

Linksys

FGW3000

User Guide



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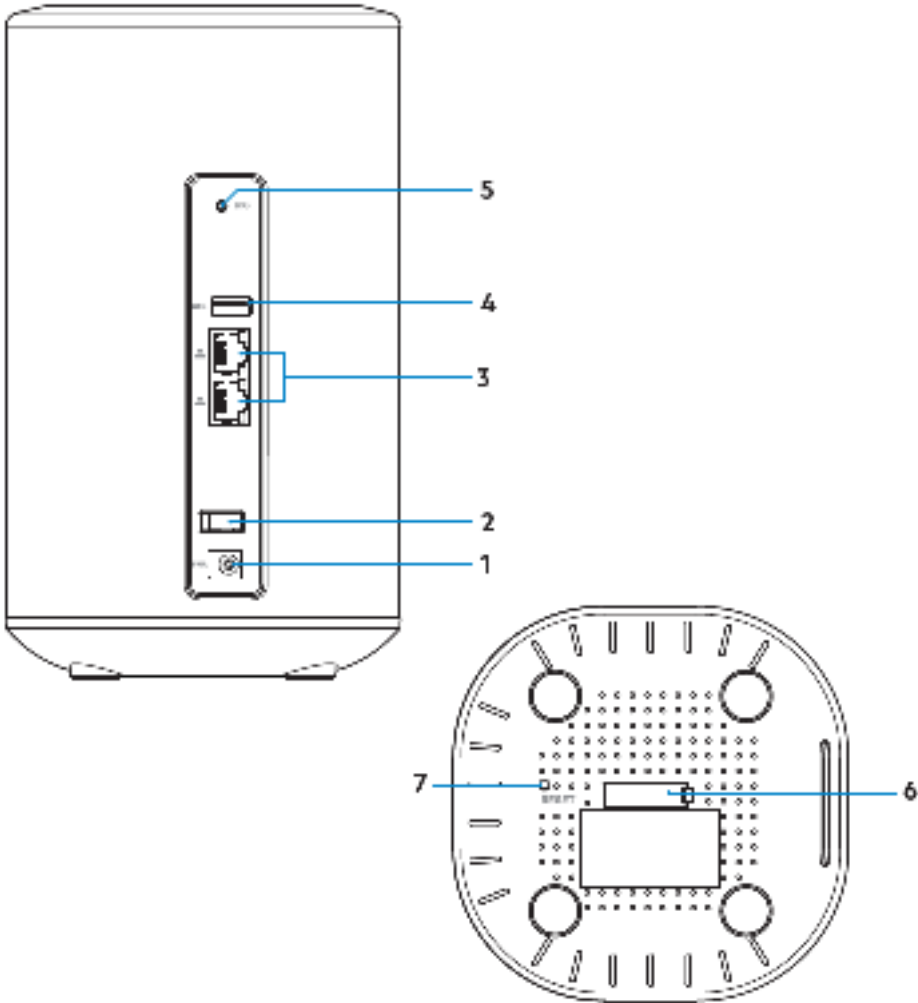
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Introduction

Product Overview

- 1. Power Input
- 2. Power on/off Switch
- 3. LAN Port
- 4. USB Port (Reserve)
- 5. WPS Button
- 6. Nano Sim Card Slot
- 7. Reset Button (Press 5 sec for Reset to Default)



LED Indicators

| LED Indication | Icon | LED Status | Description |
|-----------------------------------|---|------------------|-----------------------------------|
| Power |  | ON | Power ON |
| | | OFF | Power OFF |
| WiFi 2.4GHz |  | ON | 2.4GHz Wi-Fi ON |
| | | Blinking | Transmitting data |
| | | OFF | 2.4GHz Wi-Fi OFF |
| WiFi 5GHz |  | ON | 5GHz Wi-Fi ON |
| | | Blinking | Transmitting data |
| | | OFF | 5GHz Wi-Fi OFF |
| WPS |  | Blinking | WPS pairing (2min duration) |
| | | ON | WPS paired. (LED off after 5 sec) |
| | | Off | No WPS |
| SIM/4G signal strength |  | Blue LED On | Good Signal |
| | | Purple LED On | Medium Signal |
| | | Red LED On | Weak Signal |
| | | Red LED Blanking | No SIM detect |
| 5G signal strength (Primary cell) |  | Blue LED On | Good Signal |
| | | Purple LED On | Medium Signal |
| | | Red LED On | Weak Signal |
| No LTE Connection | The LEDs of 4G & 5G are both off | | |
| Firmware Upgrade | All LEDs in chasing pattern with blue color | | |
| Reset | All LEDs blinking with Blue color | | |

Installation

Please follow the steps below to install the router:

Step 1. Insert SIM card into the router with instructions shown below until it clicks.

Step 2. Connect one of the **LAN** ports (any port will do) on the router to your PC with a RJ-45 Ethernet cable provided.

Step 3. Insert the power cord into the **DC-12V** power jack of the router; and insert the plug into the power outlet.

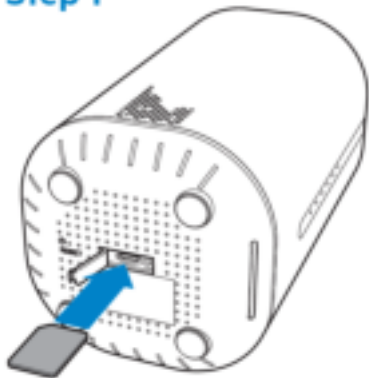
Step 4. Switch the power ON. The router will start the booting process. After a few seconds, the LED lights will start blinking.

Step 5. When the router has booted up, you will see the following LED lights on in solid color: the WiFi 2.4GHz, WiFi 5GHz, LTE and 5G. You can now connect your device to the router via an ethernet cable or over WiFi. The network name (SSID) and password (key) can be found on the label underneath the router.

