CPE-0001

User Guide: FW 1.1.5

CPE-0001

Federal Communication Commission Interference Statement

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 or more 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 grantee of this device could void the user's authority to operate the equipment

CPE-0001

RF Exposure Statement

To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons (indoor), and at least 48cm from all persons (outdoor). It must not be co-located or operating in conjunction with any other antenna or transmitter.

Safety Warnings

RF Exposure Statement

Do not use any other power adaptor except the one that accompanies this unit or a power adaptor identified in the list below.

The use of another adapter could result in damage to the unit.

The following power adaptor is qualified for use with this CPE-0001.

The unit must be powered by a model DCT18W120150US-A0 AC/DC adaptor.

Caution

Connect the power cord of the power adapter to a socket outlet with a grounding connection.

CPE-0001

Chapter 1

Introduction

CPE-0001 provides customers with an improved solution for 4G LTE home service. The innovative design of the CPE-0001 allows customers to connect their favorite devices to 4G Networks.

1.1.   Unboxing Information

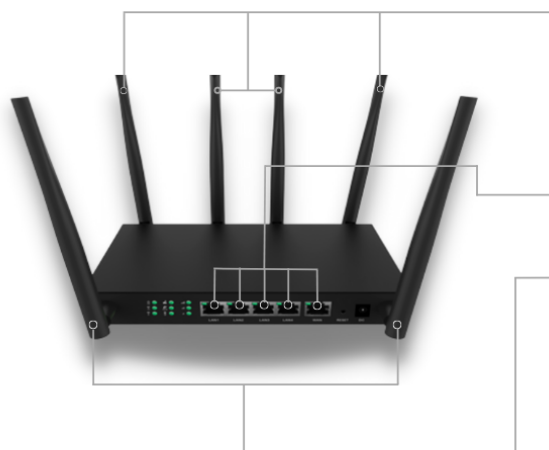Inside the product package for the CPE-0001, you should find the following items:

- CPE-0001 x 1
- Ethernet Cord x 1
- 2.4GHz WiFi antenna x 2
- 5.0GHz WiFi antenna x 2
- LTE Antenna x 2
- Power Adaptor x 1

CPE-0001

1.2.   Front and Rear Panel

Front & Rear Panel

WIFI ANTENNAS
○ 4 External Antennas
- 2 x 2.4GHz
- 2 x 5.8GHz

LTE ANTENNAS
○ 2 External Antennas
- 2 x LTE

ETHERNET PORTS
○ 5 Ethernet Ports
- 4 x LAN
- 1 x WAN

INDICATOR LIGHTS
- Power
- VS (vSIM) Indicator
- LTE
- 2.4GHz Wi-Fi
- 5GHz Wi-Fi
- WPS
- LAN 1-4
- WAN
- LTE Signal Strength Levels 1-3

LED	STATE	FUNCTION
POWER	ON	Device power on.
	OFF	Device power off.
LTE	ON	LTE is connected.
	Flash	Device is transmitting data over LTE.
	OFF	LTE is not working.
2.4GHz/5GHz Wi-Fi	ON	The 2.4GHz/5GHz Wi-Fi is on.
	Flash	Device is transmitting data over 2.4GHz/5GHz Wi-Fi.
	OFF	The 2.4GHz/5GHz Wi-Fi is off.
WPS	Flash	WPS is activated and ready to connect.
	OFF	WPS is not activated.
LAN 1-4	ON	LAN port is connected.
	Flash	Device is transmitting data via the port.
	OFF	LAN port is not connected.
WAN	ON	WAN port is connected.
	Flash	Device is transmitting data via WAN port.
	OFF	WAN port is not connected.
LTE Signal Strength	All OFF	Device is not connecting over LTE.
	1 LED	LTE signal strength is low.
	2 LED	LTE signal strength is medium.
	3 LED	LTE signal strength is high.
VS Indicator	ON	Virtual SIM mode is on.
	OFF	Physical SIM mode is on.

INTERFACE	DESCRIPTION
WPS/Reset	Press and hold the button for about 1~5 seconds to activate WPS, and hold for more than 5 seconds to reset the device.
WAN	Connect to the Cable/xDSL Modem or the Ethernet.
LAN1-4	Connect to the user's PC or network devices.
Power	Connect to the power adapter provided in the package.

CPE-0001

Chapter 2

Self-Setup and Activation

When installing the CPE-0001, make sure that the front side of the device faces towards the direction of the 4G signal (window).

Front Side

This side should face the 4G signal (window)

Back Side

This side should face inside the home

2.2. WPS Connection to a Wi-Fi Extender

WPS can be used to pair your CPE-0001 to a Wi-Fi Extender instead of connecting the Wi-Fi Extender via the SSID (network name) and password, by following these steps:

1. Press and hold the button for about 1 - 5 seconds to activate WPS.
2. Press and hold the WPS button on the Wi-Fi Extender, ensuring the device is in range of the CPE-0001.
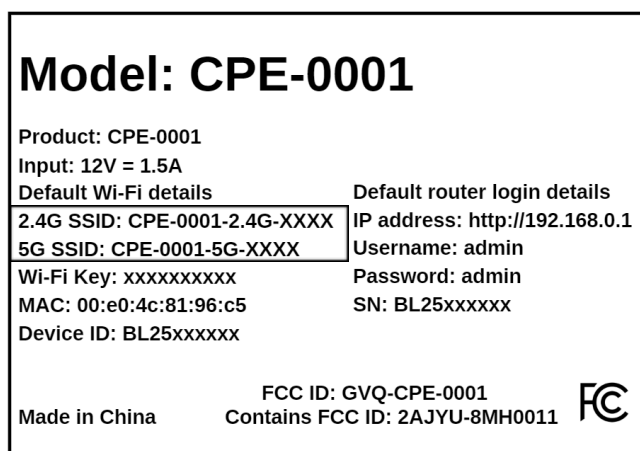3. The WPS will illuminate to indicate pairing success

CPE-0001

Chapter 3

Accessing the Web User Interface: Log In and Set Up: Setup Wizard

3.1. Login

After turning on the CPE-0001 connect to it via Wi-Fi by following these steps:

1. Locate the default SSID (network name) and the default Wi-Fi key (password) on the sticker located on the bottom of the router.
2. On your mobile device, access the Wi-Fi settings menu. Select the SSID (network name) and enter the default Wi-Fi key (password) from Step 1.
   a. Either 2.4G SSID or 5G SSID is fine to connect to.

