BandLuxe

LTE Outdoor CPE
E500 Series
User Manual

P/N: 65012500011 Rev.A

Table of Contents

About this Manual 4

PRODUCT OVERVIEW 5

Features 5
Package Contents 5
Parts and Functions 6
Mounting and Installation 7
Wall Mounting 8
Pole Mounting 9

GETTING STARTED 10

Install the SIM card 10
Assemble the Optional RJ-45 Water Resistant Kit 11
Grounding the CPE 11
Connect the Computers 12

USING WEB-BASED MANAGEMENT 13

Login 13
Basic Network Settings 15
Configure Mobile Internet Settings 15
Configure CPE IP Settings 16
Configure DHCP Services 17
Configure CPE Time 18
Status Information 19
View Internet Connection Info 19
View CPE Info 20
View Traffic Info 20
SIM/PIN Settings 21
Configure PIN 21
Unlock SIM 22
Security Settings 23
Administrator Settings 24
Change Web Management Password 24
Enable Remote Access 24
Manage LED Light 25
Select Operation Mode 25
Advanced Diagnosis 26
Enable SysLog 26
View System Log 27
Use Ping Test 27
Use Traceroute Test 27

SYSTEM MAINTENANCE 28
Backup Configuration 28
Restore Configuration 28
Update APN 29
Restore Factory Defaults 29
Upgrade CPE Firmware 29
NAT SETTINGS 30
Configure Single Port Forwarding 30
Configure Port Range Forward 31
Configure Port Range Trigger 32
Enable UPnP 33
Configure DMZ 33
ENGINEERING MODE 34
APPENDIX 35
FAQ 35
TROUBLESHOOTING 36
SPECIFICATIONS 37
SAFETY INFORMATION 39
FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT 40

About this Manual

The content of this User Manual has been made as accurate as possible. However, due to continual product improvements, specifications and other information are subject to change without notice.

Product Overview

Congratulations on your purchase of this LTE outdoor CPE.
With this LTE (Long Term Evolution) CPE (which is also known as 4G CPE), you can share high speed mobile broadband connectivity in a wide range of computing environment. Before you begin using the LTE outdoor CPE, read this chapter to familiarize yourself with the device.

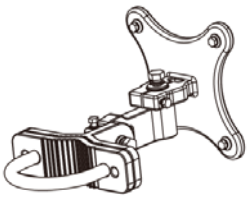
Features

- Embedded high gain directional antenna
- IP66 protection against dust and water
- Easy configuration based on Web Interface
- Provide 10 – 30dB more coverage gain compared to indoor CPE
- Support Passive Power over Ethernet.
- Easy installation and use

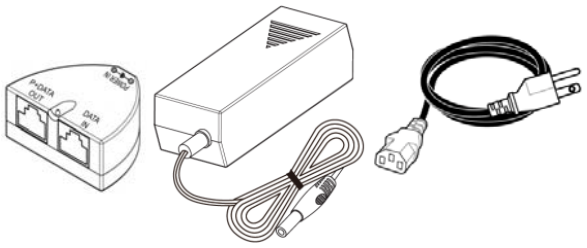
Package Contents

The following items come with your package. If any of them is damaged or missing, please contact your retailer.

LTE Outdoor CPE



Mounting bracket



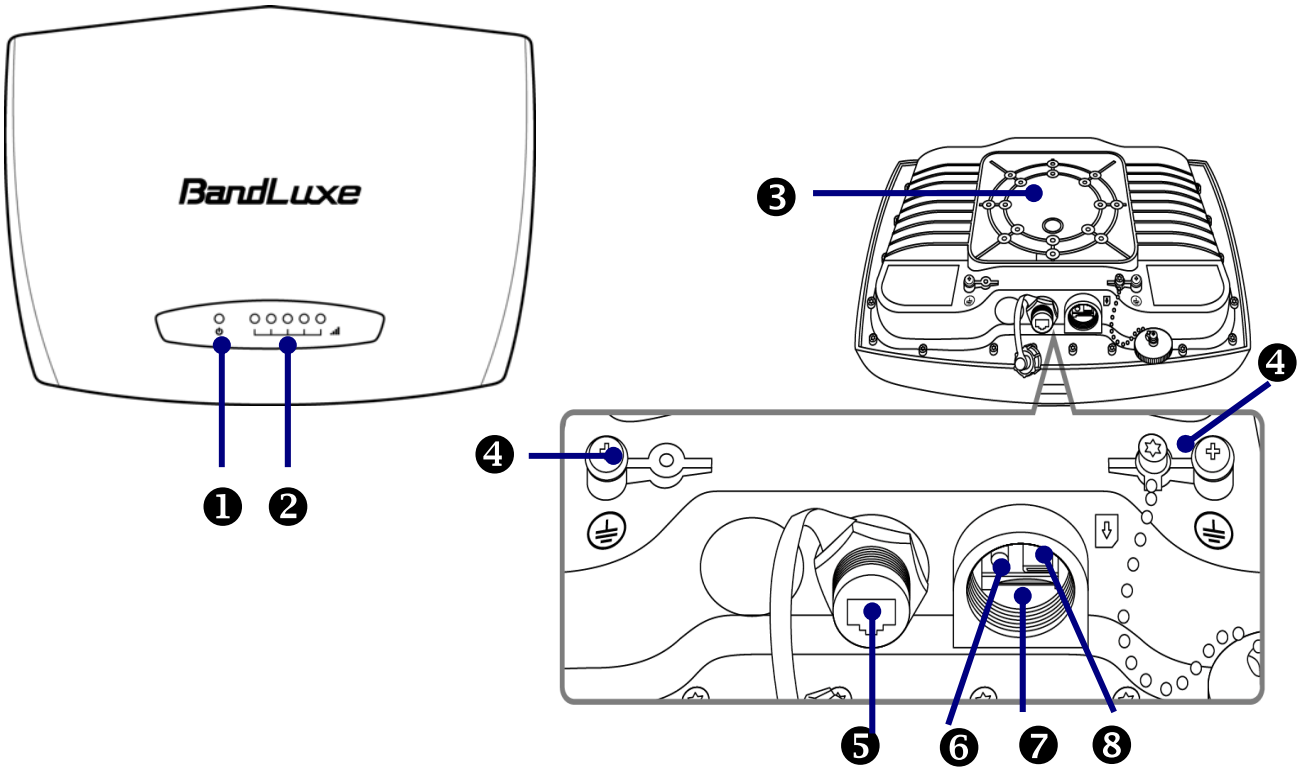
Passive PoE adapter

Optional:
Plug head water resistant kits (RJ-45)

NOTE

- The pictures are for reference only, actual items may slightly differ.

Parts and Functions

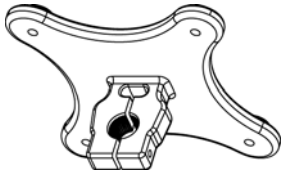
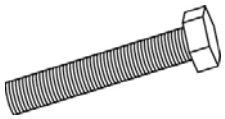
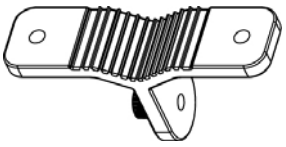


No.	Item	Description
1	Power	Blue LED lights up when the power is on.
2	Signal strength	More lighted LEDs indicate stronger signal.
3	Mount base	Attach the mount bracket.
4	Earth ground terminal	Use a spring washer and an M4x8L screw to ground and protect your CPE from lightning. See “Grounding the CPE” on page 11 for more details.
5	Ethernet port	Connect to a computer/ Passive PoE using an Ethernet cable.
6	Reset button	❖ Short press to restart the device. ❖ Long press for 5 seconds to reset the settings to factory default settings.
7	SIM card slot	SIM card placement.
8	USB port	For technician use only.

Mounting and Installation

This CPE is weatherproof and designed for outdoor use. You can mount it to a wall or to a pole.

Mounting kit includes the following items:

A. Kit-1 Quantity: 1	B. Kit-2 Quantity: 1	C. Hex Head Bolt (M8x50mm) Quantity: 2
		
D. M8 Spring Washer Quantity: 3	E. Washer M8x22 (OD) mm Quantity: 2	F. M8 Hexagon Nuts Quantity: 2
G. Hex Head Bolt (M5x35mm) Quantity: 2	H. Spring Washer (M5) Quantity: 6	I. Kit-3 Quantity: 1
		
J. Washer (M8) Quantity: 1	K. Hex. Head Bolt (M5x20mm) Quantity: 4	L. Washer (M5) Quantity: 4
M. Kit-4 Quantity: 1	N. 1/2” U Bolt DN63 Quantity: 1	O. M13 Washer Quantity: 2
P. M13 . Spring Washer Quantity: 2	Q. 1/2 Hexagon Nuts Quantity: 2	

NOTE

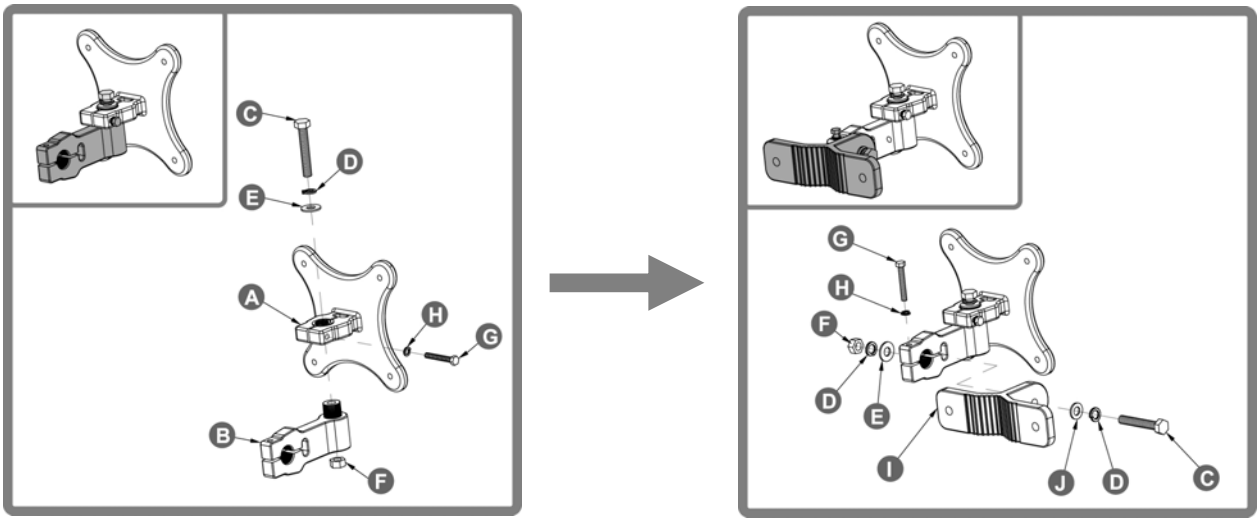
- The illustrations are for reference only, actual items may slightly differ.

Before installing the CPE, consider the ambient temperature, device weight, antenna clearance, and device orientation on wall/pole for proper installation.

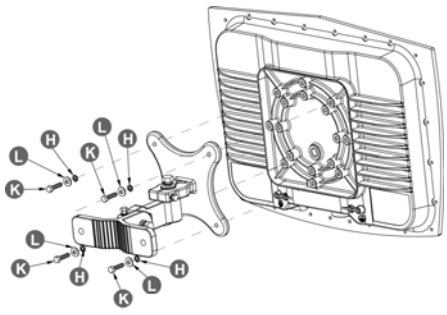
1. Choose a hard and stable wall or pole to mount the CPE.
2. The ambient temperature must be within -40°C to 55°C.
3. Mount on a wall or pole that can sustain the weight of the CPE.
4. Mount upright on a wall or pole that has a clear view of the signal source.

Wall Mounting

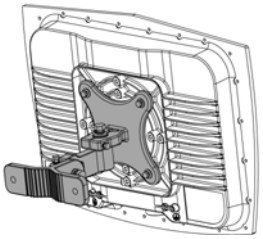
1. Align the mounting bracket on the wall. Using the bracket as mounting template, mark the positions to drill the holes.
2. Assemble the bracket as shown in the illustration.