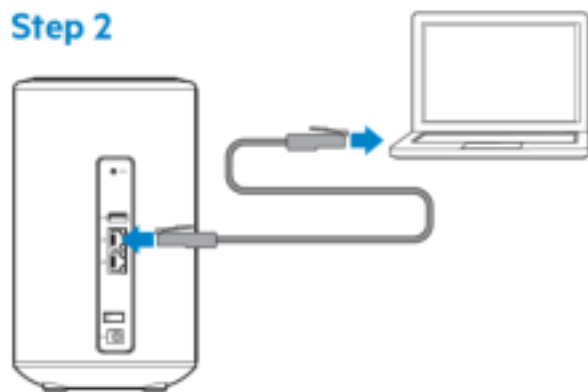
Note:

1. To remove the SIM card, please press the card in until it clicks and it will pop out automatically.
2. Do not remove the SIM card when the router is operating.

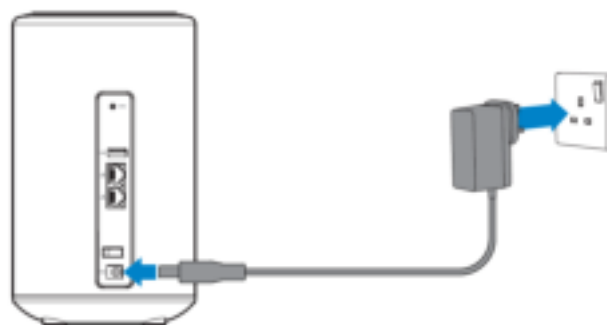
Step 1



Step 2



Step 3

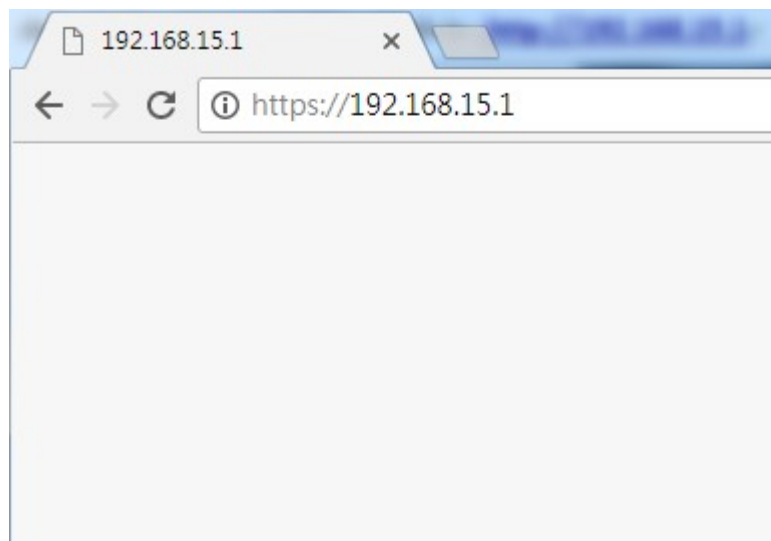


Web Interface

Login to Web-GUI

Users' devices are assumed in CPE LAN side. Please follow the steps below to configure your device through the web interface:

Step1: Open the Web browser (Ex: Internet Explorer, Firefox or Chrome) and enter the default IP address of CPE, which is : <http://192.168.15.1>



Web browser

Step2: Enter USERNAME/PASSWORD to access the web management interface. The default USERNAME/PASSWORD is **admin/admin**.



Web management interface

Step3: After successful login, you can see “Brief Summary Page”. Brief Summary Page is composed of many blocks and each block contains its own feature. A concise description is presented in the block. Users can click on it to enter “Detailed Configuration Page” to see the complete settings or tweak the configuration. Detailed information about this page will be stated below



Brief Summary Page

Brief Summary Page

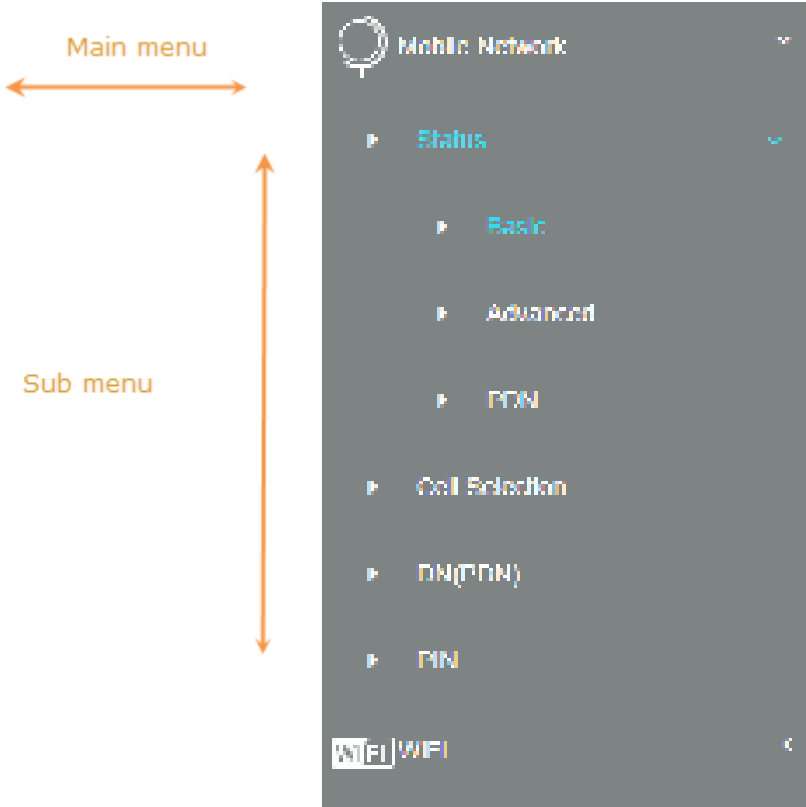
After you've opened up GUI page, the first page you see is “Brief Summary Page”. This window shows all the current settings and system information. It gives you an overview of the current status of your device.

After login, users can see a “**Brief Summary Page**” about all functions of FGW3000, each block is a link to “**Detailed Configuration Page**”.