Model: CPE-0001

Product: CPE-0001
Input: 12V = 1.5A

Default Wi-Fi details	Default router login details
2.4G SSID: CPE-0001-2.4G-XXXX	IP address: http://192.168.0.1
5G SSID: CPE-0001-5G-XXXX	Username: admin
Wi-Fi Key: xxxxxxxxxx	Password: admin
MAC: 00:e0:4c:81:96:c5	SN: BL25xxxxxx
Device ID: BL25xxxxxx	

FCC ID: GVQ-CPE-0001
Made in China   Contains FCC ID: 2AJYU-8MH0011   FC

After connecting to Wi-Fi, access the Web User Interface by following this step:

1. On your mobile device, navigate to an internet search browser, and input the IP address of **192.168.0.1**, then click enter.

CPE-0001

After navigating to the Web User Interface, log in by following this step:

1. On your mobile device, login to the Web User Interface's **Home Page** using the default user name of **admin** and the default password which will be a series of letters and numbers. Both of these can be found on the sticker located on the bottom of the router.

Model: CPE-0001

Product: CPE-0001
Input: 12V = 1.5A
Default Wi-Fi details
2.4G SSID: CPE-0001-2.4G-XXXX
5G SSID: CPE-0001-5G-XXXX
Wi-Fi Key: xxxxxxxxxx
MAC: 00:e0:4c:81:96:c5
Device ID: BL25xxxxxx

Default router login details
IP address: http://192.168.0.1
Username: admin
Password: admin
SN: BL25xxxxxx

FCC ID: GVQ-CPE-0001
Made in China   Contains FCC ID: 2AJYU-8MH0011

3.2   Setup Wizard

After logging into the CPE-0001, the **Setup Wizard** will appear. The **Setup Wizard** will guide users along the CPE-0001 configuration steps, it is imperative they follow the guide step by step.

FW:v1.1.4   Home   Wizard   Settings   Features   Management   Logout

Setup Wizard

The setup wizard will guide you through how to configure this router for the first time. Please follow the setup wizard step by step.

Begin by clicking on Next.

Next>>

CPE-0001

Step 1: Operation Mode

Home   Wizard   Settings   Features   Management   Logout

Step 1: Operation Mode

Gateway: In this mode, the device is supposed to connect to Internet via ADSL/Cable Modem. The NAT is enabled and PCs in LAN ports share the same IP to ISP through WAN port. The connection type can be setup in WAN page by using PPPOE, DHCP client or static IP.

Bridge/AP: In this mode, all Ethernet ports and wireless interface are bridged together and NAT function is disabled. All the WAN related function and firewall are not supported.

Wireless ISP: In this mode, all Ethernet ports are bridged together and the wireless client will connect to ISP Router. The NAT is enabled and PCs in Ethernet ports share the same IP to ISP through wireless LAN. You can connect to the ISP AP in Site-Survey page. The connection type can be setup in WAN page by using PPPOE, DHCP client or static IP.

Cancel   <<Back   Next>>

The **Operation Mode** page is used to toggle the CPE-0001 between different operational modes; Gateway, Bridge/AP mode, and Wireless ISP.

To ensure your device works on your pre-selected data plan, you must start by selecting **Gateway**, you can always go back and change this selection at a later time if you wish.

CPE-0001

FW:v1.1.4   Home   **Wizard**   Settings   Features   Management   Logout

Step 2: WAN Interface Setup

WAN Access Type: Dynamic IP

Clone MAC Address: 000000000000   Clone MAC

Enable VLAN: ☐

Cancel   <<Back   Next>>

The **WAN Interface Setup** page is used to set the WAN Access Type.

You do not need to set up the WAN Interface at this moment, you can always go back and set it up at a later time.

Skip this step and click Next.

CPE-0001

Step 3: LAN Interface Setup

FW:v1.1.4   Home   **Wizard**   Settings   Features   Management   Logout

Step 3: LAN Interface Setup

IP Address: 192.168.0.1

Subnet Mask: 255.255.255.0

Cancel   <<Back   Next>>

The **LAN Interface Setup** page is used to configure the IP Address and Subnet Mask if you are connecting an external router to the CPE-0001 via LAN.

You do not need to set up the LAN Interface at this moment, you can always go back and set it up at a later time.

CPE-0001

Step 4: Set Admin Account

FW:v1.1.4

Home   **Wizard**   Settings   Features   Management   **Logout**

Step 4: Set Admin Account

New Password: ••••••••••

Confirmed Password: ••••••••••

Cancel   <<Back   Next>>

The **Set Admin Account** page is used to set the new user interface (router log-in) password.

The pre-set user and password can be found on the sticker located on the bottom of the router.

Model: CPE-0001

Product: CPE-0001
Input: 12V = 1.5A
Default Wi-Fi details
2.4G SSID: CPE-0001-2.4G-XXXX
5G SSID: CPE-0001-5G-XXXX
Wi-Fi Key: xxxxxxxxxx
MAC: 00:e0:4c:81:96:c5
Device ID: BL25xxxxxx

Default router login details
IP address: http://192.168.0.1
Username: admin
Password: admin
SN: BL25xxxxxx

FCC ID: GVQ-CPE-0001
Made in China   **Contains FCC ID: 2AJYU-8MH0011**

CPE-0001

Step 5: Setup Wireless

FW:v1.1.4

| Home | Wizard | Settings | Features | Management | Logout |

Step 5: Setup Wireless

2.4GHz

Enable Wireless: ☑

SSID: CPE-0001-2.4G-a841

Password: ••••••••••

5GHz

Enable Wireless: ☑

SSID: CPE-0001-5G-a841

Password: ••••••••••

| Cancel | <<Back | Finish >> |

The **Setup Wireless** page is used to set the SSID and password for both the 2.4GHz and 5GHz Wi-Fi networks.

It is also used to enable or disable either of the Wi-Fi networks.