3. Attach the bracket to the back of the CPE.



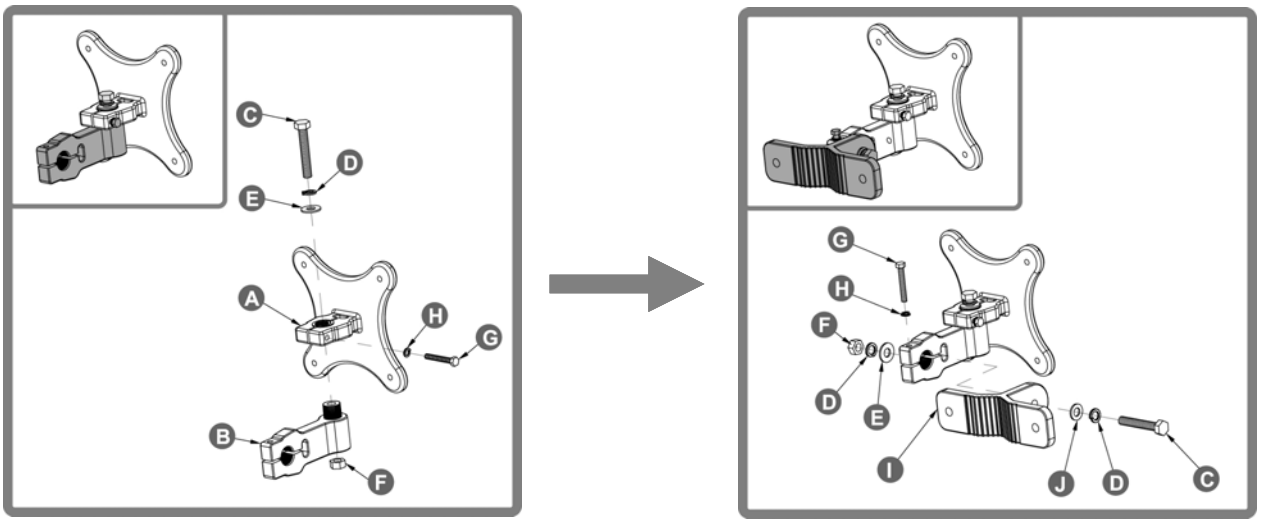
4. Hang the CPE to the wall and secure the bracket using the designated screws and washers.



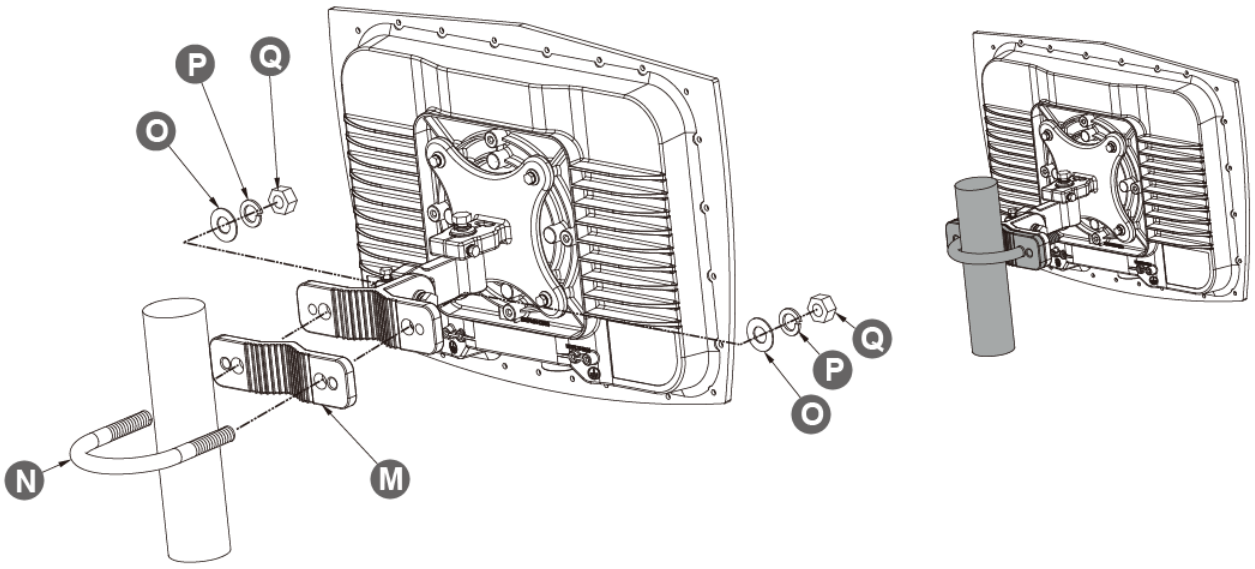
Pole Mounting

To mount the CPE to a pole, follow the steps below:

1. Assemble the mounting bracket as shown in the illustration.



2. Attach the bracket to the back of the CPE.
3. Align a pole on the bracket and assemble the pole bracket as shown.



4. Adjust the CPE position to an appropriate direction and secure the pole bracket using the designated screws and washers.

Getting Started

This chapter will guide you on how to use your outdoor CPE.

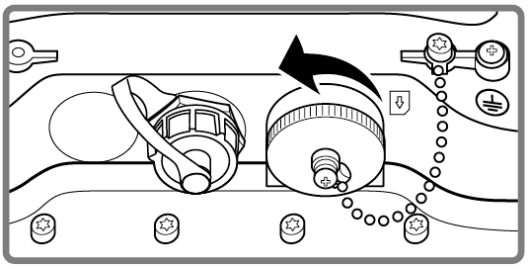
Install the SIM card

This CPE is specially designed for the 4G LTE network.

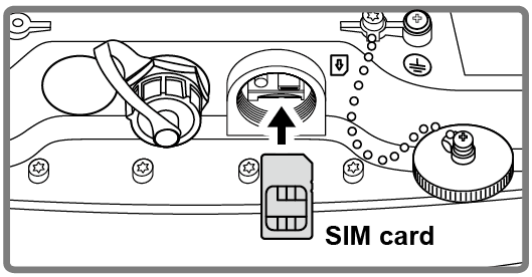
NOTE

Check the availability of service and plan rates of data connections with your network service provider.

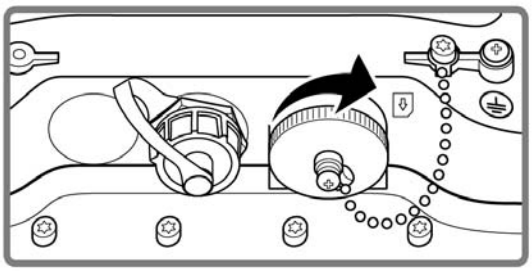
1. Unscrew the SIM card slot.



2. Insert a valid SIM card into the SIM card slot.
   Push it fully until it clicks into place.



3. Screw the cap back on tightly.



Remove the SIM card

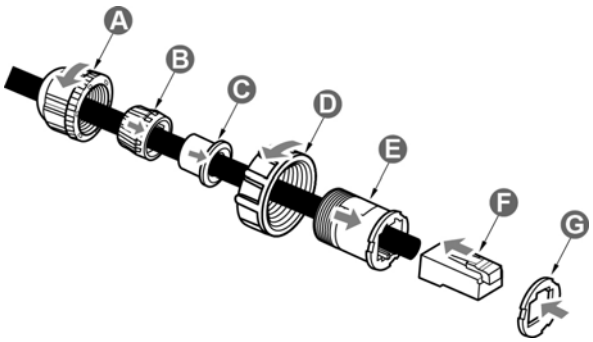
Push to eject the SIM card from the slot.

NOTE

- Once the SIM is reinserted, you must restart the CPE to read the SIM card properly.

Assemble the Optional RJ-45 Water Resistant Kit

1. Unpack the RJ-45 water resistant kit.
2. Assemble one end of the Ethernet cable as shown in the illustration.



NOTE

- The Ethernet cable is not included in the package.
- For details on the head assembly, refer to the Quick Installation Guide that is included with the RJ-45 head water resistant kit.

Grounding the CPE

For safety use, use the earth ground terminal to ground the CPE housing before making any connections.

You need the following:

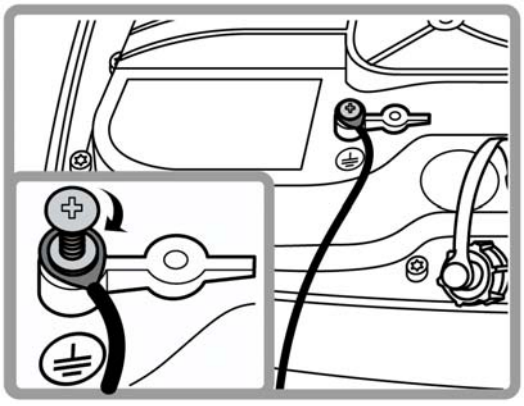
- Spring washer
- M 4x8 L screw

NOTE

- The spring washer and M4x8L screw are not included in your package.

To ground the CPE:

1. Insert the washer to the M4x8L screw.
2. Attach the screw halfway into the earth ground terminal.
3. Insert the grounding cable under the washer.
4. Tighten the screw.

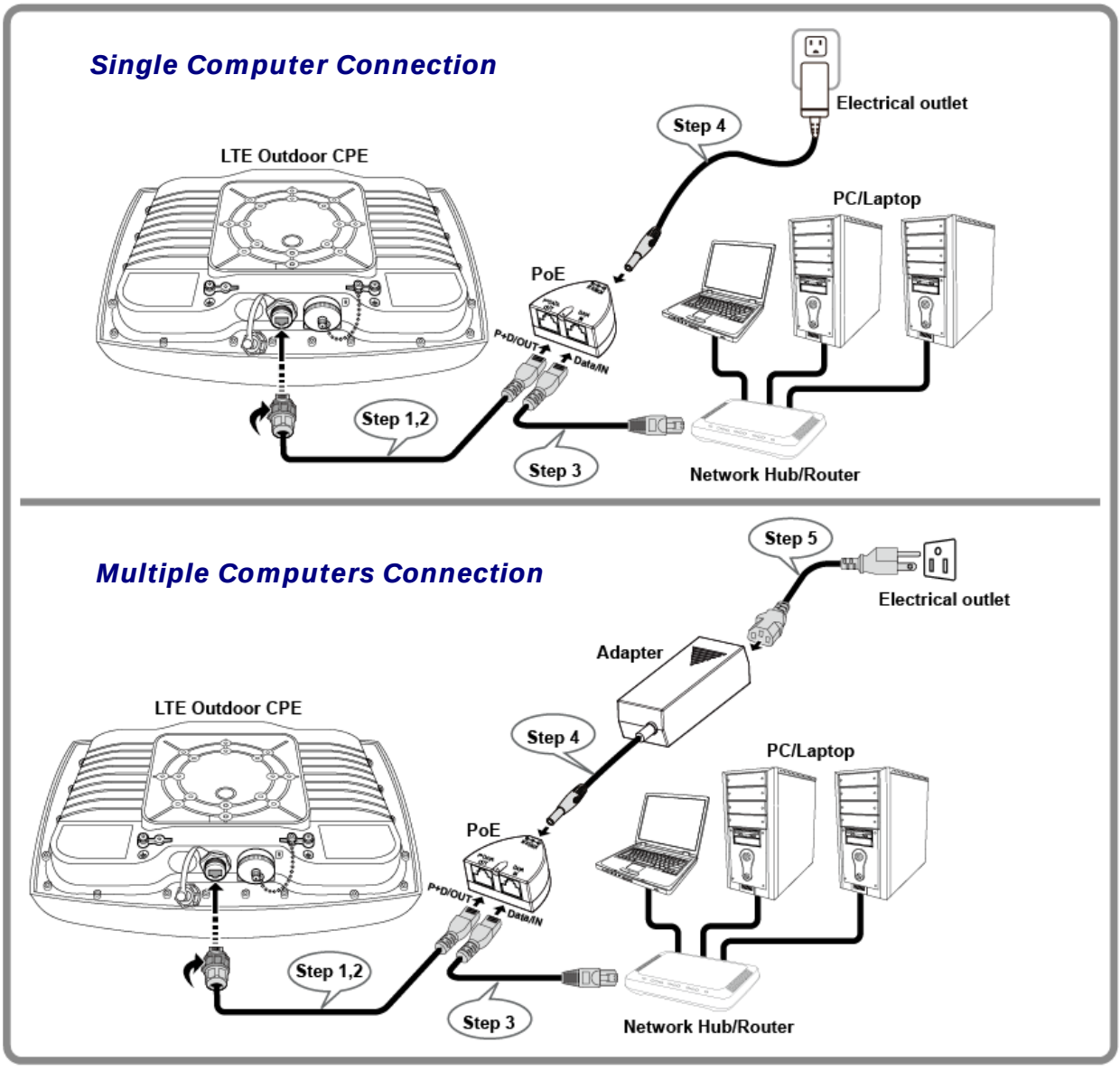


Connect the Computers

To use the Internet connection and configure the CPE settings, you must connect your CPE to a computer.

Prepare two Ethernet cables for connection.

1. Unscrew the Ethernet port and insert one end of the Ethernet cable into the port.
2. Insert the other end of the Ethernet cable to the P+D OUT port of the PoE.
3. Connect another Ethernet cable to a Network Hub/Router or directly to a PC/Laptop via PoE adapter (Data/IN port).
4. Plug the adapter to an electrical outlet.