(Ex: Click “**Network**”, you can go to “**Network**” main menu with sub-menu like WAN Setting or Port Management and other settings about Network)

Detailed Configuration Page

After clicking any block in “Brief Summary Page”, the webpage would be switched to the “Detailed Configuration Page”. (Take “Mobile Network” block for example)



Detailed Configuration

| | |
|-----------|--|
| Main Menu | Show the current main menu |
| Sub Menu | Clickable, can jump to another <u>Sub Menu</u> under the same <u>Main Menu</u> |

Menu Structure

After entering “Detailed Configuration Page”, the user can quickly jump to the specified Sub Menu.

Users can refer to the menu structure given below:

| | |
|----------------|--------------------|
| Mobile Network | PIN |
| WiFi | Status |
| | Settings |
| Network | Status |
| | WAN Setting |
| | LAN Setting |
| IPv6 | Port Management |
| | Status |
| | Settings |
| Firewall | Basic |
| | Access Restriction |
| Management | Account |
| | Device Setting |
| | Time Settings |
| | Restore Default |
| | Software |
| Monitoring | Status |
| | Iperf |
| | Diagnostic Tools |
| About | Status |

Mobile Network | PIN

PIN

Enable PIN

Enable PIN Code check

Change PIN

Change PIN

Remaining Attempts: 3

Mobile Network>PIN

Please input PIN Code.

Remaining Attempts: 3

Mobile Network >PIN >Enable PIN

Change PIN

Old PIN Code

New PIN Code

Confirm PIN Code


Remaining Attempts: 3


Mobile Network >PIN > Change PIN


 **Enable PIN:** Enable/Disable PIN code protection.


- ◆ **Change PIN:** Change the PIN code.
- ◆ **Remaining Attempts:** remaining times to try PIN code.

| | |
|----------------------|---|
| Cancel button | Reset fields to the last saved values. |
| Apply button | Commit the changes made and save to the CPE device, some services will be reloaded. |

| | |
|---|---|
|  | Please make sure the current technology is 5G . It can be checked from upper left corner of Web-GUI. |
|---|---|

| | |
|---|--|
|  | If you enter wrong PIN more than three times (maximum numbers of attempts allowed), your SIM card will become “PUK-locked” status. Please contact your service provider for further unlock instruction. |
|---|--|

| | |
|---|--|
|  | Remaining Attempts is just an example. Real number is determined by user's SIM card. |
|---|--|

| | |
|---|---|
|  | If users want to change the PIN code of SIM card, they need to enable “ Enable PIN code check ” function in advance. |
|---|---|

WiFi

In WiFi main menu, you can display and configure settings about WiFi. Users can see SSID, current channel and working mode as well as configure wireless setting, security and access control list



• Menu Structure:

| | |
|------|----------|
| WiFi | Status |
| | Settings |

WiFi | Status

Status


| WiFi 2.4GHz | |
|--------------------|-------------------|
| Status | ON |
| Radio Channel | 6 |
| Working Mode | 802.11 a/g |
| WiFi MAC | 80:02:9c:94:7d:f7 |
| Network Name(SSID) | Linksys50CPE |
| SSID Broadcast | Enable |

| WiFi 5GHz | |
|--------------------|-------------------|
| Status | ON |
| Radio Channel | 44 |
| Working Mode | 802.11 a/n |
| WiFi MAC | 80:02:9c:94:7d:f8 |
| Network Name(SSID) | Linksys50CPE_5GHz |
| SSID Broadcast | Enable |

WiFi> Status

- ◆ **State:** Possible states are **ON** and **OFF**.
 - **ON:** WiFi is on.
 - **OFF:** WiFi is off.
- ◆ **Radio Channel:** The channel used by CPE.
- ◆ **Working Mode:** This shows the working mode you designate in WiFi->Setting.
- ◆ **WiFi MAC:** As titled.
- ◆ **Network Name (SSID):** As titled.
- ◆ **SSID Broadcast:** As titled.

| | |
|-----------------------|---|
| Refresh button | Click the "Refresh" button to trigger refresh manually. |
| Auto button | This button will update the status information periodically. (The period can be configured by changing "GUI Refresh Time" in page Management/Device Setting) |

| | |
|---|--|
|  | Radio channel, WiFi MAC and Network Name (SSID) are all examples here. |
|---|--|

WiFi | Settings | WiFi 2.4GHz

Settings

Wireless Settings

Interface Status:

Network Name (SSID): Lntops3GPE

Radio Channel: Auto

Working Mode: 802.11n/g

Bandwidth: 20M

SSID Broadcast: Enable

AP Isolation: Disable

Access Control List

Filtering Policy: Disable

Security

Security Types Setup

Authentication: WPA2-Personal

Encryption: AES

Pre-shared Settings

Key Pass Phrase: SQY11bA

WPA Protected Setup (WPS)

Enable WPS:

WiFi > Settings > WiFi 2.4GHz

◆ Wireless Settings

- **Interface Status:** Click **“Disable”** button to disable WiFi, or click **“Enable”** to activate WiFi function.
- **Network Name (SSID):** SSID (service set identifier) is a label representing wireless AP. Wireless clients would see the SSID broadcasted by AP.
- **Radio Channel:** The channel to use. Selecting **“Auto”** will allow CPE to choose the best channel automatically.



To avoid the interference, **“Radio Channel”** will be automatically changed due to the selected **“LTE Band”**

- **Working Mode:** There are **“802.11axg”**, **“802.11b/g”**, **“802.11g/n”**, **“802.11b”**, **“802.11g”**.
- **Bandwidth:** The setting is only available when the wireless protocol is used; select the bandwidth from the drop-down list.
 - 20M – Set the bandwidth to 20M.
 - 40M – Set the bandwidth to 40M.
 - 20M/40M – The bandwidth setting will automatically be switched to either 20M or 40M by CPE based on the environment.
- **SSID Broadcast:** Having SSID broadcast disabled essentially makes your CPE invisible unless a wireless client already knows the SSID. The default option of SSID Broadcast is **“Enabled”**.
- **AP Isolation:** Enable or disable AP Isolation feature