Model: CPE-0001

Product: CPE-0001
Input: 12V = 1.5A
Default Wi-Fi details
2.4G SSID: CPE-0001-2.4G-XXXX
5G SSID: CPE-0001-5G-XXXX
Wi-Fi Key: xxxxxxxxxx
MAC: 00:e0:4c:81:96:c5
Device ID: BL25xxxxxx

Default router login details
IP address: http://192.168.0.1
Username: admin
Password: admin
SN: BL25xxxxxx

FCC ID: GVQ-CPE-0001
Made in China   Contains FCC ID: 2AJYU-8MH0011   FC

CPE-0001

Step 6: Automatic Reboot

FW:v1.1.4   Home   **Wizard**   Settings   Features   Management   Logout

Change setting successfully!

Do not turn off or reboot the Device during this time.

Please wait 0 seconds

The CPE-0001 will reboot once you have clicked the finished button on Step 6 to apply the changes you have made.

Remember to connect back to the router's broadcasted Wi-Fi network to connect to it again.

Remember, you may have changed what that looks like in the previous step.

CPE-0001

Chapter 3

Accessing the Web User Interface: Understanding the Home Page

3.3.   Home Page/Main Section

After completing the Setup Wizard, the **Home Page** of the CPE-0001 will appear.

FW:v1.1.5

| Home | Wizard | Settings | Features | Management | Logout |

Internet — CPE-0001 — Connected Clients: **1**

Control Panel ▼

Internet

IPv4   IPv6   **Mobile Network**

Signal Intensity	Network Provider	Network Status	Connection Uptime
.ıllı	T-Mobile USA 260192.168.42.142	Connected	1 Day 0:25:6

IP Address	Default Gateway	Primary DNS Server	Secondary DNS Server
192.168.42.142	192.168.42.129	192.168.42.129	

IMEI1	IMEI2	IMEI3	Sim Type
863969060358852	863969060389857	350679960052618	vSIM

SN			
smc1292b0k5e1azp			

The **Home Page** is where users can check the connection status between the CPE-0001 and the Internet, and adjust settings such as Wi-Fi options, parental controls, and more.

CPE-0001

3.3.1 Banner

FW:v1.1.4

Home   Wizard   Settings   Features   Management   Logout

At the top of the **Home Page**, a banner consisting of icons is presented. Each of these icons represents a sub-section, we will explore each sub-section in this guide. We have already explored the Wizard sub-section earlier in this chapter. To the left of the icons, the current firmware version (FW) of the CPE-0001 is displayed.

3.3.2 Network Map

Internet   CPE-0001   Connected Clients: 1
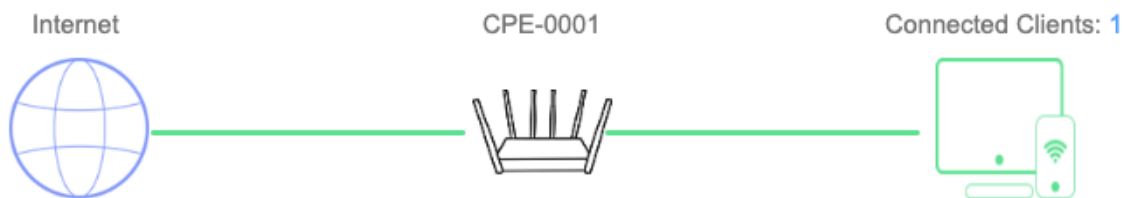
The **Network Map** is located in the middle of the **Home Page.** The line between the Internet Globe, the CPE-0001, and the Internet devices on the map indicates the connection status between them.

A solid green line indicates a successful connection, whereas a red line with an x in the idle indicates that there is no connection.

If there is a red line with an x in the idle between the Internet Globe and the CPE-0001, there is no 4G LTE connection present. If there is a red line with an x in the idle between the Internet Globe and the CPE-0001 it is an indication that there is no Wi-Fi connection between the CPE-0001 and Internet devices either over Wi-Fi or via LAN.

CPE-0001

The Internet Globe image, the CPE-0001 image, the Desktop Image, and Control Panel Drop Down are all clickable and reveal menus.

3.3.3　Internet

FW:v1.1.5

Home　Wizard　Settings　Features　Management　Logout

Internet　　　CPE-0001　　　Connected Clients: 1

Control Panel ▼

Internet

IPv4	IPv6	Mobile Network	

Signal Intensity	Network Provider	Network Status	Connection Uptime
	T-Mobile USA 260192.168.42.142	Connected	1 Day 0:25:6

IP Address	Default Gateway	Primary DNS Server	Secondary DNS Server
192.168.42.142	192.168.42.129	192.168.42.129	

IMEI1	IMEI2	IMEI3	Sim Type
863969060358852	863969060389857	350679960052618	vSIM

SN
smc1292b0k5e1azp

The **Internet** section is divided into three distinct sections: IPv4, IPv6, and Mobile Network.

CPE-0001

3.3.3.1 IPv4 or Internet Protocol Version 4

IPv4	IPv6	Mobile Network

MAC Address	Connection Type	Network Status	Connection Uptime
48:c8:62:08:a8:42		Disconnected	

IP Address	Default Gateway	Primary DNS Server	Secondary DNS Server
Not Available	Not Available	Not Available	Not Available

Item	Description
MAC Address	The MAC Address or the Media Access Control address is a unique serial number in the network circuitry of every Ethernet and Wi-Fi device.
Connection Type	Dynamic Host Configuration Protocol Version
Network Status	The connection status between the CPE-0001 and the internet when using the WAN port.
Connection Uptime	The period of time the CPE-0001 has been connected to the internet.
IP Address	An IP address, or Internet Protocol address, is a series of numbers that identifies any device on a network.
Default Gateway	The IP address of another router your CPE-0001 sends traffic too.
Primary DNS Server	The first touchpoint for a browser asking where to find a site.
Secondary DNS Server	The second touchpoint for a browser asking where to find a site in the case that the Primary DNS Server is unavailable.

CPE-0001

3.2.2.2 IPv6 or Internet Protocol Version 6

IPv4	IPv6	Mobile Network	

MAC Address	Connection Type	Network Status	Connection Uptime
48:c8:62:08:a8:42	DHCPv6	Disconnected	

IP Address	Default Gateway	Primary DNS Server	Secondary DNS Server
Not Available	Not Available	Not Available	Not Available

Item	Description
MAC Address	The MAC Address or the Media Access Control address is a unique serial number in the network circuitry of every Ethernet and Wi-Fi device.
Connection Type	Dynamic Host Configuration Protocol Version
Network Status	The connection status between the CPE-0001 and the internet when using the WAN port.
Connection Uptime	The period of time the CPE-0001 has been consistently connected to the internet.
IP Address	An IP address, or Internet Protocol address, is a series of numbers that identifies any device on a network.
Default Gateway	The IP address of another router your CPE-0001 sends traffic too.
Primary DNS Server	The first touchpoint for a browser asking where to find a site.
Secondary DNS Server	The second touchpoint for a browser asking where to find a site in the case that the Primary DNS Server is unavailable.

