name
	Save

- c. 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:
 - a. Login to the Admin UI <u>http://192.168.1.1</u>
 - b. Select the Hamburger menu on the top right



c. Locate the Security → Parental Control

Home
Network Setting
Security
Firewall
MAC Filter
Parental Control
Certificates
System Monitor
Maintenance

d. Open the Parental Control

	k user.A maxir	nom of 20 profil	es can be created.				
Parental	l Control		🔿 Faable 🦲 Disable (Settings are invalid when disable)			
arontal	l Control Pr		O Eligible 🥥 Disoble (senings are invalid when asable)			
leniu	CONTOLET	UIIIe(FCF)				+	Add New P(
# S1	itatus P	CP Name	Home Network User MAC	Restricted Internet Access Sche	dule Network Service	Website Blocked	Modify

- 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 \rightarrow OK

Enable O Disable (Settings are invalid when disable	
Kids1	
ALL	Add
adule	
	Enable Disable (Settings are invalid when disable Kids1 ALL MAC Address edule

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

				Parental Control			
To limi	t the time of usir	ng Internet or to prevent far	nily members from inappropriate contents and	online activities,the administrator can define Parental Control Profi	e(PCP) to a specific home network user.A	maximum of 20 profiles can be a	reated.
Genero	al						
Parent	al Control		● Enable 🔿 Disable (Setting	s are invalid when disable)			
Parente	al Control Pro	ofile(PCP)					
							+ Add New PCP
+	Status	PCP Name	Home Network User MAC	Restricted Internet Access Schedule	Network Service	Website Blocked	Modify
1	Ģ	Kids1		M T W T F S S 00:00-06:15	None	None	ß
				cuncer 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 \rightarrow Network Settings \rightarrow Broadband \rightarrow 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

	Edit APN 1	
Configure Access Point Name	(APN) provided by your service provider.	
Enable		
APN Manual Mode		
APN	open.internet.public.static	
Username		(Optional)
Password	0	(Optional)
Authentication Type	None	
PDP Type	IPv4/IPv6 ▼	

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

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

	Static DHCP Configuration
Active	
IP Type	IPv4
Select Device Info	Manual Input
MAC Address	
IP Address	
	Cancel OK

Static Routing (if required)

- a. Login to the Admin UI Web Page <u>http://192.168.1.1</u>
- b. Select the Hamburger menu \rightarrow Network Settings \rightarrow Routing \rightarrow Static Route
- c. +Add Static Router \rightarrow and enter desired setting \rightarrow OK

	Add Ne	w sidiic kou	le	
Configure the required inform	nation for a static route.			
Active				
Route Name				
IP Туре	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:

- a. The device will check for an upgrade every night between 02:00 and 04:00 and will autoupgrade (follow the below steps to manually check if any upgrades are available)
- b. Log in to the Admin UI Web Page http://192.168.1.1
- c. Select the Hamburger menu \rightarrow Maintenance \rightarrow Firmware Upgrade \rightarrow Online Upgrade
- d. Click Check for Latest Firmware Now
- e. 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)

	Firmware Upgrade
Firmware Upgrade Online Upgrad	e
Online Upgrade page can manua	al/auto online check and upgrade the latest version.
Manual Online Upgrade	
Check for Latest Firmware Now	
Auto Online Upgrade	
Auto Upgrade	•
Online Check Period	Daily Check Weekly Check
Online Check Start Time	01:00 👻
The device will upgrade from 01:00 to (05:00 in the every day.
	Cancel Apply

3.7 Diagnosis

Steps:

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

D'		
1)10	ano	STIC
DIG	gilu	2110

PING 8.8.8.8 (8.8.8.8): 56 data bytes 64 bytes from 8.8.8.8: seq=0 ttl=58 tlme=26.418 ms 64 bytes from 8.8.8.8: seq=1 ttl=58 tlme=25.824 ms 64 bytes from 8.8.8.8: seq=2 ttl=58 tlme=52.765 ms 64 bytes from 8.8.8.8: seq=3 ttl=58 tlme=52.744 ms			
 — 8.8.8.8 ping statistics — 4 packets transmitted, 4 packets received, 0% packet loss round-trip min/avg/max = 25.824/49.487/92.965 ms 			
P/IP			



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.