◆ Security

➤ **Security Types Setup:** There are 10 different security types provided as below –

| Authentication | Encryption | |
|-------------------------------|--|--|
| Open Systems | NONE | |
| 802.1x | WEP | 802.1x Settings - Rekey Interval RADIUS Server RADIUS Port RADIUS Key |
| WPA3-Personal | CCMP | Pre-shared Settings - Key Pass Phrase |
| WPA2-Personal | AES TKIP TKIP/AES CCMP TKIP/CCMP | Pre-shared Settings - Rekey Interval Key Pass Phrase Wi-Fi Protected Setup(WPS)– Enable WPS |
| WPA-Personal | AES TKIP TKIP/AES CCMP TKIP/CCMP | Pre-shared Settings - Rekey Interval Key Pass Phrase Wi-Fi Protected Setup(WPS)– Enable WPS (only for AES and TKIP/AES.) |
| WPA2/WPA3-Personal Mixed Mode | CCMP | Pre-shared Settings - Key Pass Phrase |
| WPA/WPA2-Personal Mixed Mode | TKIP/AES TKIP AES | Pre-shared Settings - Rekey Interval Key Pass Phrase Wi-Fi Protected Setup(WPS)– Enable WPS (only for AES and TKIP/AES.) |
| WPA2-Enterprise | TKIP/AES TKIP AES | 802.1x Settings - Rekey Interval: RADIUS Server RADIUS Port RADIUS Key |

| | | |
|---|-------------------------|---|
| WPA-Enterprise | TKIP AES TKIP/AES | 802.1x Settings - Rekey Interval: RADIUS Server RADIUS Port RADIUS Key |
| WPA/WPA2-Enterprise Mixed Mode | TKIP AES TKIP/AES | 802.1x Settings - Rekey Interval: RADIUS Server RADIUS Port RADIUS Key |


➤ **Wi-Fi Protected Setup(WPS)**

- **Enable WPS:** User can share their WiFi via WPS when this box is checked.

◆ **Access Control List:** Users can block or allow clients with certain MAC addresses to access to CPE.

- **Disable:** Any clients can establish the connection.
- **WhiteList:** Only clients with MAC addresses in “Access Control List” can establish the connection, other clients will be blocked.
- **BlackList:** Only clients with MAC addresses in “Access Control List” will be blocked, other clients can establish the connection.

| | |
|----------------------|---|
| Cancel button | Reset fields to the last saved values. |
| Apply button | Commit the changes made and save to the CPE device, some services will be reloaded. |

| | |
|---|--|
|  | If you select “ WhiteList ” and have no MAC address in the list, no one can establish the connection. |
|---|--|

WiFi | Settings | WiFi 5GHz

Settings

WiFi> Settings>WiFi 5GHz

◆ Wireless Setting

- **Interface Status:** Click **“Disable”** button to disable WiFi, or click **“Enable”** to activate WiFi function.
- **Network Name (SSID):** SSID (service set identifier) is a label representing wireless AP. Wireless clients would see the SSID broadcasted by AP.
- **Radio Channel:** The channel to use. Selecting **“Auto”** will allow CPE to choose the best channel automatically.
- **Working Mode:** There are **“802.11axa”**, **“802.11a/n”**, **“802.11ac”**, or **“802.11a”**
- **Bandwidth:** Select the bandwidth from the drop-down list.
 - 20M – Set the bandwidth to 20M.
 - 40M – Set the bandwidth to 40M.
 - 80M – Set the bandwidth to 80M.
 - 20M/40M/80M– The bandwidth setting will automatically be switched to either 20M or 40M or 80M by CPE based on the environment.
- **SSID Broadcast:** Having SSID broadcast disabled essentially makes your CPE invisible unless a wireless client already knows the SSID. The default option of SSID Broadcast is **“Enabled”**.
- **AP Isolation:** Enable or disable AP Isolation feature

◆ Security

- **Security Types Setup:** There are 10 different security types provided as below –

| | |
|----------------|------------|
| Authentication | Encryption |
|----------------|------------|

| | | |
|--|--|--|
| Open Systems | NONE | |
| 802.1x | WEP | 802.1x Settings - Rekey Interval RADIUS Server RADIUS Port RADIUS Key |
| WPA3-Personal | CCMP | Pre-shared Settings - Key Pass Phrase |
| WPA2-Personal | AES TKIP TKIP/AES CCMP TKIP/CCMP | Pre-shared Settings - Rekey Interval Key Pass Phrase Wi-Fi Protected Setup(WPS)– Enable WPS |
| WPA-Personal | AES TKIP TKIP/AES CCMP TKIP/CCMP | Pre-shared Settings - Rekey Interval Key Pass Phrase Wi-Fi Protected Setup(WPS)– Enable WPS (only for AES and TKIP/AES.) |
| WPA2/WPA3-Personal Mixed Mode | CCMP | Pre-shared Settings - Key Pass Phrase |
| WPA/WPA2-Personal Mixed Mode | TKIP/AES TKIP AES | Pre-shared Settings - Rekey Interval Key Pass Phrase Wi-Fi Protected Setup(WPS)– Enable WPS (only for AES and TKIP/AES.) |
| WPA2-Enterprise | TKIP/AES TKIP AES | 802.1x Settings - Rekey Interval: RADIUS Server RADIUS Port RADIUS Key |
| WPA-Enterprise | TKIP AES TKIP/AES | 802.1x Settings - Rekey Interval: RADIUS Server RADIUS Port RADIUS Key |

| | | |
|---|----------|--------------------------|
| WPA/WPA2-Enterprise Mixed Mode | TKIP | 802.1x Settings - |
| | AES | Rekey Interval: |
| | TKIP/AES | RADIUS Server |
| | | RADIUS Port |
| | | RADIUS Key |


➤ **Wi-Fi Protected Setup(WPS)**

- **Enable WPS:** User can share their WiFi via WPS when this box is checked.

◆ **Access Control List:** Users can block or allow clients with certain MAC addresses to access to CPE.