CPE-0001

3.2.2.3 Mobile Network

	IPv4	IPv6	**Mobile Network**	

Signal Intensity	Network Provider	Network Status	Connection Uptime
.ıll		Connected	0 Day 0:35:19

IP Address	Default Gateway	Primary DNS Server	Secondary DNS Server
192.168.42.158	192.168.42.129	192.168.42.129	

IMEI1	IMEI2	IMEI3	SIM Type
863969060007152	863969060008655	350679960034483	Virtual SIM

SN
smc111240xgc7

Item	Description
Signal Intensity	The cellular signal strength of the CPE-0001.
Network Provider	The local cellular network your CPE-0001 connects to.
Network Status	The connection status between the CPE-0001 and the internet when using vSIM.
Connection Uptime	The period of time the CPE-0001 has been connected to the internet.
IP Address	An IP address, or Internet Protocol address, is a series of numbers that identifies any device on a network.
Default Gateway	The IP address of another router your CPE-0001 sends traffic too.
Primary DNS Server	The first touchpoint for a browser asking where to find a site.
Secondary DNS Server	The second touchpoint for a browser asking where to find a site in the case that the Primary DNS Server is unavailable.

CPE-0001

IMEI (1,2,3)	IMEI or International Mobile Equipment Identity is a unique number for identifying a device on a mobile network.
SIM Type	Whether the CPE-0001 is connecting to the internet via Virtual Sim or Physical Sim.
SN	The CPE-0001's Serial Number.

3.3.4 CPE-0001

FW:v1.1.4

Home Wizard Settings Features Management Logout

Internet CPE-0001 Connected Clients: 1
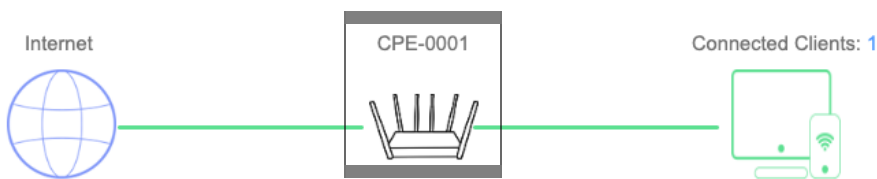
Control Panel▼

CPE-0001

IPv4 Network	
MAC Address:	48:c8:62:08:a8:41
Router IP Address:	192.168.0.1
Subnet Mask:	255.255.255.0

IPv6 Network	
Link-Local Address:	fe80::4ac8:62ff:fe08:a841
Router IPv6 Address:	Not Available

System	
Uptime:	3 Days 0:59:51
Build Time:	Mon Sep 26 09:41:47 CST 2022

CPU	
CPU Usage:	18.00%
Memory (Free/Total):	51776/106080

Wi-Fi 2.4GHz	
Status:	Up
Wi-Fi Name (SSID):	CPE-0001-2.4G-a841
Encryption:	WPA2-WPA3-Mixed
BSSID:	48:c8:62:d8:a8:41
Channel Number:	7

Wi-Fi 5GHz	
Status:	Up
Wi-Fi Name (SSID):	CPE-0001-5G-a841
Encryption:	WPA2-WPA3-Mixed
BSSID:	48:c8:62:58:a8:41
Channel Number:	161

CPE-0001

Clicking the CPE-0001 image provides a combined overview of the same internet sections that were found under the Global Internet Image.

Item	Description
MAC Address	The cellular signal strength of the CPE-0001.
Router IP Address	The CPE-0001's IP address.
Subnet Mask	A number that resembles an IP address. It reveals how many bits in the IP address are used for the network by masking the network portion of the IP address
Link-Local Address	A network address that is valid only for communications within the subnetwork that the host is connected to.
Router IPv6 Address	A numeric label that is used to identify and locate a network interface of a computer or a network node participating in a computer network using IPv6.
CPU Usage	The percentage of total CPU capacity being used at any given time.
Memory (Free/Total)	The amount of memory used.
Status	An indication of whether or not the 2.4GHz and 5GHz Wi-Fi networks are emitting.
WiFi Name (SSID)	The network name.
Encryption	The encryption type currently being used to secure your wireless network with an authentication protocol.
BSSID	Basic Service Set Identifier.
Channel Number	The Wi-Fi channel your CPE-0001 is emitting Wi-Fi through.

CPE-0001

3.2.1 Connected Clients

FW:v1.1.4   🏠 Home   ⚡ Wizard   🔧 Settings   ⊞ Features   ⚙ Management   🏃 Logout

Internet — CPE-0001 — Connected Clients: 1

Control Panel ▼
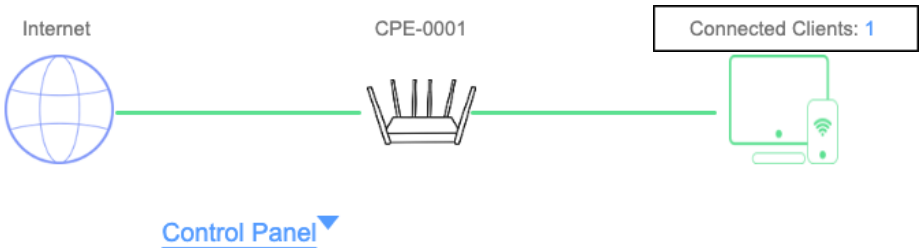
Connected Clients

Hostname	IP Address	MAC Address
Home-Office-Computer	192.168.0.101	38:f9:3e:1e:0b:32f

There is a clickable number and logo above the Connected Client's image which represents the number of devices connected at any given point in time.

Item	Description
Hostname	Name(s) of the connected personal devices to the CPE-0001's emitted Wi-Fi network.
IP Address	An IP address, or Internet Protocol address, is a series of numbers that identifies any device on a network.
MAC Address	The MAC Address or the Media Access Control address is a unique serial number in the network circuitry of every Ethernet and Wi-Fi device.