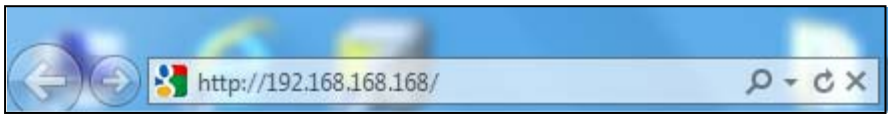


Using Web-based Management

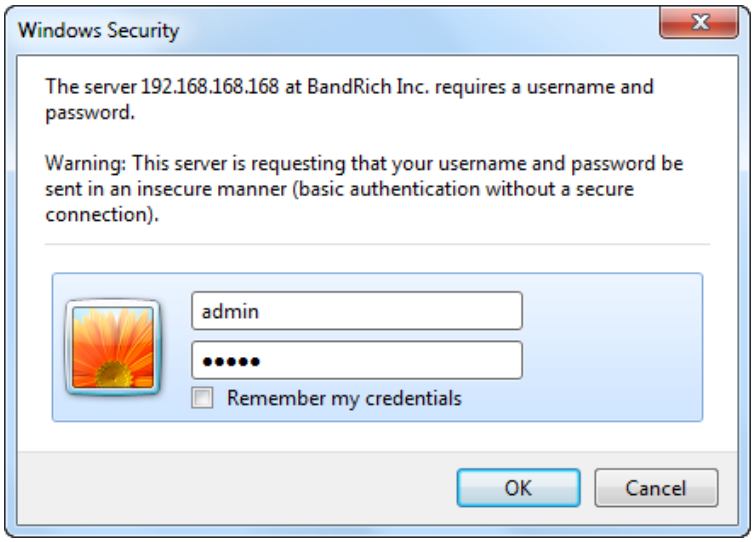
This chapter will guide you on how to configure your CPE via the web-based utility.

Login

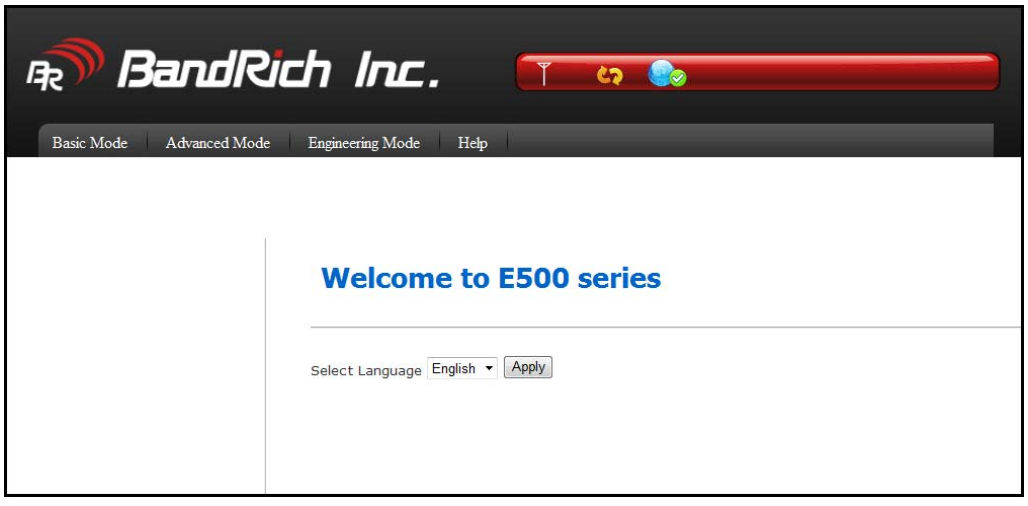
1. Launch a web browser.
2. On the address bar, enter http://192.168.168.168, then press **Enter**.



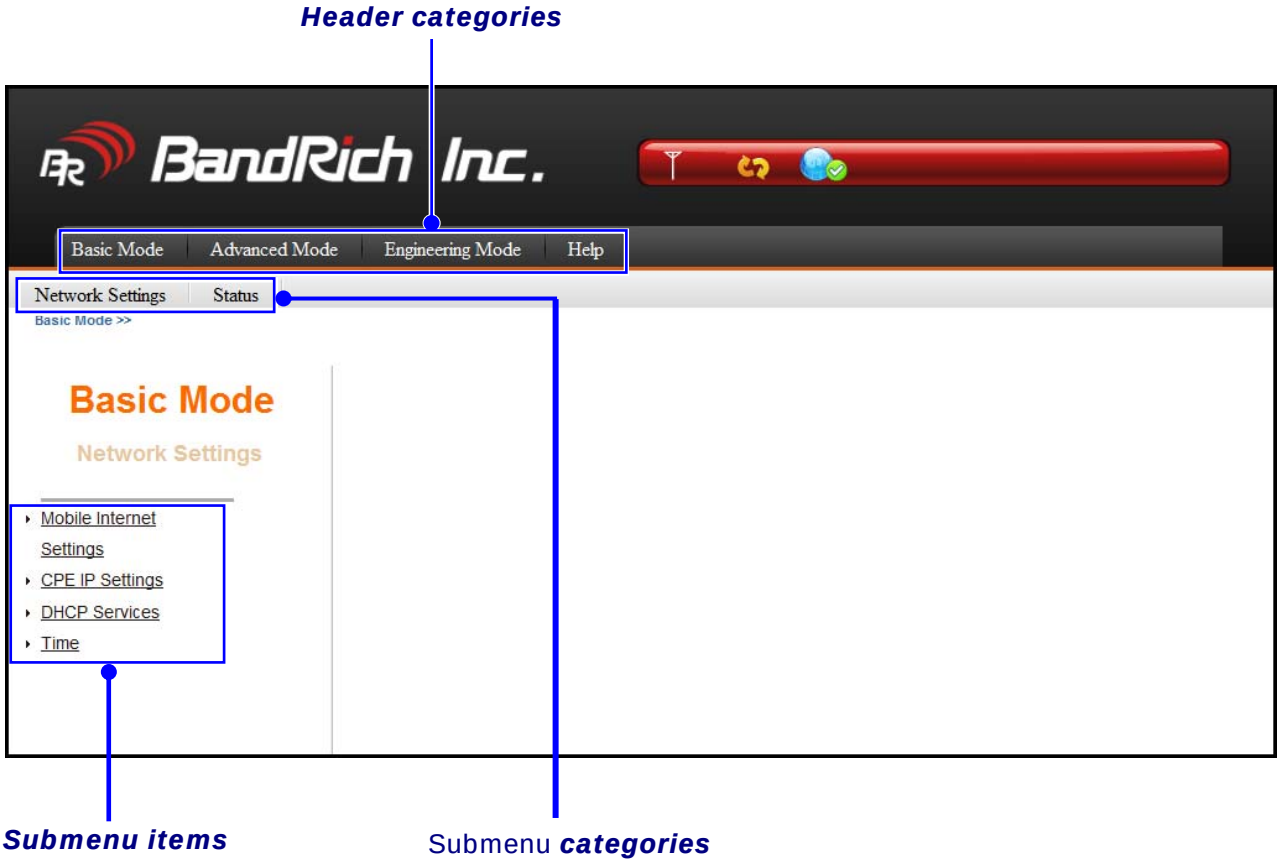
3. On the opening screen, enter the username (**admin**) and password (**admin**).



4. Click **OK** to login to the main screen.
5. Select preferred language, and click **Apply**.



6. Click one of the header tabs and click the left navigation submenu items to configure the system.



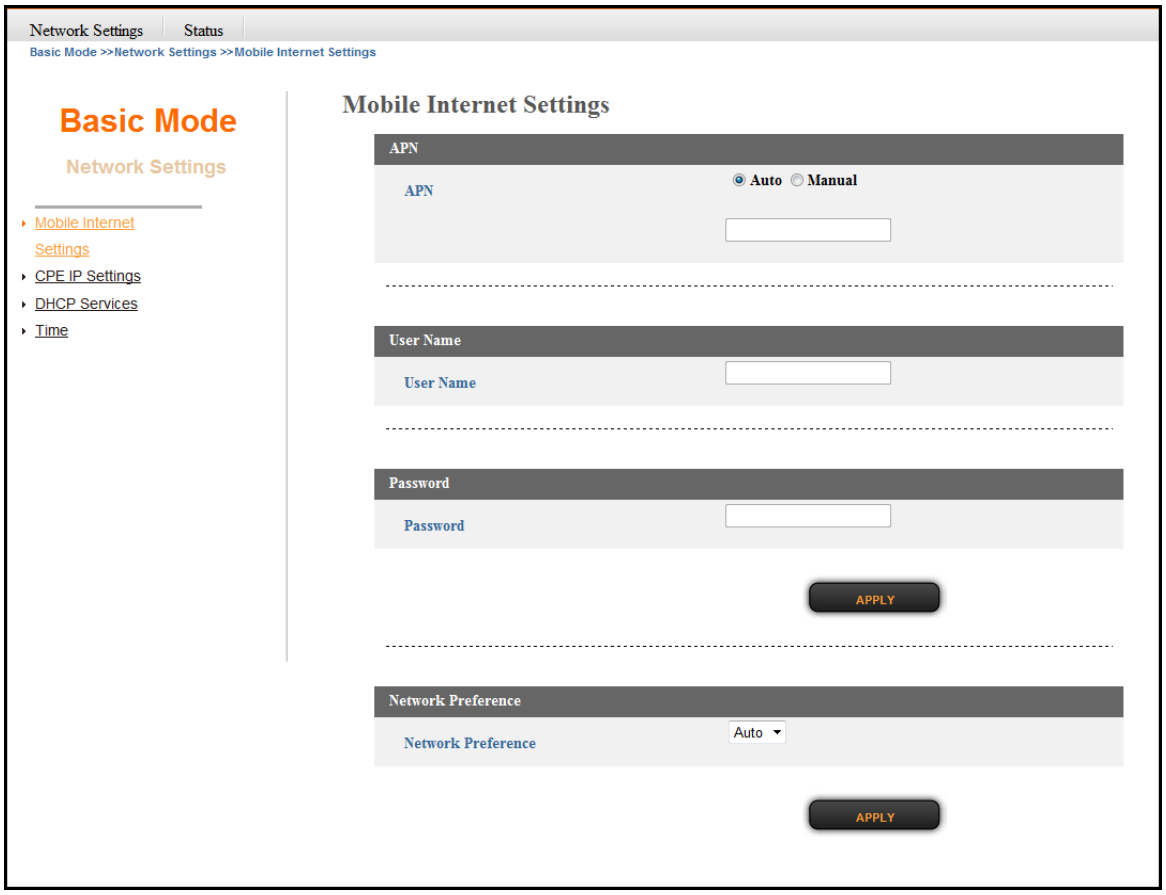
Basic Network Settings

With **Basic Mode**, you can configure the basic settings of CPE and view CPE status.

Configure Mobile Internet Settings

Set up your 4G mobile broadband connection.

1. Click **Basic Mode** tab and select **Network Settings**.
2. Click **Mobile Internet Settings**.



3. Configure the **APN** setting.
   If there is a need for manual setting, enter the **APN** name, **User Name** and **Password**.
4. Click **APPLY** to save changes.

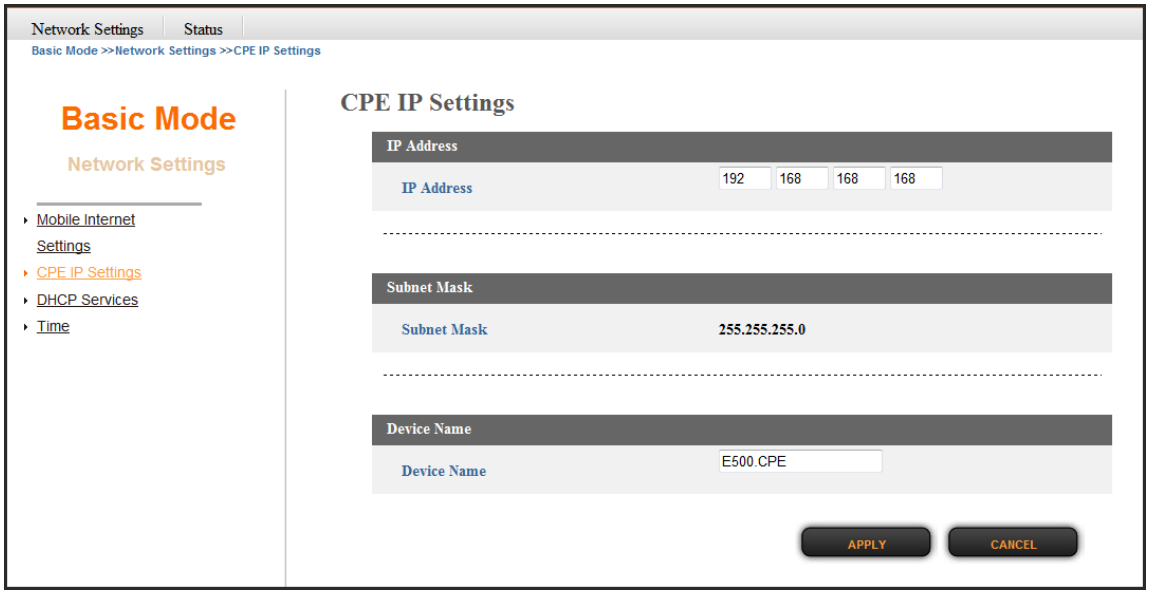
NOTE

- If you are not sure of the details, contact your 4G internet service provider for more information.

Configure CPE IP Settings

Modify the IP address configuration of your CPE.