- **Disable:** Any clients can establish the connection.
- **WhiteList:** Only clients with MAC addresses in “Access Control List” can establish the connection, other clients will be blocked.
- **BlackList:** Only clients with MAC addresses in “Access Control List” will be blocked, other clients can establish the connection.

| | |
|----------------------|---|
| Cancel button | Reset fields to the last saved values. |
| Apply button | Commit the changes made and save to the CPE device, some services will be reloaded. |

| | |
|---|--|
|  | If you select “ WhiteList ” and have no MAC address in the list, no one can establish the connection. |
|---|--|

Network

The “Network” page allows user to configure network function such as WAN setting, LAN Setting, QOS, Port Management, DSCP, and MGMT Service.



◆ Menu Structure:

| | |
|---------|-----------------|
| Network | Status |
| | WAN Setting |
| | LAN Setting |
| | Port Management |

Network | Status

◆ LAN Information

| LAN Information | | | |
|-----------------|-------------------|-----------------|-------------|
| LAN MAC | 00:00:00:00:00:00 | LAN IP Address | 192.168.1.1 |
| LAN Subnet Mask | 255.255.255.0 | Tx Bytes | 102400 |
| Rx Bytes | 1024000 | Tx Packets | 1024 |
| Rx Packets | 11100 | Tx Drop Packets | 0 |
| Rx Drop Packets | 0 | | |

Network > Status > LAN Information

- ◆ **WAN Information:** This section shows WAN IP, MAC, Gateway, DNS Server, Time Server of NR indoor CPE and statistics of TX and RX Bytes and Packets of WAN interface.

| WAN Information | | | |
|------------------------|------------------------|--------------------|---------------------|
| Type | Static | Current MTU | 1500 |
| WAN IP Address | 10.10.10.10 | WAN IP Subnet Mask | 255.255.255.0 |
| WAN IP Default Gateway | 10.10.10.1 | IP Connector | ON |
| Lease Obtained | 2010/01/01 00:00:00 | Lease Expires | 2010/01/01 00:00:00 |
| DNS Server | 210.21.190.10.10.10.10 | Tx Bytes | 102400 |
| Rx Bytes | 1024000 | Tx Packets | 1024 |
| Rx Packets | 11100 | Tx Drop Packets | 0 |


Network > Status > WAN Information

- ◆ **Lease Status Table:** This section shows all clients who get IP from DHCP server in NR indoor CPE.

| Lease Status Table | | | | |
|--------------------|------------------|-------------------|----------------|--------------------------|
| No. | Client Host Name | MAC Address | IP Address | Remaining Lease Duration |
| 1 | ASTMP-028238 | 04:3B:04:79:F7:FC | 192.168.15.162 | 02:00 Seconds |

Network > Status > Lease Status Table

| | |
|-----------------------|--|
| Refresh button | Click the “Refresh” button to trigger refresh manually. |
| Auto button | This button will update the status information periodically. The period can be set from “GUI Refresh Time” in page Management/Device Setting |

| | |
|---|--|
|  | The address and TX/RX bytes are all examples here. Real values depend on the local ISP provider. |
|---|--|

Network | WAN Setting (NAT Mode)



Network > WAN Setting

- ◆ **WAN Connection Type:** NAT mode.
- ◆ **WAN MTU:** This value is “Maximum Transmission Unit”. The size of a single packet can only be as large as MTU. If the size of the packet exceeds MTU, the packet would be fragmented.
- ◆ **DNS1/2:** Domain Name Server, editable when users select “Static” in “Connection Mode”. Otherwise, DNS information will be given by DHCP server. **WAN IP Address/ Subnet Mask/ Gateway Address:** These values are un-editable.

| | |
|----------------------|---|
| Cancel button | Reset fields to the last saved values. |
| Apply button | Commit the changes made and save to the CPE device, some services will be reloaded. |

Network | LAN Setting

Network >LAN Setting


- ◆ **LAN Setting:**
 - **LAN IP Address / Subnet Mask:** The IP address and subnet mask used by CPE in LAN
 - ◆ If users choose other tunnel mode, this IP means LAN side domain and Web GUI IP address. (This IP will change IP prefix in “**DHCP Server**” , “**Port Forwarding**” and “**Port Trigger**”)
- ◆ **DHCP Server Settings:** (Available in NAT, Tunnel, Router Mode)

Network>LAN Setting


CPE has a built-in DHCP server to manage the distribution of IP addresses. A device connected to CPE

through the Ethernet port or WiFi would obtain a dynamic IP address from CPE.

- ◆ **Enable DHCP Server:** enable/disable DHCP server
- ◆ **DHCP Starting IP Address:** The starting IP address assigned by DHCP server.
- ◆ **DHCP Ending IP Address:** The ending IP address assigned by DHCP server.

| | |
|---|---|
|  | Notice that WiFi and Ethernet share the same DHCP server, the range of IP addresses should not be narrow. Otherwise, clients cannot get LAN IP addresses. |
|---|---|


- ◆ **From ISP:** When the checkbox is ticked, clients set CPE as DNS server, but CPE will only act as a “DNS relay”.


| | |
|---|---|
|  | If users want to know DNS Servers obtained from ISP, It can be found in “ Network > Status > WAN Information > DNS Server ” |
|---|---|

- ◆ **DNS 1/ DNS2 / DNS3:** If the checkbox “From ISP” is not ticked, users can designate the DNS server for DHCP clients. Two pictures below are captured from CPE and a PC in LAN, DNS fields are “1.1.1.1”, “2.2.2.2” and “3.3.3.3”. Clients’ DNS request will be directly sent to the first operative server in the order of primary, secondary and tertiary DNS.

| | | | | |
|----------|--------------------------|----------------------|----------------------|----------------------|
| From ISP | <input type="checkbox"/> | | | |
| DNS 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| DNS 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| DNS 3 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Network > DHCP Server > not From ISP


| | |
|---|--|
|  | “1.1.1.1”, “2.2.2.2” and “3.3.3.3” are examples. |
|---|--|

- ◆ **DHCP Lease Time:** The life time of the IP assigned by DHCP server(range: 2 minutes-365days)
- ◆ **Lease Reservation Table:** This table records the mapping of MAC and IP addresses. Clients with the specific MAC address in the table would get the corresponding IP address. Click “Add +” button to add a new mapping, clicking “Delete” icon () to delete it. To enable the mapping, users have to tick the “Enable” checkbox.