CPE-0001

3.2.2 Control Panel

FW:v1.1.5

Home   Wizard   Settings   Features   Management   Logout

Internet   CPE-0001   Connected Clients: 1

Control Panel ▲

Cellular: **Disable**

SignalScan™:   **Start**

WiFi Repeater: **Settings**

Internet

Signal Intensity		Connection Uptime
▃▁▄▅▆		1 Day 0:30:11

IP Address		Secondary DNS Server
192.168.42.142		Not Available

IMEI1	IMEI2	IMEI3	Sim Type
863969060358852	863969060389857	350679960052618	vSIM

SN
smc1292b0k5e1azp

There is a clickable drop-down button called "Control Panel" which reveals three additional buttons that can be toggled.

CPE-0001

Item	Description
Cellular	Click Disable to stop the cellular data connection.
Signal Scan	Click Start to use SignalScan™ to identify a better mobile network in your current location. During the SignalScan™, your device will be offline for a few minutes.
WiFi Repeater	Click Settings to automatically navigate to the Site Survey Page under WiFi settings to scan available WiFi networks in the CPE-0001's immediate vicinity.

CPE-0001

Chapter 3

Accessing the Web User Interface: Settings

3.4.   Settings

After selecting the wrench tool icon on the banner atop the GUI, the **Settings** of the CPE-0001 will appear.

The **Settings** is where users can toggle the CPE-0001 between Virtual and Physical Sim, rename the default SSID (network name), change the default Wi-Fi password, set the Wi-Fi security mode, scan for access points, enable or disable WPS functions, and set the Wi-Fi band as either 2.4GHz or 5.0GHz, amongst other features. It is divided into five distinct sections which all have their own subsections.

3.4.1   WAN

The **WAN** page is used to configure the parameters for the internet network that connects to the WAN port of the CPE-0001. The page is divided into six distinct sections, those being Default Route, SIM Mode, IPv4, IPv6, Status, and VLAN.
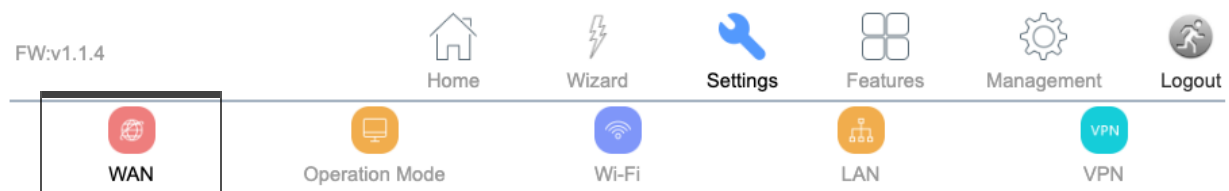
CPE-0001

3.4.1.1 Default Route

The **Default Route** page enables the user to select which WAN connection (WAN1 or Cellular) provides the source of the internet to the CPE-0001.

Selecting "enable WAN failover to Cellular", allows the CPE-0001 to automatically continue providing internet through Virtual Sim if the router that you connected to it via the WAN port has failed.

CPE-0001

3.4.1 SIM Mode

The **SIM Mode** page is used as a toggle between a Physical SIM inserted in the router for access to the internet and a Virtual built into the router for same purpose.

Virtual SIM

Make sure that Virtual SIM is selected so that your CPE-0001 will work on your data plan.

CPE-0001

When using a Physical SIM card, toggle to Physical SIM and a menu will appear. Once you have inputted your desired changes click "Save & Apply".

The CPE-0001 will reboot with your saved changes after 30 seconds. Be sure to connect to the CPE-0001's Wi-Fi network once the reboot is complete.

Physical SIM

CPE-0001

Item	Description
SIM Mode	Physical Sim or Virtual SIM
User Name	The username associated with your physical sim data plan.
Password	The password associated with your physical sim data plan.
APN	The APN provided by your internet service provider.
PIN	The PIN provider by your internet service provider.
Auth Method PAP	Password Authentication Protocol
Auth Method CHAP	Challenge-Handshake Authentication Protocol

3.4.1.1 IPv4

The **IPv4** page is used to toggle between three WAN Access Types (modes) that can be used; DHCP, Static IP, and PPPoE. A fourth mode is available and takes the form of a VLAN tag and can be used if necessary.

CPE-0001

3.4.1.1.1 DHCP (Dynamic IP)

FW:v1.1.4 | Home | Wizard | **Settings** | Features | Management | Logout

WAN | Operation Mode | Wi-Fi | LAN | VPN

The IPv4 page is used to configure the parameters for the Internet network which connects to the WAN port of the router. On this page, you may change the access method to static IP, DHCP, and PPPoE by clicking the item value of the WAN Access Type.

| Default Route | SIM Mode | IPv4 | IPv6 | Status | VLAN |

Connect name: WAN1

Enable: ✓

WAN Access Type: Dynamic IP (DHCP)

MTU: 1500 (1280-1500 bytes)

Option 43: ✓

Clone MAC Address: 000000000000   Clone MAC

Enable VLAN: ☐

Save & Apply

Selecting the Dynamic IP (DHCP) WAN Access Type will enable the router to automatically obtain IP addresses, subnet masks, and gateway addresses.

Selecting Dynamic IP (DHCP) WAN Access Type also enables you to set the MTU to allow smaller or larger data packages to flow into the CPE-0001. You should not have to adjust this metric.

For large locations such as an office building or campus with a large grouping of computers or other devices all located in the same place, VLAN can be enabled.

CPE-0001

Item	Description
MTU	Minimum Transmission Unit (to be kept as default).
VLAN ID	Identifies the VLAN to which a data frame belongs.

CPE-0001

3.4.1.1.2 Static IP

FW:v1.1.4

Home | Wizard | **Settings** | Features | Management | Logout

WAN | Operation Mode | Wi-Fi | LAN | VPN

The IPv4 page is used to configure the parameters for the Internet network which connects to the WAN port of the router. On this page, you may change the access method to static IP, DHCP, and PPPoE by clicking the item value of the WAN Access Type.

Default Route	SIM Mode	**IPv4**	IPv6	Status	VLAN

Connect name: WAN1

Enable: ✓

WAN Access Type: Static IP

IP Address: 192.168.50.183

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.50.1

MTU: 1500 (1400-1500 bytes)

DNS 1: 192.168.50.1

DNS 2:

Clone MAC Address: 000000000000 | Clone MAC

Enable VLAN: ☐

Save & Apply

Selecting the Static IP Access Type will enable the router to support Static IP as a WAN connection type.