1. Click **Basic Mode** tab and select **Network Settings**.
2. Click **CPE IP Settings**.

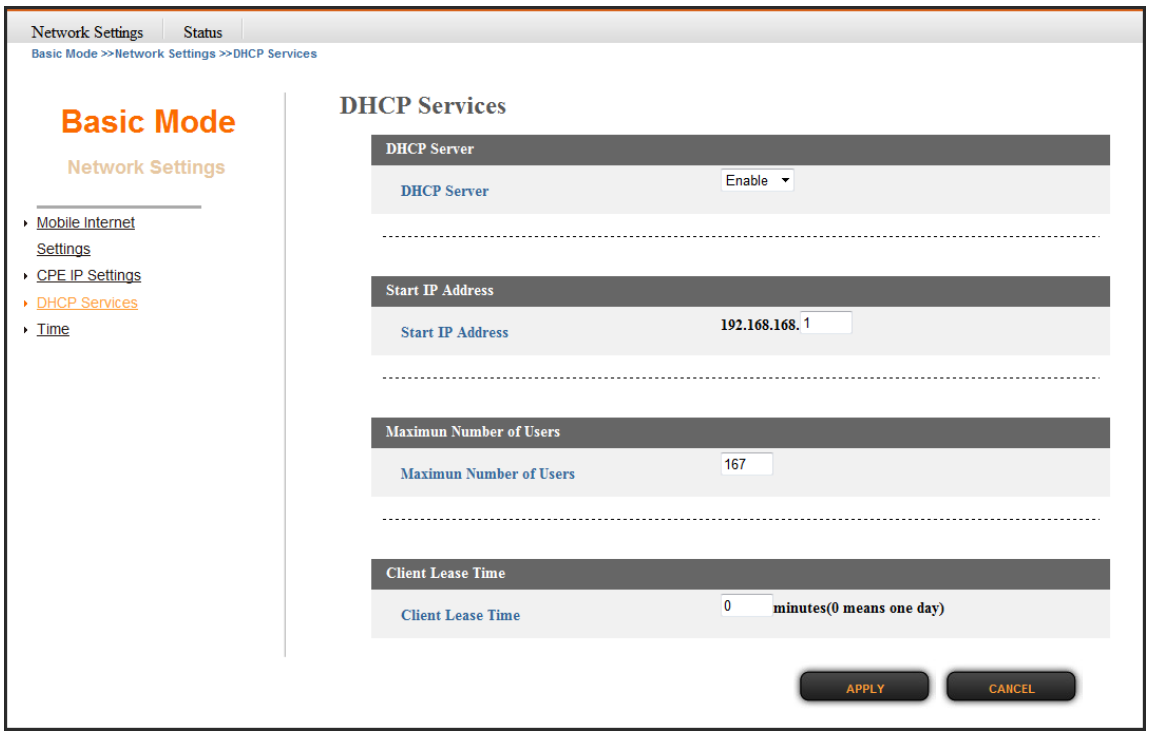


3. Modify the necessary settings.
   - **IP Address**: Enter the IP address of the CPE.
     By default, the IP address is 192.168.168.168.
   - **Subnet Mask**: Display the mask used to divide the IP address.
   - **Device Name**: Type a device name to use to access the web-based utility instead of entering the IP address on the address bar. In the case of the above illustration, you may type http://E500.CPE on the address bar to access the web-based utility.
4. Click **APPLY** to save changes.

Configure DHCP Services

Configure your CPE to use the Dynamic Host Configuration Protocol (DHCP). With DHCP service, your CPE will automatically assign an IP address to each computer on your network.

1. Click **Basic Mode** tab and select **Network Settings**.
2. Click **DHCP Services**.

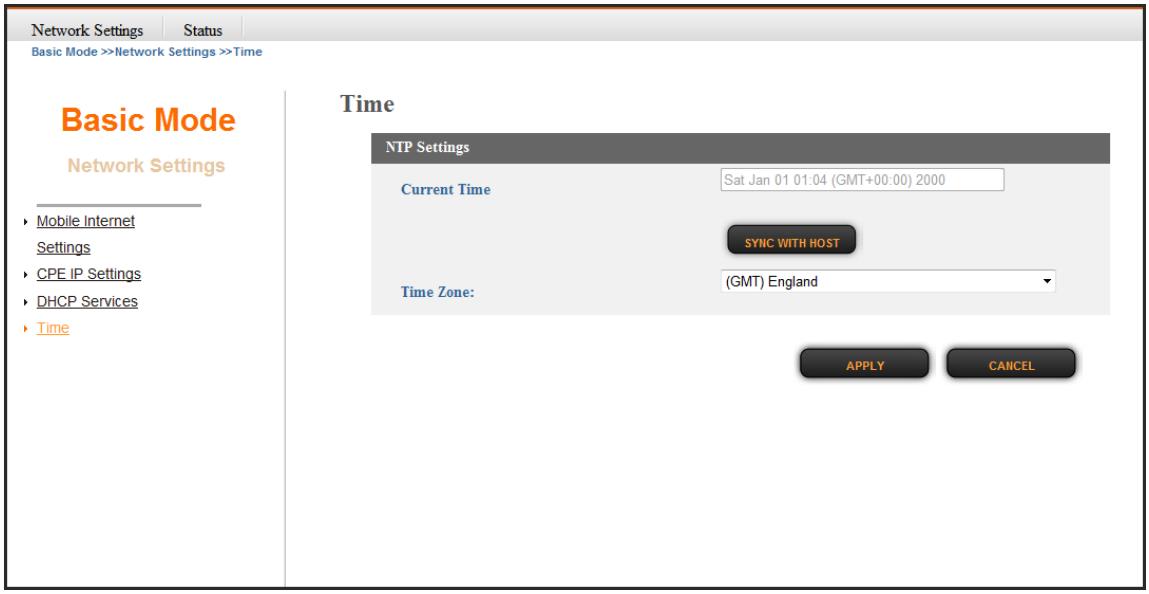


3. Modify the necessary settings.
   - **DHCP Server**: Select to enable/disable the DHCP server.
   - **Start IP Address**: Assign the first IP from the range to be leased.
   - **Maximum Number of Users**: Enter the maximum number of IP addresses to be leased.
   - **Client Lease Time**: Set the amount of time that the IP address will still be reserved for the computer after it has been disconnected from the CPE.
4. Click **APPLY** to save changes.

Configure CPE Time

Adjust the current system date and time.

1. Click **Basic Mode** tab and select **Network Settings**.
2. Click **Time**.



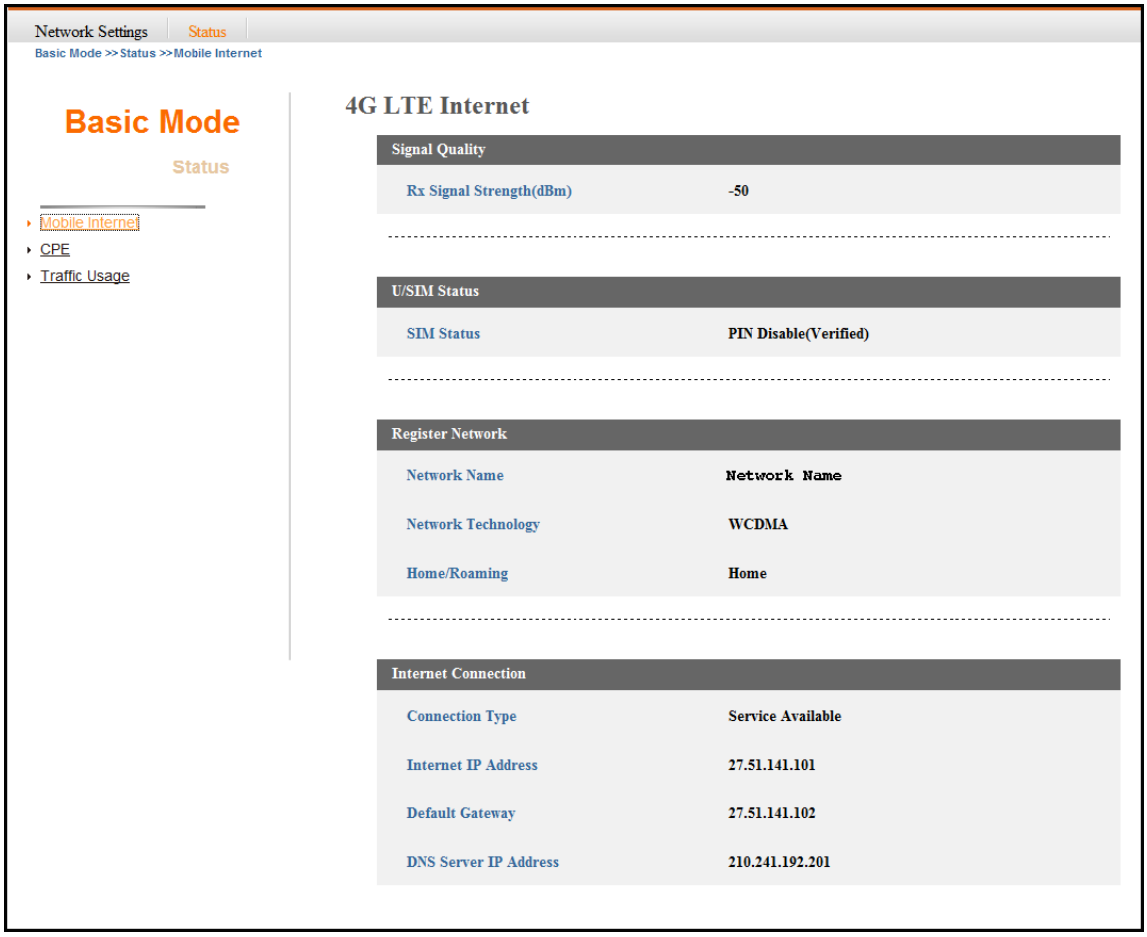
3. Modify the necessary settings.
   - **Current Time**: Display the current date and time. Click **SYNC WITH HOST** to synchronize with the computer date and time.
   - **Time Zone**: Select your local time zone from the list.
4. Click **APPLY** to save changes.

Status Information

View the CPE status information.

View Internet Connection Info

Display information on 4G status, 4G signal strength, network, and internet connection.

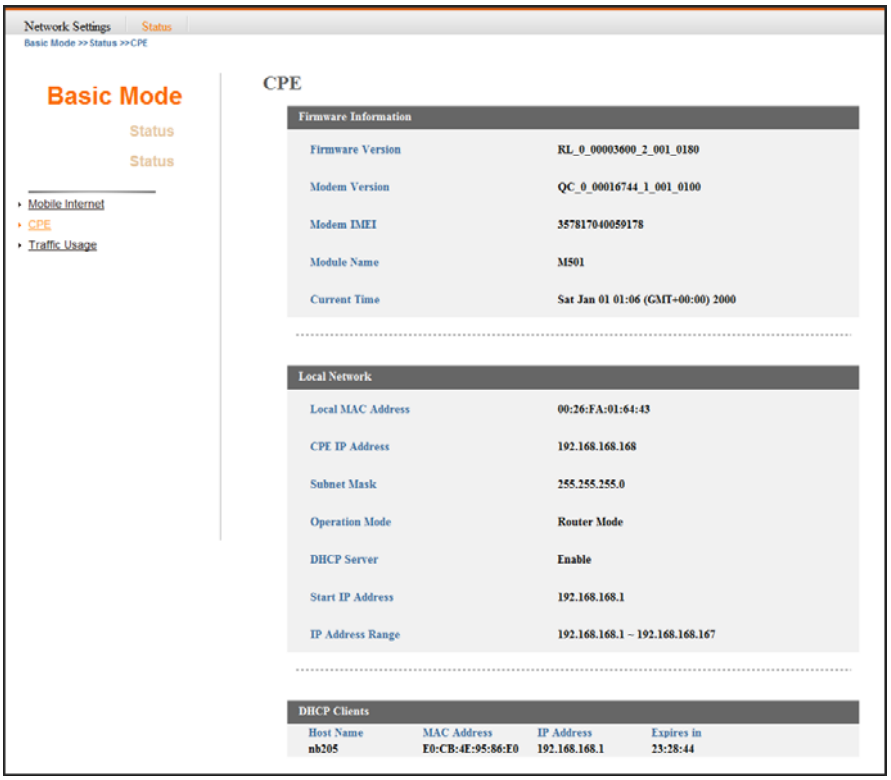


1. Click **Basic Mode** tab and select **Status**.
2. Click **Mobile Internet**. The following sections are shown:
   - **Signal Quality**: Displays the Rx signal strength.
   - **U/SIM Status**: Displays the SIM card status.
   - **Register Network**: Displays the network information and status. **Home/Roaming** displays whether the network is in Home or Roaming mode.
   - **Internet Connection**: Displays the Internet connection information, such as type, IP address, gateway, and DNS server.

View CPE Info

Display your CPE firmware version, local network settings, and DHCP client information.