An example is illustrated below. If a client with MAC Address “11:22:33:44:55:66” requests IP, DHCP server will assign IP “192.168.15.123” and the host name “Example” to it.



Network > DHCP Server > Lease Reservation Table

| | |
|---|---|
|  | “Example”, “11:22:33:44:55:66”, “192.168.15.179” are examples here. |
|---|---|

| | |
|----------------------|---|
| Cancel button | Reset fields to the last saved values. |
| Apply button | Commit the changes made and save to the CPE device, some services will be reloaded. |

Network | Port Management

Port Forwarding



| Protocol | WAN Port | | LAN Port | | LAN IP | Enable | Delete |
|----------|----------|-----|----------|-----|--------|--------------------------|--------|
| | Begin | End | Begin | End | | | |
| | | | | | | <input type="checkbox"/> | |

Network > Port Management

◆ Port Forwarding:



| Protocol | WAN Port | | LAN Port | | LAN IP | Enable | Delete |
|----------|----------|-----|----------|-----|------------|-------------------------------------|--------|
| | Begin | End | Begin | End | | | |
| TCP | | | | | 102.108.15 | <input checked="" type="checkbox"/> | |

- For a single port, multiple ports or a range of ports—sends traffic inbound on a specific port or ports to a specific device or port on your Wi-Fi

◆ Port Trigger:



| Application Name | Triggered Range | | Forwarded Range | | Enable | Delete |
|------------------|-----------------|--|-----------------|--|-------------------------------------|--------|
| | | | | | | |
| | | | | | <input checked="" type="checkbox"/> | |

- In port range triggering, the system watches outgoing data for specific port numbers. The system remembers the IP address of the device that requests the data so that when the requested data returns, it is routed back to the proper device

IPv6

The "IPv6" page allows user to get IPv6 information such as WAN Connection Type and WAN IPv6 Address.



◆ Menu structure:

| | |
|------|----------|
| IPv6 | Status |
| | Settings |

IPv6 | Status

| IPv6 Information | |
|-----------------------------|---------------------------------|
| WAN Connection Type | AutoConfiguration(SLAAC/DHCPv6) |
| WAN IPv6 Address | N/A |
| WAN IPv6 Link-Local Address | N/A |

| LAN Address AutoConfiguration | |
|-------------------------------|-----------------------|
| LAN Prefix Type | Extend WAN Prefix |
| LAN IPv6 Address | N/A |
| LAN IPv6 Link-Local Address | fe80:3202:9cfe:947dR1 |
| AutoConfiguration Type | SLAAC+RDNS |

Cancel

Apply

IPv6> Status

IPv6 | Settings

Settings

| Internet Connect Type | |
|-----------------------|---------------------------------|
| IPv6 Connection Type: | AutoConfiguration(SLAAC/DHCPv6) |
| DNS From: | Auto |
| DNS 1: | |
| DNS 2: | |

| IPv6 LAN Address Setting | |
|-----------------------------------|--------------------------|
| LAN Prefix Type: | Extend WAN Prefix |
| LAN IPv6 Address: | |
| LAN IPv6 Link-Local Address: | fe80:3202:9cfe:947dR1 |
| Address AutoConfiguration Setting | |
| Auto IPv6 Address Assignment: | <input type="checkbox"/> |

- ◆ **IPv6 Connection Type:** Show IPv6 Connection Type with “Auto Configuration (SLAAC/DHCPv6).
- ◆ **DNS From:** Get DNS from Auto or Static
- ◆ **LAN Prefix Type:** choose LAN Prefix Type with Extend WAN Prefix, Prefix Delegation, or Static
- ◆ **Auto IPv6 Address Assignment:** auto assignment IPv6 address

Firewall

The "Firewall" page allows user to configure firewall to block and grant some network access.

| | |
|--|--------------------------------------|
|  Firewall | Display in Brief Summary Page |
|--|--------------------------------------|

◆ **Menu structure:**

| | |
|----------|--------------------|
| Firewall | Basic |
| | Access Restriction |

Firewall | Basic

Basic

Setting

| | |
|---------------------------|---|
| Enable Firewall | <input checked="" type="checkbox"/> |
| DMZ IP Address | <input type="checkbox"/> 192.168.15. <input type="text"/> |
| Redirect ICMP to the Host | <input type="checkbox"/> |
| Multicast Filter | <input type="checkbox"/> |
| Enable UPnP IGD | <input type="checkbox"/> |

Cancel Apply

Firewall > Basic

- ◆ **Enable Firewall:** Enable/Disable firewall.
- ◆ **DMZ IP Address:** All network traffic from WAN is forwarded to this IP address in LAN.
- ◆ **Redirect ICMP to the host:** The function will be activated if DMZ is enabled. Tick the checkbox to have CPE pass ICMP messages to hosts, or un-tick the checkbox to let the CPE reply ICMP messages.
- ◆ **Multicast Filter:** If the checkbox is ticked, multicast packets would be dropped; otherwise, they pass through.
- ◆ **Enable UPnP IGD:** Enable/Disable Internet Gateway Device.

| | |
|----------------------|---|
| Cancel button | Reset fields to the last saved values. |
| Apply button | Commit the changes made and save to the CPE device, some services will be reloaded. |

Firewall | Access Restriction

Access Restriction

Settings Add +

Name: Enable:

Blocked Day / Time

Every Day Sun Mon Tue Wed Thu Fri Sat

24 Hours : : :

Blocked Device **Blocked Reason**

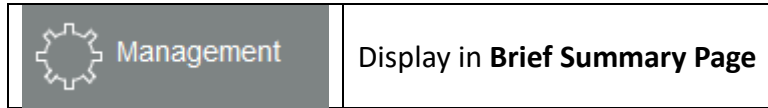
Deny All Devices Deny Type: Deny All Traffic Deny Type:

Firewall > Access Restriction

- ◆ Set and enable individual firewall rules by date / Time, device and note blocked reason.

Management

The "Management" page allows user to configure the main system parameters such as password, language, device time/name ...etc.