CPE-0001

Item	Description
IP Address	The cellular signal strength of the CPE-0001.
Subnet Mask	A number that resembles an IP address. It reveals how many bits in the IP address are used for the network by masking the network portion of the IP address
Default Gateway	The IP address of another router your CPE-0001 sends traffic too.
DNS 1	Domain Name System 1
DNS 2	Domain Name System 2
MTU	Minimum Transmission Unit (to be kept as default).
VLAN ID	Identifies the VLAN to which a data frame belongs.

CPE-0001

3.4.1.1.2 PPPoE

The IPv4 page is used to configure the parameters for the Internet network which connects to the WAN port of the router. On this page, you may change the access method to static IP, DHCP, and PPPoE by clicking the item value of the WAN Access Type.

| Default Route | SIM Mode | IPv4 | IPv6 | Status | VLAN |

Connect name: WAN1

Enable: ☑

WAN Access Type: PPPoE

User Name:

Password:

Service Name:

MTU: 1492   (1360-1492 bytes)

Connection Type: Continuous

Clone MAC Address: 000000000000   Clone MAC

Enable VLAN: ☐

Save & Apply

Selecting the PPPoE Access Type will enable the router to support PPPoE as a WAN connection type.

CPE-0001

Item	Description
VLAN ID	Identifies the VLAN to which a data frame belongs.
Service Name	CPE-0001
MTU	Minimum Transmission Unit (to be kept as default).
Connection Type: Continuous	Continuous
Connection Type: Connect on Demand	Connect on Demand
Connection Type: Manual	Manual

3.4.1.2 IPv6

FW:v1.1.4   Home   Wizard   **Settings**   Features   Management   Logout

WAN   Operation Mode   Wi-Fi   LAN   VPN

The IPv6 page is used to configure the parameters for the Internet network which connects to the WAN port of the router.

Default Route	SIM Mode	IPv4	**IPv6**	Status	VLAN

Enable IPv6: ☐

Save & Apply   Reset

CPE-0001

By enabling IPv6, a collapsable menu will appear, enabling the user to toggle between three distinct origin types, STATIC, AUTO, and 6RD.

3.4.1.2.1 STATIC

Item	Description
IP Address	The cellular signal strength of the CPE-0001.

CPE-0001

Default Gateway	The IP address of another router your CPE-0001 sends traffic too.
DNS 1	Domain Name System
MLD Proxy	Multicast Listener Discovery

3.4.1.2.2 AUTO

Item	Description
Stateful Address	DHCP will supply an IPv6 address.

CPE-0001

Stateless Address	DHCPv6 server does not provide IP addresses at all.
DUID	The DUID identified a DHCPv6 device.
PD	Prefix Delegation.
MLD Proxy	Multicast Listener Discovery.

3.4.1.2.1 6RD

FW:v1.1.4

Home Wizard **Settings** Features Management Logout

WAN Operation Mode Wi-Fi LAN VPN

The IPv6 page is used to configure the parameters for the Internet network which connects to the WAN port of the router.

| Default Route | SIM Mode | IPv4 | **IPv6** | Status | VLAN |

Enable IPv6: ☑

Origin Type: 6RD

6RD IPv6 Prefix: 0000 : 0000 : 0000 : 0000 : 0000 : 0000 : 0000 : 0000 / 0

WAN IPv4 Address: Get from DHCP / 0

6RD Border Relay IPv4 Address: 0.0.0.0

DNS: 0000 : 0000 : 0000 : 0000 : 0000 : 0000 : 0000 : 0000 / 0

Enable MLD Proxy: ☑

Save & Apply   Reset

CPE-0001

Item	Description
6RD IPv6 Prefix	WAN IPv6 prefix delegation.
WAN IPv4 Address	WAN IPv4 Address.
6RD Border Relay IPv4 Address	Border Relay IPv4 Address.
DNS	Domain Name System.
MLD Proxy	Multicast Listener Discovery.

3.4.1.3 Status

The **Status** page will display the status of each WAN connection; WAN1, WAN2, WAN3, WAN4.

CPE-0001

3.4.1.4 VLAN

The **VLAN** page is used to configure the VLAN settings.

CPE-0001

3.4.2.2 Operation Mode

The **Operation Mode** page is used to toggle the CPE-0001 between the different operational modes; Gateway, Bridge Mode, and Wireless ISP.

The CPE-0001 must remain on Gateway mode to work with your data plan.

CPE-0001

3.4.3   Wi-Fi

FW:v1.1.4

| Home | Wizard | **Settings** | Features | Management | **Logout** |

| WAN | Operation Mode | Wi-Fi | LAN | VPN |

The **Wi-Fi** section is used to configure the CPE-0001's Wi-Fi settings.

CPE-0001

3.4.3.1 Basic

FW:v1.1.4 | Home | Wizard | **Settings** | Features | Management | Logout

WAN | Operation Mode | Wi-Fi | LAN | VPN

This page is used to configure the parameters for wireless LAN clients which may connect to the router. Here you may change the wireless encryption settings as well as the wireless network parameters.

| Basic | Security | ACL | Site Survey | WPS | Wi-Fi Schedule |

WLAN interface: 2.4GHz

Disable Wireless LAN Interface: ☐

Country or Region: UNITED STATES

Band: 2.4 GHz (B+G+N)

Mode: AP

Multiple AP

SSID: CPE-0001-2.4G-a841

Channel Width: 20MHz

Control Sideband: Upper

Channel Number: 7

Broadcast SSID: On

WMM: On

Data Rate: Auto

Associated Clients: **Show Active Clients**

Enable Universal Repeater Mode: ☐

Save & Apply | **Reset**

CPE-0001

The **Basic** page is used to toggle between and set up both the 2.4GHz and 5.0GHz Wi-Fi interfaces (bands).

Wi-Fi as a feature can also be shut off on this page by selecting the 'Disable Wireless LAN Interface' box.

The CPE-0001's SSID (network name) and guest SSID can both be edited on this page. Edits include the ability to rename the SSID and toggle its broadcasting status (whether or not it comes up as an option when users are viewing available Wi-Fi networks to connect to on their mobile devices). In addition, users can view Associated Clients which provides a list of all devices connected to the CPE-0001's Wi-Fi network at that exact moment.