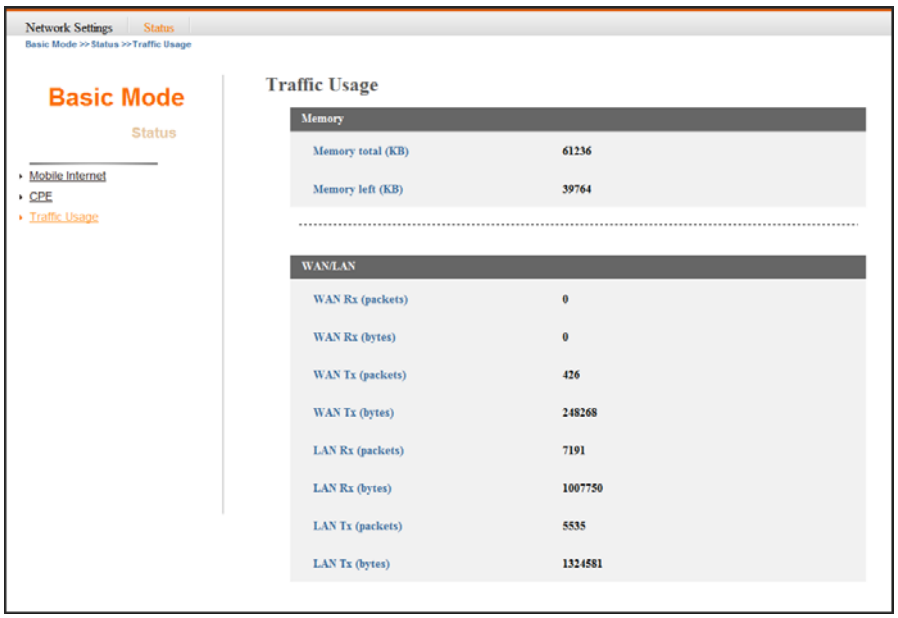
1. Click **Basic Mode** tab and select **Status**.
2. Click **CPE**.



View Traffic Info

Display your CPE memory and network (WAN/LAN) data usage.

1. Click **Basic Mode** tab and select **Status**.
2. Click **Traffic Usage**.



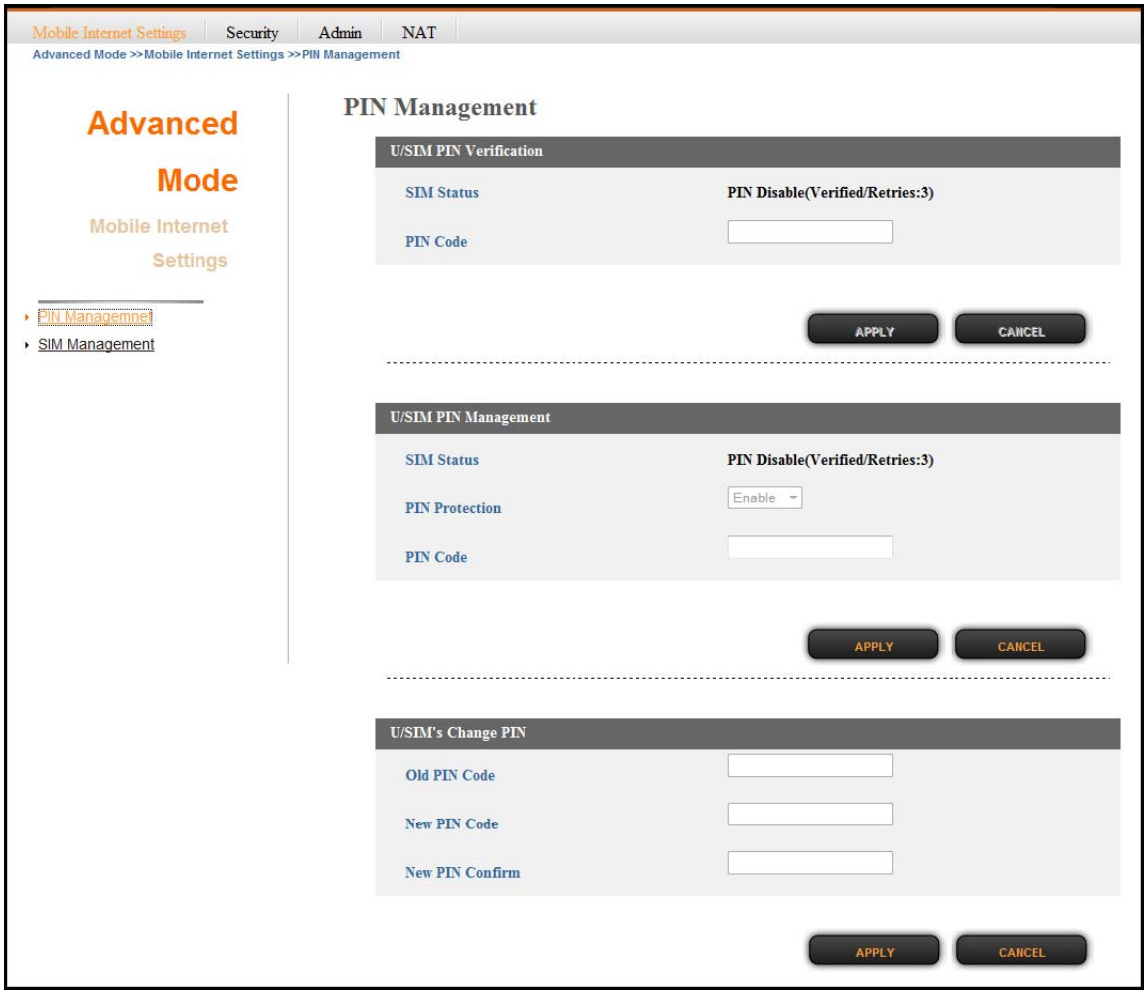
SIM/PIN Settings

You can protect the 4G SIM card installed on your CPE from unauthorized users by requiring the PIN code or entering a password.

Configure PIN

Set the PIN code to enable SIM card lock.

1. Click **Advanced Mode** tab and select **Mobile Internet Settings**.
2. Click **PIN Management**.

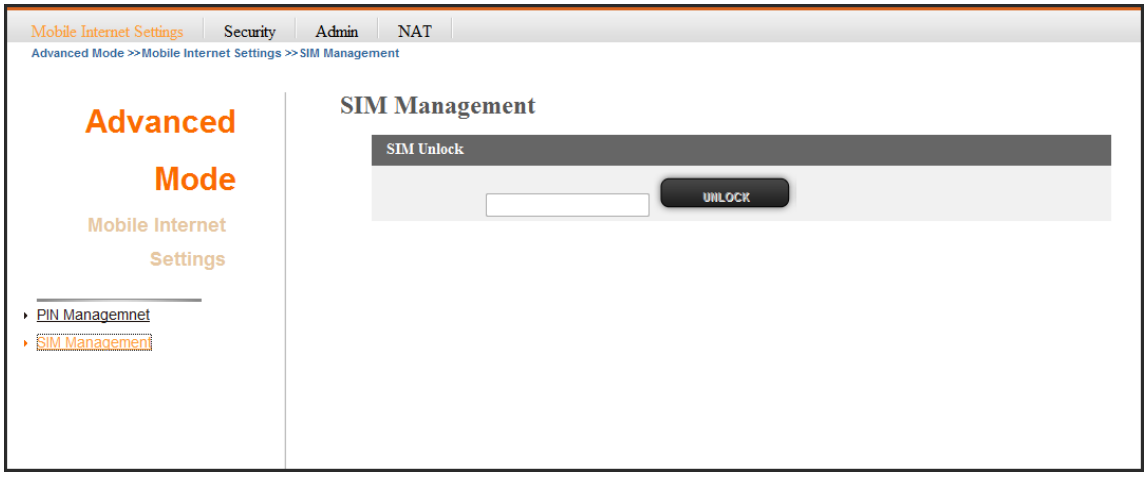


3. Modify the necessary settings.
   - **U/SIM PIN Verification**: Enter the PIN code.
   - **U/SIM PIN Management**: Enable/Disable PIN protection after typing a PIN code and clicking **APPLY**. The **PIN Protection** field shows the state you want to change to.
   - **U/SIM's Change PIN**: Change the PIN code.
4. Click **APPLY** to save changes.

Unlock SIM

Unlock SIM is applicable only for other types of SIM to which the services are originally locked. When the SIM card is accessed and an invalid SIM is displayed on the screen, you must enter the SIM unlock password to unlock the SIM card.

1. Click **Advanced Mode** tab and select **Mobile Internet Settings**.
2. Click **SIM Management**.



3. Enter the password.
4. Click **UNLOCK** to unlock the SIM card.

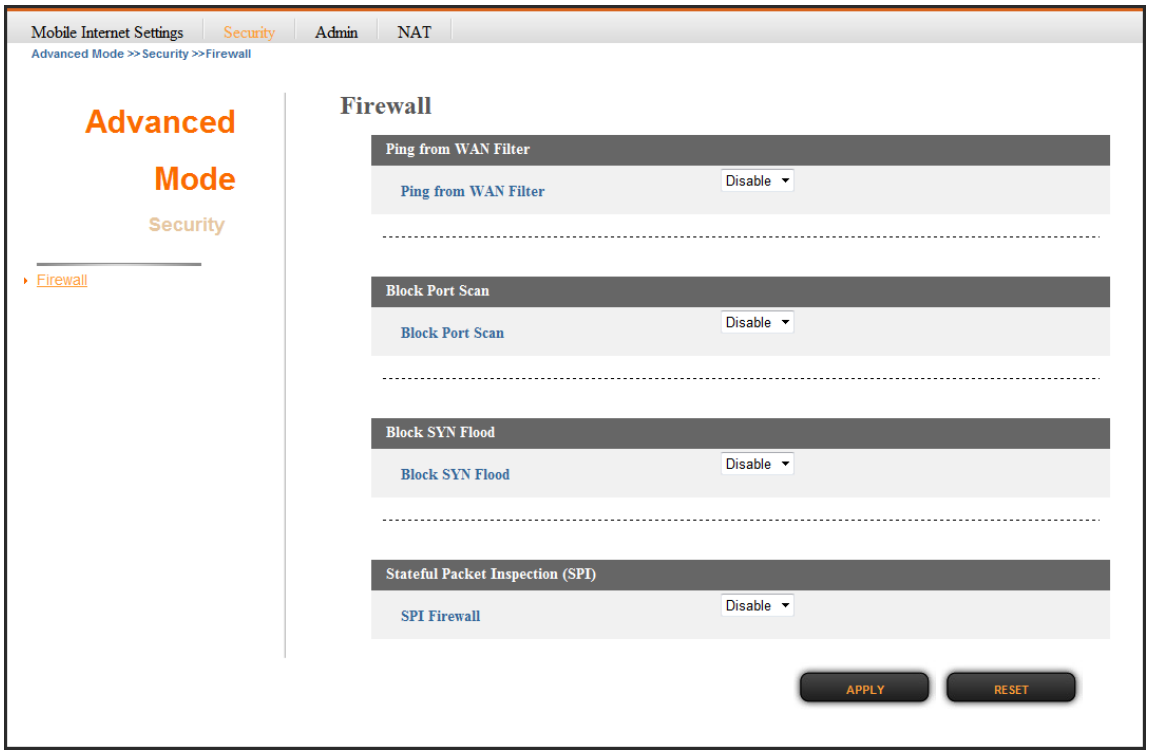
NOTE

- If you are not sure of the details, contact your 4G internet service provider for more information.

Security Settings

Configure firewall settings to suit your requirement.

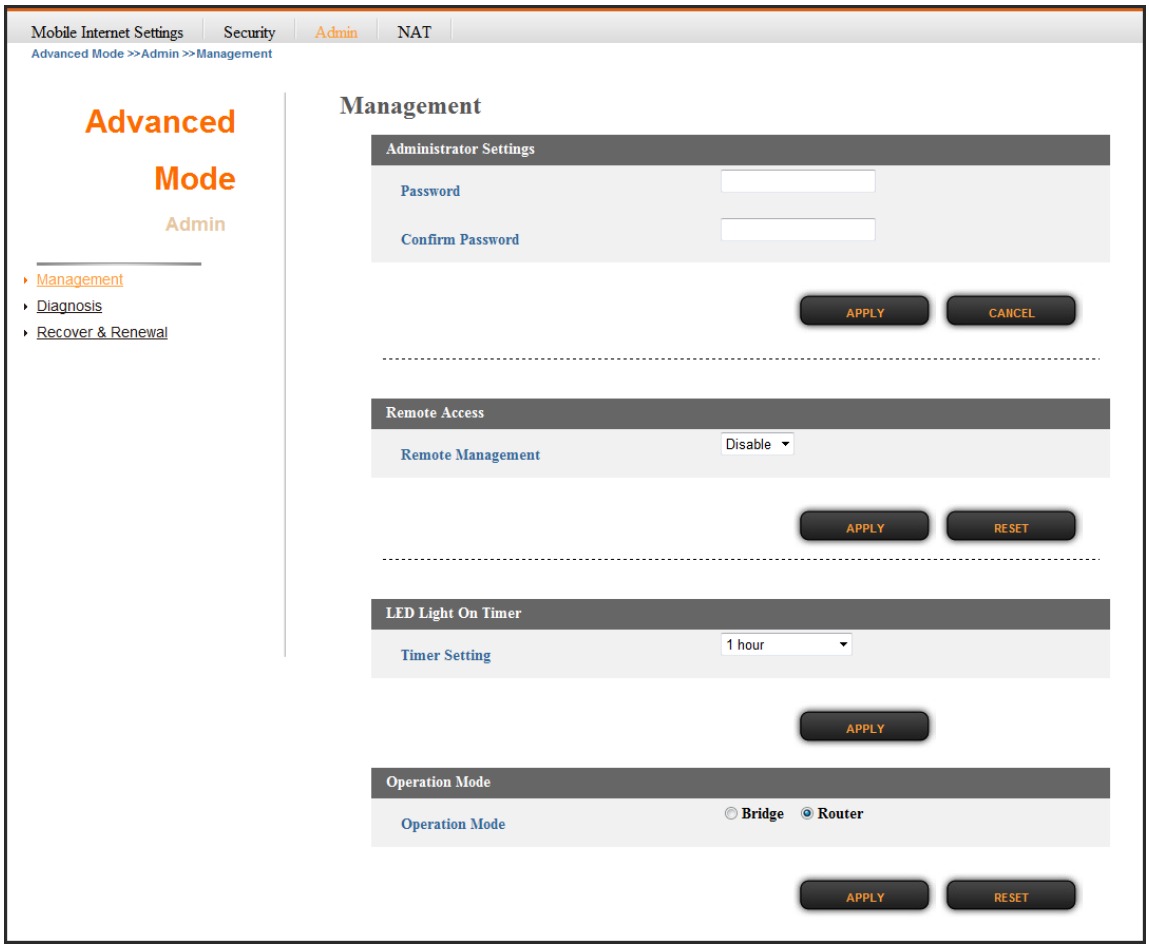
1. Click **Advanced Mode** tab and select **Security**.
2. Click **Firewall**.