◆ **Menu structure:**

| | |
|------------|-----------------|
| Management | Account |
| | Device Setting |
| | Time Settings |
| | Restore Default |
| | Software |

Management | Account

Account

End User Account

| | |
|----------------------|--------------------------|
| Old User Name | <input type="text"/> |
| Old Password | <input type="password"/> |
| New User Name | <input type="text"/> |
| New Password | <input type="password"/> |
| New Password Confirm | <input type="password"/> |



Management > Account

The Account page lets you change the default username and password for superuser and enduser.

- ◆ There should be at least 9 characters for the password. Click "**Apply**" to save this change. Tick the checkbox "**Enable**" to enable the account.

| | |
|----------------------|--|
| Apply button | Commit the changes made and save them to the CPE device. |
| Cancel button | Reset fields to the last saved values |

Management | Device Setting

Device Setting

Timeout/Refresh Setting

Management Session Timeout Minutes

GUI Refresh Time Seconds

Device Name

Current Device Name Linksys00043

New Device Name

Management > Device Setting

- ◆ **Timeout/Refresh Setting**
 - **Management Session Timeout:**Automatic logout after the period. (Range: 0-10 Minutes; 0 means never expired)
 - **GUI Refresh Time:** When users press “**auto**” button in any page, the page refresh every the designated time. (Range: 5-60 Seconds)
- ◆ **Device Name:** The name of CPE. Users can login to CPE from any device in the internal network by entering the device name on the address bar.
 - **Current Device Name:** Display the current device name.
 - **New Device Name:** A field to update your current device name.

| | |
|----------------------|--|
| Apply button | Commit the changes made and save them to the CPE device. |
| Cancel button | Reset fields to the last saved values |

Management | Time Settings

Time Settings



Device Time

Current Local Time Mar 04 2021 16:32

Synchronize With PC

Time Zone

(GMT+08:00) Hong Kong

Auto adjust for Daylight Saving Time

Time Server Information

NTP1

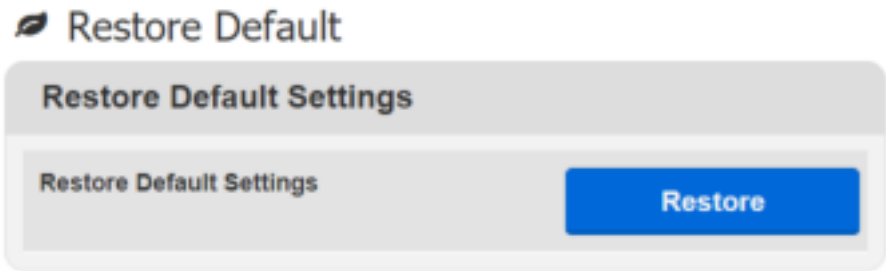
NTP2

Management > Time Settings

- **Current Local Time:** Display current local time; or click **“Synchronize with PC”** button to synchronize the time of CPE with PC.
- **Time Zone:** as titled.
- **Auto Adjust for Daylight Saving Time:** Enable this option if your location observes Daylight Savings Time.
- **Time Server Information:** Setting the NTP server.
- **NTP1/2:** Users can specify two NTP servers in “IP” or “Domain name” format.

| | |
|----------------------|--|
| Apply button | Commit the changes made and save them to the CPE device. |
| Cancel button | Reset fields to the last saved values |

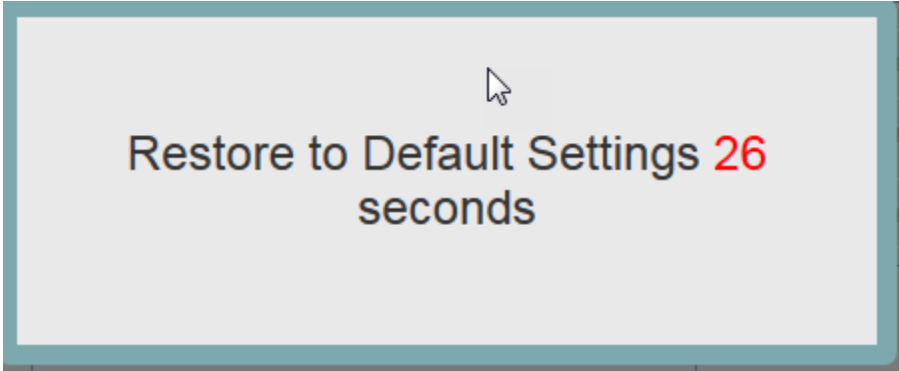
Management | Restore Default




Management > Restore Default

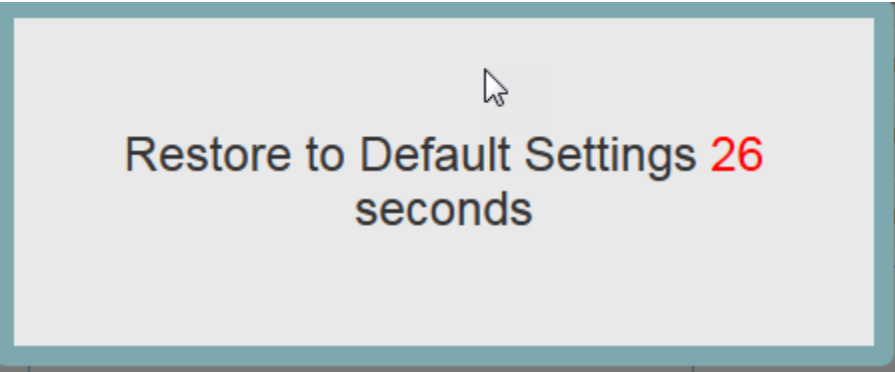
Select **Management>Restore Default** to go back to the factory default settings.

- ◆ **Restore Default:** Click “Restore” button to clear all users’ configuration and restore to factory default settings.



Restore to default settings Window

- ◆ **Integrity Check:** Integrity check for the software used in the device in case the storage device is broken. The green check  indicates the investigation is passed.



Integrity Check Window

Management | Software



Management > Software

- ◆ **Software Upgrade:** Click "**Browse**" button to select the ipkg file to upload, and then click "**Upgrade**" to install the selected file. The Upgrading window will be shown as below and then the reboot process will be started to let the change taken effect. The ipkg file you have uploaded will be shown in the table below the device software version.