For more technically savvy users, the Wi-Fi channel width, sideband, and number can all be toggled from within the Wi-Fi page as well.

CPE-0001

Item	Description
Disable WIreless LAN Interface	You may choose to enable or disable the wireless function.
Wireless Band	Default is "Mixed 802.11b/g/n". It is strongly recommended that you set the Band to "802.11b/g/n", that way all 802.11b, 802.11g, and 802.11n wireless stations can connect to the CPE-0001.
Multiple AP	You can set the guest SSID from this button.
Network Type	You can configure the WLAN network type with this parameter.
SSID	Set a Wi-Fi name (SSID) for your wireless network. If you switch to Client Mode, this field becomes the SSID of the AP you want to connect with.
Channel Width	Select a proper channel bandwidth to enhance wireless performance. When there are 11b/g and 11n wireless clients, please select the 802.11n mode of 20/40MHz frequency band.
Control Sideband	Control channels are only applicable if your gateway is operating at 40 MHz bandwidth and the 802.11n mode is configured as Automatic.
Channel Number	For optimal wireless performance, you may select the least interferential channel. It is advisable that you select an unused channel or "Auto" to let the CPE-0001 detect and select the best possible channel for your wireless network to operate on from the drop-down list.
Broadcast SSID	You may choose a visible or invisible SSID broadcast. When it is enabled, the CPE-0001's SSID will be broadcast in the wireless network so that it can be scanned by wireless clients and they can join the wireless network with this SSID.

CPE-0001

WMM	WMM provides basic Quality of service (QoS) features to IEEE 802.11 networks. WMM prioritizes traffic according to four Access Categories: voice, video, best effort, and background.
Associated Clients	This option shows you all the clients who are connected to a SSID.
Enable Universal Repeater Mode	Repeater mode.

Selecting **Show Active Clients** leads to the Active Wireless Client Table which displays a list of the current devices that are connected to the CPE-0001 at any given point in time.

Active Wireless Client Table-wlan1

This table shows each wireless client's network status.

MAC Address	Mode	Tx Packet	Rx Packet	Tx Rate (Mbps)	Power Saving	Expired Time (s)
38:f9:d3:1e:0b:32	11n	189670	129216	104	no	300

Refresh   Close

Selecting **Multiple AP** leads to a view of the wireless settings for multiple APs.

FW:v1.1.4   Home   Wizard   Settings   Features   Management   Logout

WAN   Operation Mode   Wi-Fi   LAN   VPN

This page shows and updates the wireless setting for multiple APs.

Basic	Security	ACL	Site Survey	WPS	Schedule

No.	Enable	Band	SSID	Broadcast SSID	Active Client List	WLAN mode
AP1	☐	2.4 GHz (B+G+N ∨)	CPE-0001-2.4G VA	On ∨	Show	AP ∨
AP2	☐	2.4 GHz (B+G+N ∨)	CPE-0001-2.4G VA	On ∨	Show	AP ∨
AP3	☐	2.4 GHz (B+G+N ∨)	CPE-0001-2.4G VA	On ∨	Show	AP ∨
AP4	☐	2.4 GHz (B+G+N ∨)	CPE-0001-2.4G VA	On ∨	Show	AP ∨

Save & Apply   Reset

CPE-0001

FW:v1.1.4

Home | Wizard | **Settings** | Features | Management | Logout

WAN | Operation Mode | Wi-Fi | LAN | VPN

This page allows you to setup wireless security. Turning on WEP or WPA by using Encryption Keys could prevent unauthorized access to the router's wireless network.

| Basic | Security | ACL | Site Survey | WPS | Wi-Fi Schedule |

Select SSID: Root AP - CPE-0001-2.4G-

Encryption: WPA2-WPA3-MIXED

Authentication Mode: ○ Enterprise (RADIUS) ● Personal (Pre-Shared Key)
WPA2 Cipher Suite: ☐ TKIP ☑ AES
Management Frame Protection: ○ none ● capable ○ required
Pre-Shared Key Format: Passphrase
Pre-Shared Key: •••••••••

Save & Apply | Reset

3.4.3.2 Security

The **Security** page is used to set the Wi-Fi encryption type.

Item	Description
Encryption	Select the security mode from the Encryption drop-down list. There are 4 options in the Security Mode drop-down list: ● Disable ● WEP ● WPA2

CPE-0001

	• WPA-Mixed
Enterprise (RADIUS)	Remote Authentication Dial In User Service
TKIP	Temporal Key Integrity Protocol
AES	Advanced Encryption Standard

3.4.3.3 ACL

The **ACL** page enables user's to specify which wireless device MAC addresses are permitted to connect to the CPE-0001's Wi-Fi network and which are not permitted.

CPE-0001

Keep this mode disabled if you want to keep your Wi-Fi free for any device in your home to connect too without limitation.

Item	Description
Wireless ACL Mode	If you choose 'Allowed Listed', only those clients whose wireless MAC addresses are in the access control list will be able to connect to your Access Point. When 'Deny Listed' is selected, these wireless clients on the list will not be able to connect to the Access Point.
MAC Address	The MAC address of the client.

3.4.3.4 Site Survey

FW:v1.1.4   Home   Wizard   **Settings**   Features   Management   Logout

WAN   Operation Mode   Wi-Fi   LAN   VPN

This page provides a tool to scan the wireless networks in your proximity. If any router or IBSS is found, you could choose to connect to it manually when client mode is enabled.

| Basic | Security | ACL | Site Survey | WPS | Wi-Fi Schedule |

Site Survey

SSID	BSSID	Channel Number	Type	Encrypt	Signal
TDPQ	40:b0:76:c0:bf:f0	7(B+G+N+AC)	AP	WPA2-PSK	55
WTPD	3a:1a:52:28:46:1a	7 (G+N)	AP	WPA2-PSK	42
SRVC	40:e3:d6:5e:13:24	11 (B+G+N)	AP	WPA2-PSK	33
chargingstations	40:e3:d6:5e:13:25	11 (B+G+N)	AP	WPA2-PSK	33
DIRECT-2E-HP ENVY 6000 series	86:2a:fd:95:f4:2e	6 (G+N)	AP	WPA2-PSK	30
WWA	f0:9f:c2:3d:99:24	1 (B+G+N)	AP	WPA2-PSK	29

CPE-0001

The **Site Survey** page enables user's to scan all the Wi-Fi networks available to them in the immediate vicinity of the CPE-0001.