3. Modify the necessary settings.
   - **Ping from WAN Filter**: Select to enable/disable Ping permit from WAN. If this function is enabled, you can remotely ping the network device from the WAN side.
   - **Block port scan:** Port scanning means intruder across the network is scanning your computer for open ports possibly to see if there are any services running on your computer for hacking. Select whether to enable or disable the block port scan function.
   - **Block SYN Flood**: SYN Flood is a common Denial of Service (DoS) attack in which an attacker sends a succession or flood of SYN packets. Select whether to enable or disable the block SYN flood function.
   - **SPI Firewall**: SPI (Stateful Packet Inspection) Firewall filters more kinds of attacks by closely examining packet data structures. Select whether to enable or disable the SPI Firewall function.
4. Click **APPLY** to save changes.

Administrator Settings

Change the administrator password, configure remote access setting, set the timer duration for LED light, and select the operation mode of your CPE.



Change Web Management Password

Change the administrator password.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Management**.
3. On **Administrator Settings**, do the following:
   - **Password**: Enter the new password.
   - **Confirm Password**: Enter again the new password for confirmation.
4. Click **APPLY** to save changes.

Enable Remote Access

Configure remote access settings.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Management**.

3. On **Remote Access**, select **Enable** from the drop-down list to enable remote management function.
4. Click **APPLY** to save changes.

Manage LED Light

Set the duration for the LED light to stay on.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Management**.
3. On **LED Light On Timer**, select the desired length of time from the drop-down list.
4. Click **APPLY** to save changes.

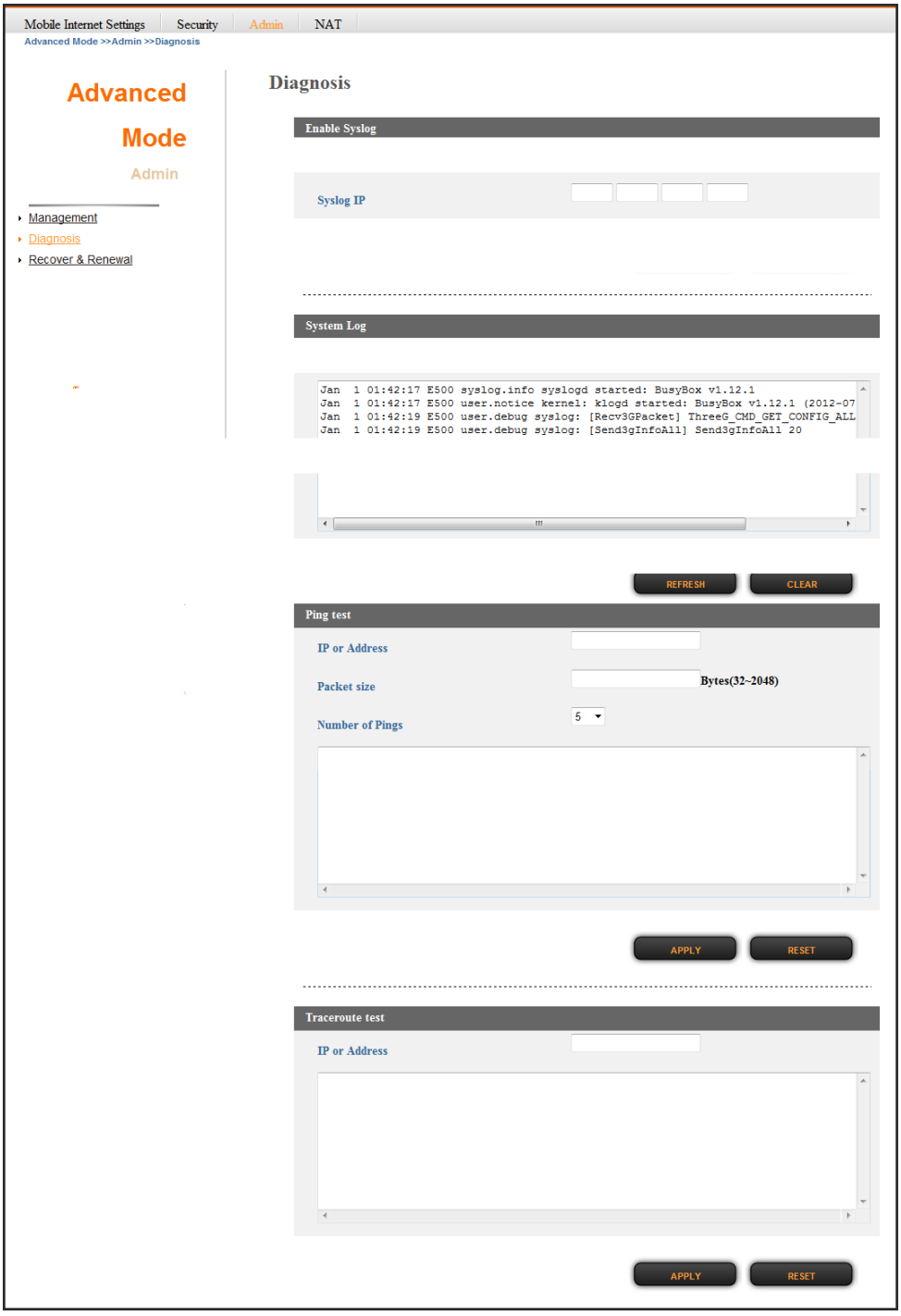
Select Operation Mode

Set the operation mode of the CPE.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Management**.
3. On **Operation Mode**, select one of the following options:
   - **Bridge**: Select Bridge mode if you will have another router in your network to be set as the DHCP server. Clients in your network will directly receive IP address assigned by the server. After selecting Bridge mode, you may connect other routers or network devices. To access the CPE web-based utility in bridge mode, you must configure the IP address of the computer connected to the CPE with the IP address of the CPE.
   - **Router**: Select Router mode to use the CPE as a router. This is the default mode.
4. Click **APPLY** to save changes.

Advanced Diagnosis

Set the system log, view the system log entries, and configure Ping and Traceroute tests settings.



Enable SysLog

Configure the system log settings.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Diagnosis**.

3. On **Enable Syslog**, do the following:
   - **Enable Syslog**: Click **Enable** to enable the system log.
   - **Syslog IP**: Specify the IP address of the server that will receive the system log.
4. Click **APPLY** to save changes.

View System Log

View the current system log entries.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Diagnosis**.
3. On **System Log**, it displays the current system log entries.
   - Click **REFRESH** to refresh the log shown on the screen.
   - Click **CLEAR** to clear the current system log data.

Use Ping Test

Allow the CPE to ping the network devices to verify their connection.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Diagnosis**.
3. On **Ping test**, do the following:
   - **IP or Address**: Enter the IP address of the network device that you want to ping.
   - **Packet size**: Enter the packet size.
   - **Number of Pings**: Enter the number of pings.
4. Click **APPLY** to ping other network device.

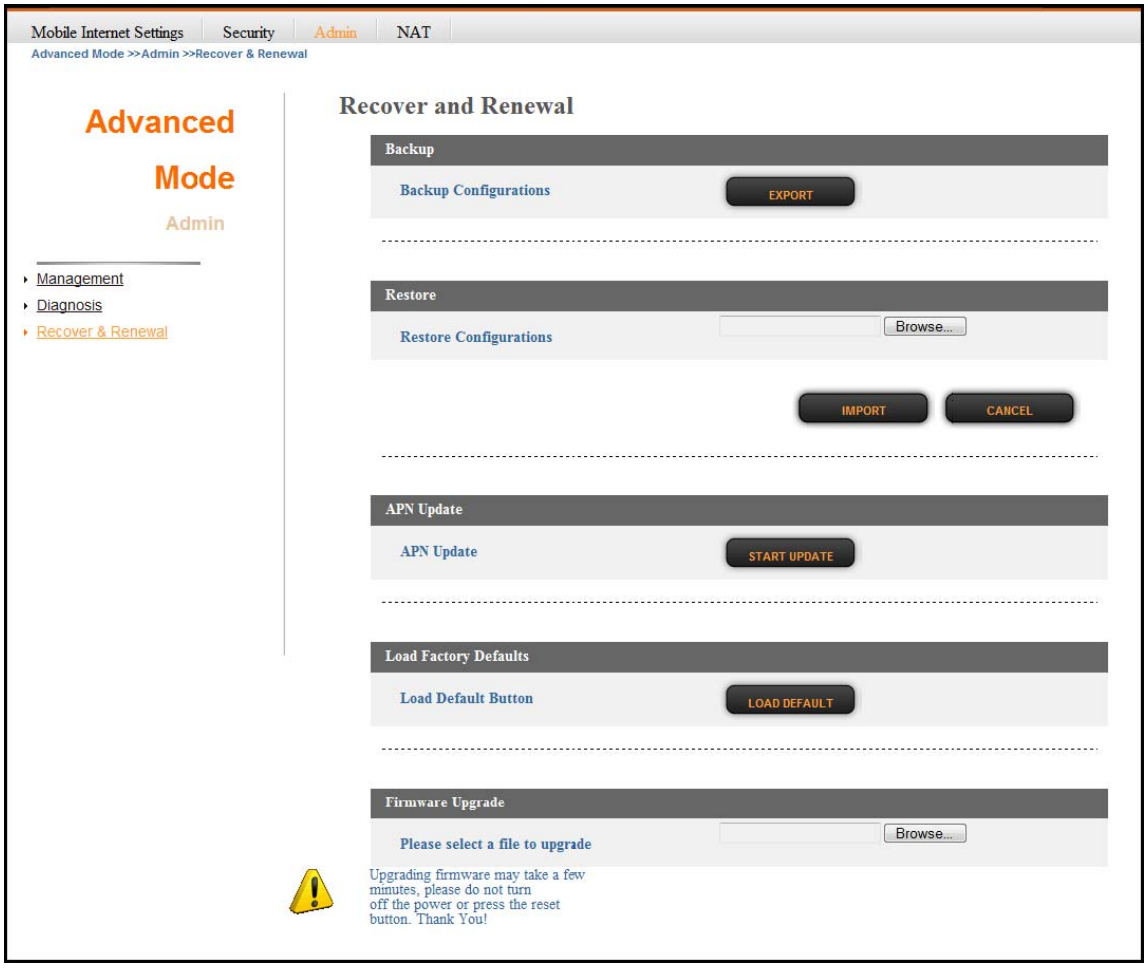
Use Traceroute Test

Allow the CPE to trace the route that test packets take from one web destination to another. This function is commonly used to troubleshoot network problems and identify routing problems or firewalls that may be blocking access to a web site.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Diagnosis**.
3. On **Traceroute test**, enter the IP or the domain name on **IP or Address**.
4. Click **APPLY** to monitor a network trace.

System Maintenance

Configure the settings to back up and restore the CPE configurations, upgrade the APN and CPE firmware, and reset the CPE to factory default settings.



Backup Configuration

Back up the CPE configuration to your computer.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Recover & Renewal**.
3. On **Backup**, click **EXPORT** to export the current configurations to your computer.

Restore Configuration

Restore the previously saved backup of the CPE configuration.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Recover & Renewal**.

3. On **Restore**, click the **Browse** button and select the previously saved configuration file in your computer.
4. Click **IMPORT** to update the CPE configuration.

Update APN

Update the APN database.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Recover & Renewal**.
3. On **APN Update**, click **START UPGRADE** to update the APN.

Restore Factory Defaults

Reset your CPE to the factory default settings.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Recover & Renewal**.
3. On **Factory Defaults**, click **LOAD DEFAULT** to reset all configuration parameters to the factory defaults settings.

Upgrade CPE Firmware

Update the firmware of your CPE.

1. Click **Advanced Mode** tab and select **Admin**.
2. Click **Recover & Renewal**.
3. On **Firmware Upgrade**, click the **Browse** button and select the latest firmware in your computer.
4. Click **START UPGRADE** to upgrade the CPE firmware.