⚠ 192.1	68.1.1	1:					
3 NR510	3E	≡					
Connectivity							
	<u>−</u> ⊖-•(
System Info			← → C ▲ Not secure 192.168.1.1			Q. 🖻	☆
Model Name	NR5103E		S NR5103E				
Firmware Version	V1.00(ACBJ.0)b10_2	221027	Connectivity	System Info			
System Uptime LAN MAC Address	0 days 3 hours 20 m ecs	ins 33 s		Model Name Firmware Version System Uptime LAN MAC Address	NR5103E V1.00(ACBJ.0)b10_221027 0 days 3 hours 24 mins 3 secs		
Cellular WAN		>		Cellular WAN	ân ân	>	

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

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

- a. Log in to the Admin UI <u>http://192.168.1.1</u>
- b. Select the Hamburger menu \rightarrow Network Settings \rightarrow Broadband \rightarrow Cellular SMS

Collidar SMC Cool		dr SMS		
Cellular SMS Cont	liguration			🕂 Add New Message
torage Status				-
Used Capacity	0			
Total Capacity	1	00		
MS Inbox				
Retrieve Messages				
#	From	Time Stamp	Content	Modify
MS Outbox				



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.

Cellular Info		
Mode	Router Mode	
Status	Up	

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 <u>http://192.168.1.1</u> \rightarrow Hamburger Menu \rightarrow Broadband \rightarrow Cellular Band Select the desired Technology and Apply

Broadband Ethernet WA	AN Cellular WAN Cellular APN Cellular SIM Gellular Band Cellular PLMN
Cellular IP Passthrough C	Cellular SMS
Either select Auto Switch to have the	2 Zyxel Device connect to an available network using the default settings on the SIM card or select the type of the network (4G,
NR5G-NSA, or NR5G-SA) to which you	want the Zyxel Device to connect.
NR5G-NSA, or NR5G-SA) to which you	u want the Zyxel Device to connect.
NR5G-NSA, or NR5G-SA) to which you	ou want the Zyxel Device to connect.
NR5G-NSA, or NR5G-SA) to which you Access Technology Preferred Access Technology	NPSG-NSA/4G (Auto Switch)
NR5G-NSA, or NR5G-SA) to which you Access Technology Preferred Access Technology	NR5G-NSA/4G (Auto Switch)
NR5G-NSA, or NR5G-SA) to which you Access Technology Preferred Access Technology Band Management	NR5G-NSA/4G (Auto Switch) NR5G-SA/NR5G-NSA/4G (Auto Switch) NR5G-SA
NR5G-NSA, or NR5G-SA) to which you Access Technology Preferred Access Technology Band Management	NR5G-NSA/4G (Auto Switch) NR5G-SA/NR5G-NSA/4G (Auto Switch) NR5G-SA NR5G-NSA/4G (Auto Switch) NR5G-NSA/4G (Auto Switch)

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 <u>http://192.168.1.1</u> \rightarrow Hamburger Menu \rightarrow System Monitor \rightarrow Traffic Status



WAN LAN							
Figures about dat	a that have been sent out to and r	eceived from the Internet are displa	ayed in the following t	table.			
Refresh Interval	None	Sent (71236606 Byte (964	Received 949000 Byte			
	Connected Interface	Data	Packets Sent Error	Drop	Data	Packets Received Error	Drop
	Connected Interface Cellular WAN 1	Data 147344	Packets Sent Error 0	Drop 0	Data 791253	Packets Received Error 0	Drop 0
	Connected Interface Cellular WAN 1 Disabled Interface	Data 147344 Data	Packets Sent Error Packets Sent Error	Drop 0 Drop	Data 791253 Data	Packets Received Error 0 Packets Received Error	Drop 0 Drop
	Connected Interface Cellular WAN 1 Disabled Interface Cellular WAN 2	Data 147344 Data 0	Packets Sent 0 Packets Sent Error 0	<u>ргор</u> 0 <u>ргор</u> 0	Data 791253 Data 0	Packets Received 0 Packets Received Error 0	Drop 0 Drop 0