Management > Software > Upgrading Window

| | |
|--|--|
| | After pressing the "Upgrade" button, it will automatically reboot the CPE and upgrade the firmware with the specified file. You will be prompted to re-login to the CPE after the upgrade is complete. |
|--|--|

- ◆ **FOTA Upgrade:** Click "**Check New Firmware**" button to get the latest firmware from cloud server.



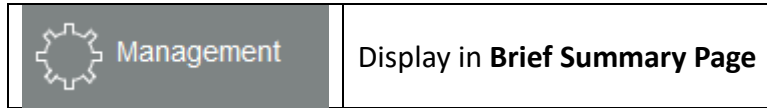
Newer firmware version is available
download and apply it?



Management > Software > FOTA Upgrade

Monitoring

The “Monitoring” page allows user to monitor system resource such as CPU, Memory, Uplink and Downlik data rate, and enable lperf and diagnostic tools ...etc.



◆ Menu structure:

| | |
|------------|------------------|
| Monitoring | Status |
| | lperf |
| | Diagnostic Tools |

Management | Status

The "Status" page allows user to monitor system resource such as CPU, Memory, Uplink and Downlink data rate.



Management > Software>Status

System Perf. Monitor Period: Set system perf. Monitor period by second



Management > Software>CPU Utilization

CPU Usage Threshold: Set CPU Usage Threshold percentage



Management > Software>Memory Utilization

Memory Usage Threshold: Set Memory Usage Threshold percentage

Uplink Data Rate

| | |
|-------------------|-------------|
| Current Data Rate | 14.652 kbps |
|-------------------|-------------|

Downlink Data Rate

| | |
|-------------------|-------------|
| Current Data Rate | 35.900 kbps |
|-------------------|-------------|

Management > Software>Uplink & Downlink Data Rate

System Information

| | |
|----------------|---------------------------|
| Firewall | ON |
| Device Up Time | 0 Days 2 Hours 16 Minutes |
| Restart Reason | Device auto |

Refresh Auto Apply

Management > Software>System Information

Management | Iperf

Iperf

Settings

Status: Enable Disabled

Last Measurement Date/Time:

Iperf Version: iperC

Protocol Version: IPv4

Server Address:

Server Port: 5001

Management Port: 5001

Measurement Time: 60 Seconds

Protocol Type: TCP

TCP Client Number: 1

Interval: 0

Subinterval Test: Individually

Management > Iperf

Enable/Disable Iperf with many parameters settings such as Iperf Version, Server Port, Management Port, Measurement Time, Protocol Type and get result

Management | Diagnostic Tools

Diagnostic Tools

Settings

| | |
|-------------------|--|
| Status | <input type="button" value="Start"/> <input type="button" value="Stop"/> |
| Diagnostic Type | <input type="text" value="Ping"/> |
| Protocol Type | <input type="text" value="IPV4"/> |
| IP Address/Domain | <input type="text"/> |
| Ping Count | <input type="text" value="4"/> |
| Packet Size | <input type="text" value="50"/> Bytes |
| Ping Timeout | <input type="text" value="10"/> Seconds |
| Max Hop | <input type="text" value="30"/> |

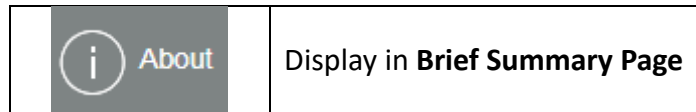
Diagnostic Result

Management > Diagnostics Tools

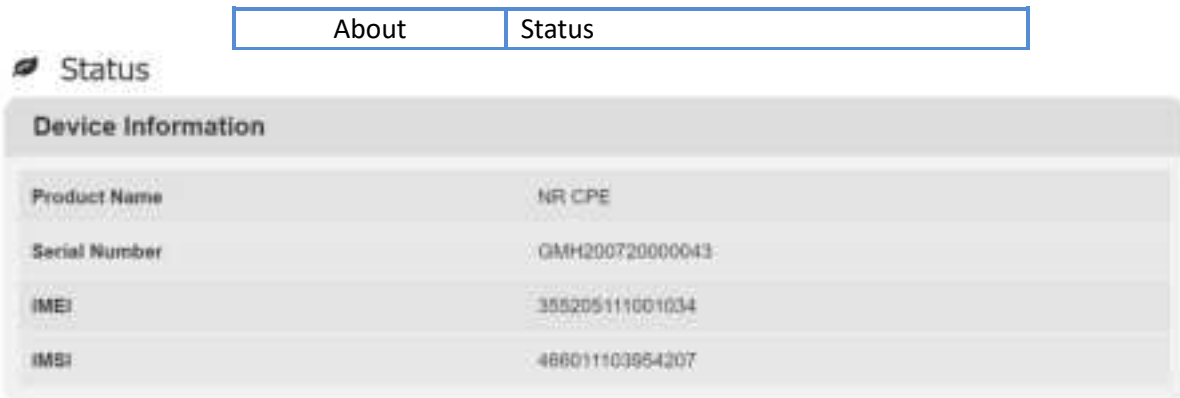
Use system Diagnostics tools to set up parameters such as Diagnostics Type, Protocol Type, Ping Count, Packet Size, Ping Timeout, and get the Diagnostic Result afterward

About

This section shows the device information such as Product Name, Serial Number, IMEI, and IMSI



◆ Menu structure:



Specification

- Support 5G NR Sub 6GHz for both TDD & FDD
 - 5G NR TDD Bands : 78/79*
 - 5G NR FDD Bands : n1/3/5
- Support LTE
 - FDD Bands: B1/3/7/8
- Support USIM card
- Web-based configuration
- Support 2 RJ-45 Giga Ethernet Port
- Support 802.11ax/b/g/n (2x2) Wi-Fi 6 Technology @ 2.4GHz
- Support 802.11ax/ac/an/a (4x4) Wi-Fi Technology @ 5GHz

*WiFi 5G will not be available when device is connected to 5G n79 network