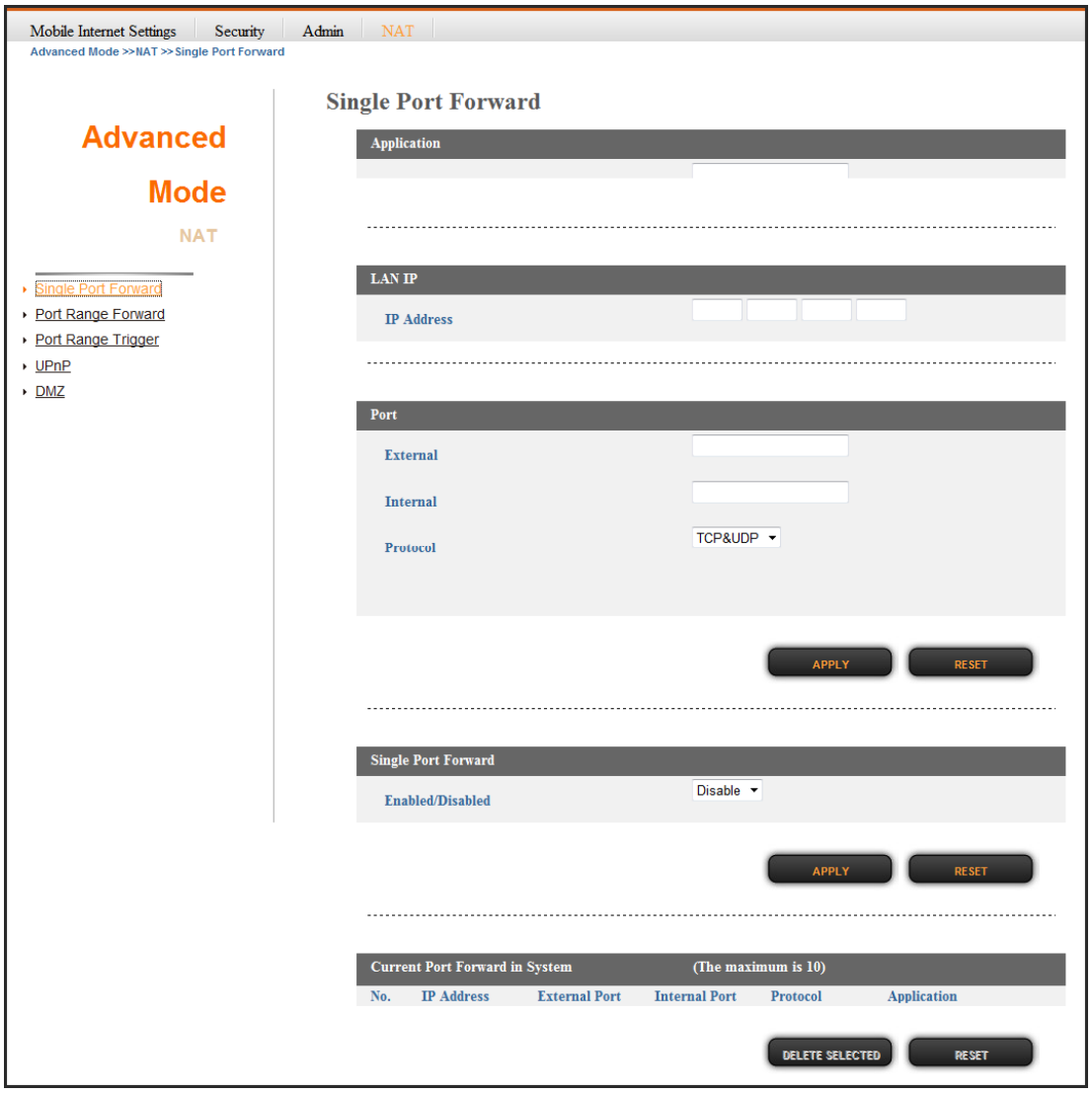
NAT Settings

Configure the network address translation (NAT) settings of the CPE.

Configure Single Port Forwarding

Single Port Forward allows users on the Internet to access this server by using the WAN port address and the matched external port number. When users send these types of request to your WAN port IP address via the Internet, the CPE will forward those requests to the appropriate servers on your LAN. Configured single port forward settings are listed on the table at the bottom of the screen.

1. Click **Advanced Mode** tab and select **NAT**.
2. Click **Single Port Forward**.



3. To configure the port forwarding, do the following:
   - **Application**: Enter a rule name.
   - **LAN IP**: Enter the local network IP address of the system hosting the server.

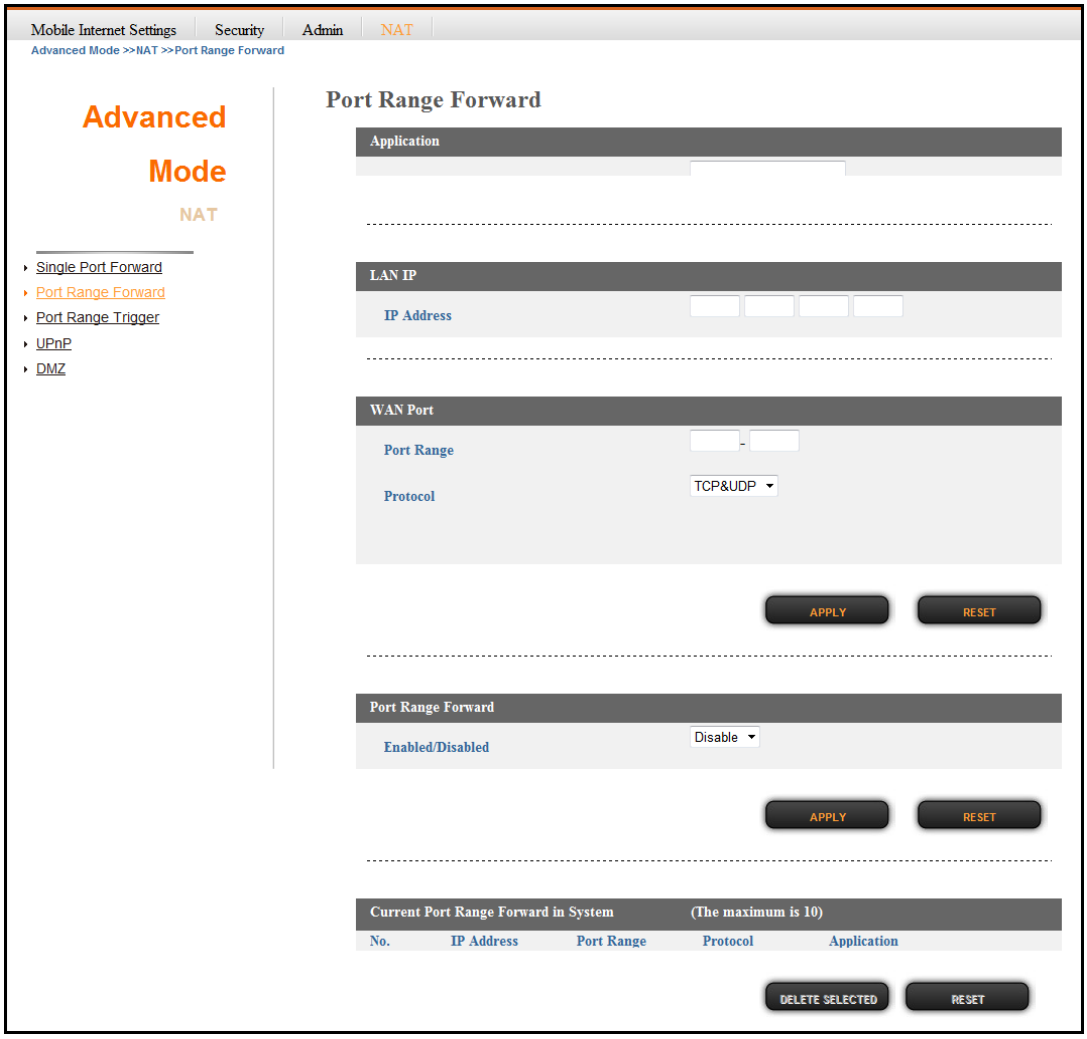
- **Port**
  - **External**: Enter the external port to be redirected to ***Internal port***.
  - **Internal**: Enter the port used by the device to receive data.
  - **Protocol**: Select the protocol from the drop-down list.
- **Single Port Forward**
  - **Firewall enable or disable**: Select **Enable** from the drop-down list to enable firewall.

4. Click **APPLY** to save the configuration rules.

Configure Port Range Forward

Port Range Forward allows users on the Internet to access this server by using the WAN port IP address and the pre-defined range of ports. When users send these types of request to your WAN port IP address via the Internet, the CPE will forward those requests to the appropriate servers on your LAN. Configured port range forward settings are listed on the table at the bottom of the screen.

1. Click **Advanced Mode** tab and select **NAT**.
2. Click **Port Range Forward**.

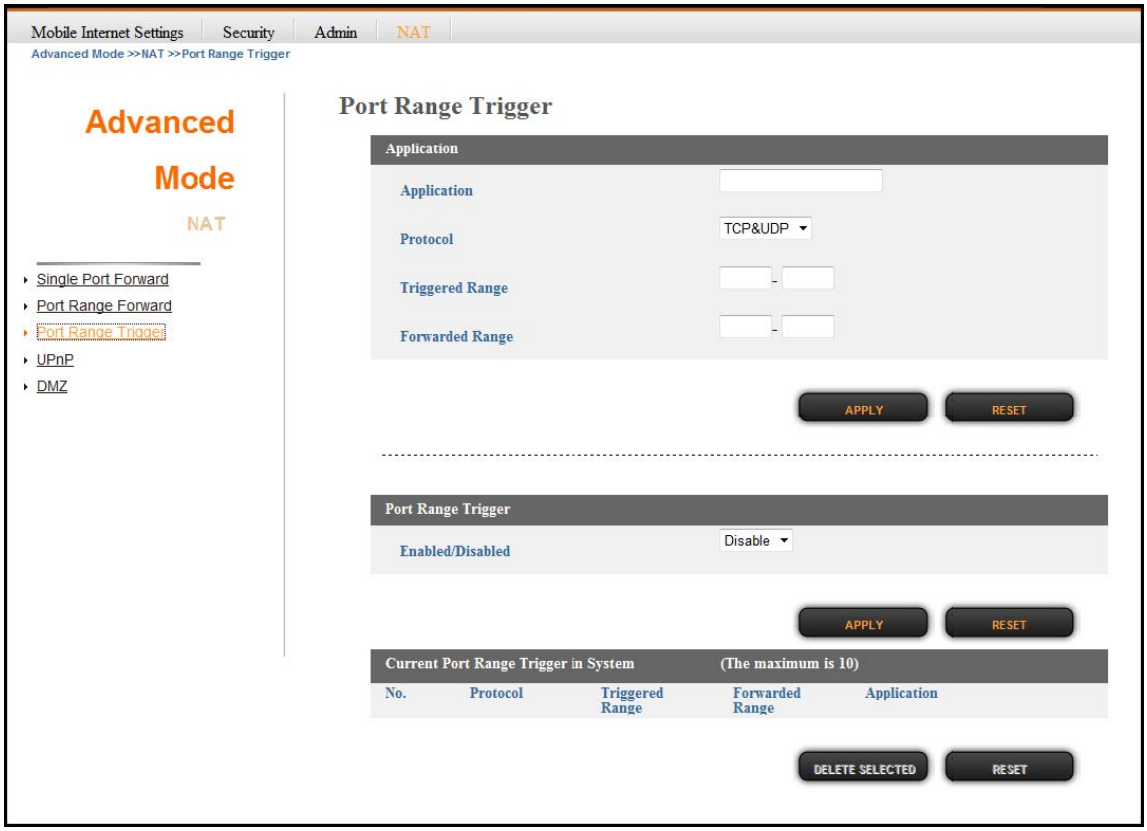


3. To configure the port forwarding, do the following:
   - **Application**: Enter a rule name.
   - **LAN IP**: Enter the local network IP address of the system hosting the server.
   - **WAN Port**
     - **Port Range**: Enter the start-port and end-port used by the public port from the WAN side.
     - **Protocol**: Select the protocol from the drop-down list.
   - **Port Range Forward**
     - **Enabled / Disabled**: Select **Enable** from the drop-down list to enable firewall.
4. Click **APPLY** to save the configuration rules.

Configure Port Range Trigger

Port trigger allows the device to monitor firstly if traffic on certain ports of a computer is being triggered or being sent out; if so, the incoming traffic from the Internet on certain ports will be allowed to pass into the same computer.

1. Click **Advanced Mode** tab and select **NAT**.
2. Click **Port Range Trigger**.

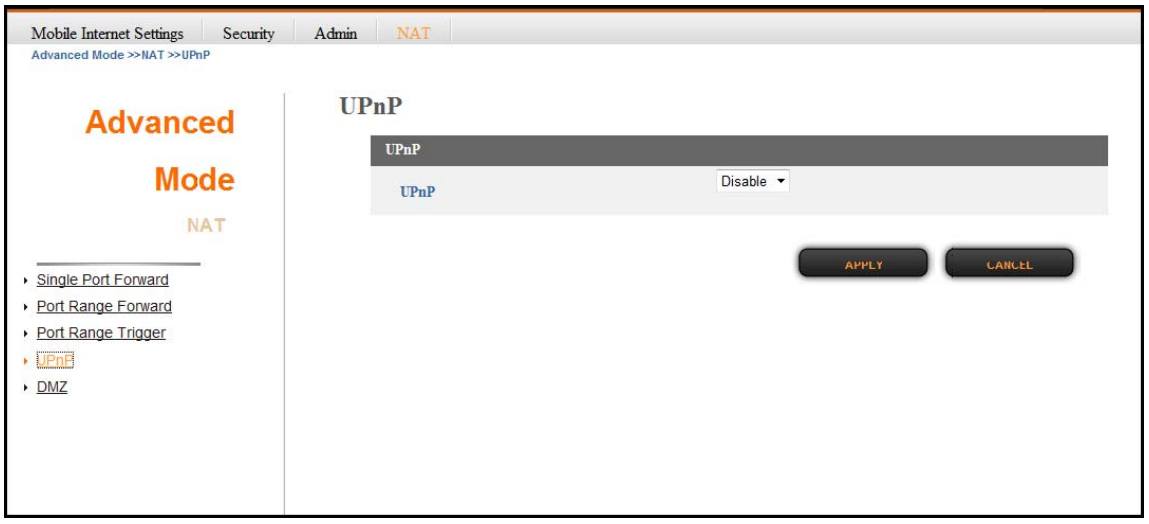


3. To configure the settings, do the following:
   - **Application**
     - **Application**: Enter a rule name.
     - **Protocol**: Select the trigger port protocol from the drop-down list.
     - **Triggered Range**: Enter the start-port and end-port that will trigger the device to open ports for incoming data.
     - **Forwarded Range**: Enter the start-port and end-port used by the public port from the WAN side.
   - **Port Range Trigger**
     - **Enabled / Disabled**: Select **Enable** from the drop-down list to enable firewall.
4. Click **APPLY** to save the configuration rules.

Enable UPnP

Universal Plug and Play (UPnP) allows automatic discovery and control of services available on the network from other devices without user intervention.

1. Click **Advanced Mode** tab and select **NAT**.
2. Click **UPnP**.

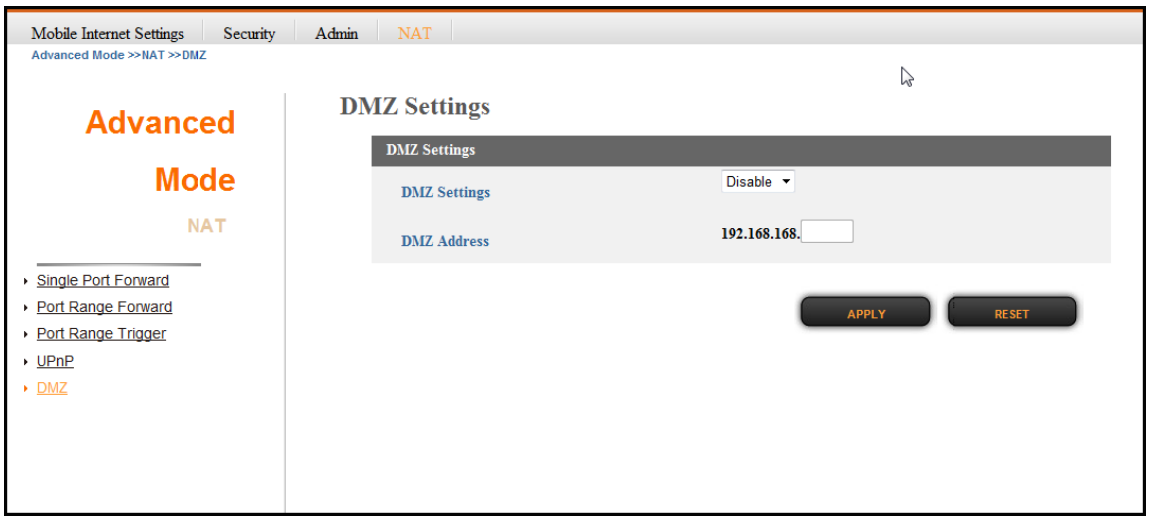


3. On **UPnP**, select **Enable** from the drop-down list to enable the UPnP feature.
4. Click **APPLY** to save changes.

Configure DMZ

A DMZ (Demilitarized Zone) sets a single computer, called a DMZ host, on your network to receive unrestricted incoming traffic from the Internet.

1. Click **Advanced Mode** tab and select **NAT**.
2. Click **DMZ**.

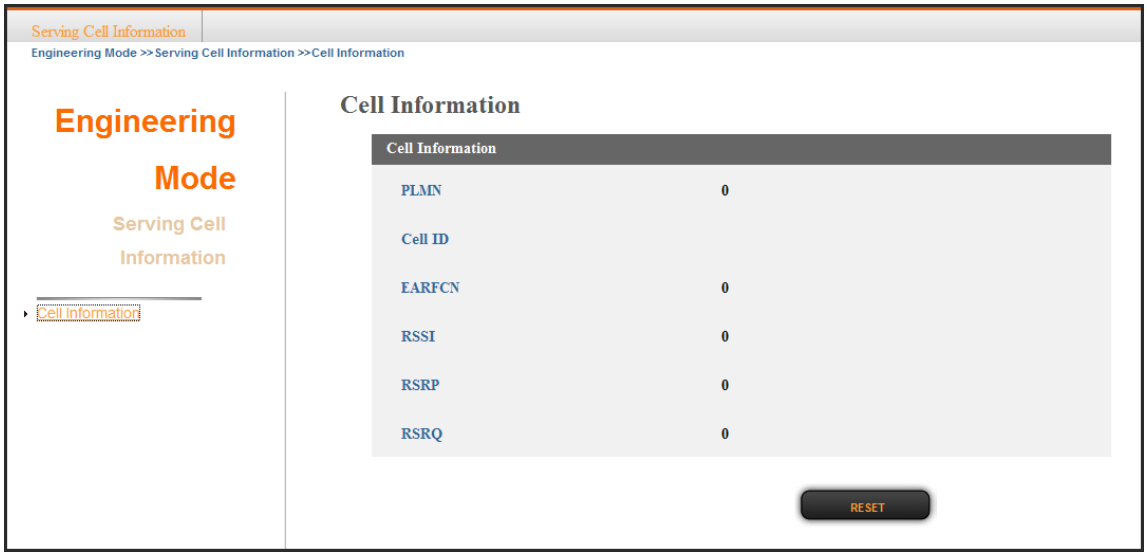


3. On **DMZ Settings**, do the following:
   - **DMZ Settings**: Select **Enable** from the drop-down list to enable the DMZ function.
   - **DMZ Address**: Enter the IP address of the DMZ host.
4. Click **APPLY** to save changes.

Engineering Mode

Reset all cellular information.

1. Click **Engineering Mode** tab.
2. Click **Cell Information**.



3. Click **RESET** to reset the cellular information.

Appendix

FAQ

This chapter contains a list of frequently asked questions when you set up your CPE configuration.

Q: What and how to find my computer IP address?

A: IP address is the identifier for a computer or device on a TCP/IP network. Networks using the TCP/IP protocol route messages based on the IP address of the destination. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be zero to 255.

For example, 192.168.168.254 could be an IP address.

To find your computer IP address,

➥ In Windows, click ***Start > Run*** to launch the **Command** program.

➥ Type “ipconfig”, then press the **Enter** button.

➥ Your computer IP address is listed on the *IP Address*.

Q: What is Long Term Evolution (LTE)?

A: LTE is a 4th generation (4G) mobile broadband standard and is the successor to the 3G technologies CDMA/GSM/UMTS. The service is typically much faster on both uplink/download speeds.

Q: What is a firewall?

A: A firewall is a set of related programs that protects the resources of a private network from users from other networks.

Q: What is Network Address Translation (NAT)?

A: Network Address Translation (NAT) is the process where a network device, usually a firewall, assigns a public address to a computer (or group of computers) inside a private network.

Q: What is Universal Plug and Play (UPnP)?

A: UPnP is an open networking architecture that consists of services, devices, and control points. The ultimate goal is to allow data communication among all UPnP devices regardless of media, operating system, programming language, and wired/wireless connection.

Troubleshooting

This chapter contains a list of common problems that you might experience when using your CPE, and techniques to try and overcome the problem. If you need additional help, contact your retailer.

Problems	Solutions
I cannot acquire network connection.	Make sure that a 4G SIM card is properly inserted to the CPE.
	• Check if the Ethernet cable is properly connected. • If you are using a PoE adapter, make sure that the Ethernet cables are properly connected and the power adapter is plugged into an appropriate power source. 5. Ensure you obtained the correct Access Point Name (APN) supplied by the SIM card carrier.
The Power LED did not light up when I plugged the adapter.	Make sure that the power adapter is connected to the CPE and plugged in to an appropriate power source. Use only the supplied power adapter.
	Check that the power source is receiving sufficient power.
	If the error persists, you may have a hardware problem. In this case, you should contact technical support.
I cannot access the web management page.	Make sure you are using the correct IP address of the CPE.
	Your computer and the CPE IP addresses must be on the same subnet for local network (LAN) access. You can check the subnet in use by the CPE on the Basic Network settings.
I forgot my login username and/or password.	Press the **Reset** button for five seconds to reset the settings to the factory default settings. Access the web management page. You can now login with the factory default username and password “admin”.

Specifications

Features	Specifications								
Cellular Connectivity and Data Speed									
Model	E503	E504	E507	E512	E513	E520	E538	E540	E525
LTE band	Band 3	Band 4	Band 7	Band 12 Band 17	Band 13	Band 20	Band 38	Band 40	Band 25 Band 2
EVDO Band	-	-	-	-	-	-	-	-	BC1 (1900)
DL Peak Data Rate	100Mbps								
UL Peak Data Rate	50Mbps								
LTE Bandwidth	Up to 20 MHz supported (real allocation depents on LTE channel planning)								
Module	M501LC	M505LC	M501LC	M505U	M525LC	M501LC	M509LC	M508LC	M528LC
Antenna	Antenna Type	Embedded high gain directional antenna							
	Antenna Gain	10~13dB gain (depends on model type)							
	RX Diversity Antenna	Built-in design							
	MIMO	Downlink 2x2 SU-MIMO							
Water Resistant	IP Code	IP66							
Interface	Ethernet Port	RJ45 x 1 (with power riding on Ethernet cable)							
	SIM Slot	Yes							
	USB 2.0	Micro USB 2.0 for debug purpose							
	Reset Button	Reset to factory default setting							
	LED Indicator	Signal strength indicators: LED x 5 Power indicator: LED x 1 LED light up timer: 5 min / 15 min / 30 min (default) / 60 min							
Router Features	Security	Multiple VPN pass-through (IPSec, PPTP, L2TP), Firewall Protection (Block Port Scan/Block SYN Flood/Filter Ping from WAN), SPI Firewall							
	NAT-NAPT	Single Port Forward, Port Range Forward, Port Range Trigger, DMZ, UPnP							
	DHCP	DHCP Server/Client							
	Other features	IPv4, TCP, UDP, ICMPv4, ARP, HTTP/HTTPs							

Features	Specifications	
CPE Management	CPE Operation Mode	Two modes of operation: Bridge or Router mode
	System Protection	Two types of user account: User and Operator. Evey user account has his own password protected mechanism
	Browser-based Administration GUI	Browser supported: IE, Firefox, Safari, Chrome
	Browser-based Administration GUI Multi-Language Support	English
Remote Management	Web Browser Interface	HTTP
	Command Line Interface	Telnet, SSH
Power Input	Passive Power over Ethernet Support (PPoE)	Yes, both 12V and 48V passive PoE input power supported
	CPE power consumption	Max 6.6 Watts when heater is off Max 23 Watts when heater is on
Environment	Operation Temperature (Excluding Power adaptor)	-40°C to 65oC (-40°F to 149°F)
	Power Adapter Operation Temperature	0°C to 40°C (32°F to 104°F)
	Storage Temperature	-40°C to 70°C (-40°F to 158°F)
	Operating Humidity	10% to 80% (Non-Condensing)
	Storage Humidity	5% to 90% (Non-Condensing)
Dimensions	423.5 (L) x 309.5 (W) x 104 (H) mm	
Weight	2kg	
Certification	FCC, RoHS	

Specifications are subject to change without prior notice.

Safety Information

Read and understand all safety information. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

Power Cord Protection

- Do not connect the power supply cord on elevated surfaces.
- Avoid any obstructions in its path and no heavy items should be placed on the cord.
- Protect the power cord from being walked on or pinched.

Object Entry

- Never insert objects of any kind through the openings of the CPE, as they may touch dangerous voltage points that could result in a fire or electric shock.

Operating Environment

- Do not mount the CPE near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Accessories

- Use only accessories specified by the manufacturer.

Cleaning

- Unplug the CPE from the power outlet before cleaning. Use only a dry cloth to clean the device.

Servicing

- Never attempt to disassemble the CPE yourself.
- In the unlikely event that smoke, abnormal noise, or strange odor is present, immediately turn off the CPE.
- Refer all servicing to qualified service personnel.

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.