When the CPE-0001 is set in client mode, it can act as a repeater and connect to those specific Wi-Fi networks, rendering the plan unusable.

CPE-0001

3.4.3.5 WPS

FW:v1.1.4

Home | Wizard | Settings | Features | Management | Logout

WAN | Operation Mode | Wi-Fi | LAN | VPN

This page allows you to change the settings for WPS (Wi-Fi Protected Setup).

| Basic | Security | ACL | Site Survey | WPS | Wi-Fi Schedule |

Disable WPS: ☐

Save & Apply | Reset

WPS Status: ◉ Configured ○ UnConfigured

Reset to UnConfigured

Auto-lock-down state: unlocked | Unlock

Self-PIN Number: 55636575

Push Button Configuration: Start PBC

STOP WSC: Stop WSC

Connected State Started

Client PIN Number: [   ] Start PIN

Current Key Info

Authentication	Encryption	Key
	AES	••••••••••

The **WPS** page enables the user to change the settings for Wi-Fi Protected Setup. Specifically enabling the user to enable or disable WPS, and permit certain devices to connect to the CPE-0001 via WPS.

CPE-0001

Item	Description
WPS	This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to an Access Point in a minute without any hassle.
Disable WPS	Enable or disable WPS function.

3.4.3.6 Wi-Fi Schedule

FW:v1.1.4

| Home | Wizard | Settings | Features | Management | Logout |

| WAN | Operation Mode | Wi-Fi | LAN | VPN |

This page allows you to set up the Wi-Fi Schedule rule. Please do not forget to configure the system time before enabling this feature.

| Basic | Security | ACL | Site Survey | WPS | **Wi-Fi Schedule** |

Enable Wi-Fi Schedule: ☐

Enable	Day	From		To	
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)
☐	Sun	00 (hour)	00 (min)	00 (hour)	00 (min)

| Save & Apply | Reset |

CPE-0001

3.4.5   LAN

The **LAN** section enables the user to configure the parameters for the local area network.

3.4.5.1 IPv4

CPE-0001

The **IPv4** page enables the user to change the settings for several LAN-related parameters with focus on settings around the DHCP function.

FW:v1.1.4

Home | Wizard | **Settings** | Features | Management | **Logout**

WAN | Operation Mode | Wi-Fi | **LAN** | VPN

This page is used to configure the parameters for the local area network which connects to the LAN port of the LTE CPE. Here you may change the settings for IP addresses, subnet mask, DHCP, and more.

IPv4	IPv6	TUNNEL 6 over 4

IP Address: 192.168.0.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

Work Mode: Server

DHCP Client Range: 192.168.0.100 - 192.168.0.200   Show Client

Lease Time: 1440   (1 ~ 10080 minutes)

DNS: 0.0.0.0

Static DHCP: Set Static DHCP

Domain Name: router.local

802.1d Spanning Tree: Off

Save & Apply | Reset

CPE-0001

Item	Description
LAN IP Address	The default is 192.168.0.1. You can change it according to your needs.
Subnet Mask	The router's LAN subnet mask.
Work Mode	If this is selected, the router serves as the DHCP server and automatically assigns IP addresses to all computers in the LAN.
DHCP Client Range	Enter the start and end IP address of all the available successive IPs.
Lease Time	Select the time for using one assigned IP from the drop down list. After the lease time, the AP automatically assigns new IP addresses to all connected computers.
Static DHCP	This page allows you to reserve IP addresses, and assign the same IP address to the network device with the specified MAC address any time it requests an IP address. This is almost the same as when a device has a static IP address except that the device must still request an IP address from the DHCP server.
Domain Name	Set the domain name of the server.
802.1d Spanning Tree	Enable or disable spanning tree function.

3.4.5.2 Static DHCP

Entering the **Static DHCP** page by clicking the "Set Static DHCP" button enables users to reserve a specific IP address for a device by granting them access to bind the MAC address of the said device to an IP address that is specified by the user on this page.

Click the "Set Static DHCP" button also reveals the RADVD page.

CPE-0001

3.4.5.3 IPv6

The **IPv6** page enables the user to permit the CPE-0001 to serve as the DHCP server and automatically assigns IPv6 addresses to all connected mobile devices on the LAN.

Item	Description
IP Address	Router's LAN IPv6 address.
RADVD	Router Advertisement Dameon

CPE-0001

Stateful Address	DHCP will supply an IPv6 address.
Stateless Address	DHCPv6 server does not provide IP addresses at all.
6RD IPv6 Prefix	WAN IPv6 prefix delegation.

CPE-0001

3.4.5.4 RADVD

Configuring Router Advertisement

IPv4	IPv6	RADVD	TUNNEL 6 over 4

Enable: ☑

radvdinterfacename: br0

MaxRtrAdvInterval: 15

MinRtrAdvInterval: 10

MinDelayBetweenRAs: 10

AdvManagedFlag: ☐

AdvOtherConfigFlag: ☑

AdvLinkMTU: 0

AdvReachableTime: 0

AdvRetransTimer: 0

AdvCurHopLimit: 0

AdvDefaultLifetime: 45

AdvDefaultPreference: high ▼

AdvSourceLLAddress: ☐

UnicastOnly: ☐

Prefix1
Enabled: ☐

Prefix2
Enabled: ☐

Save & Apply	default	reset

CPE-0001

The **RADVD** page enables the user to set up all the settings around IPv6 RADVD, including the specified time delays between packets, maximum and minimum retry intervals, and advertisement settings.

Item	Description
radvdinterfacename	Interface name.
MaxRtrAdvInterval	Max retry advertisement interval.
MinRtrAdvInterval	Min retry advertisement interval.
MinDelayBetweenRAs	Min delay between router advertisement.
AdvManagedFlag	Advertisement managed flag.
AdvOtherConfigFlag	Advertisement other config flag.
AdvLinkMTU	Advertisement link MTU.
AdvReachableTime	Advertisement reachable time.
AdvRetransTimer	Advertisement retrains timer.
AdvCurHopLimit	Advertisement current hop limit.
AdvDefaultLifetime	Advertisement default lifetime.
AdvDefaultPreference	"High", "medium" or "low" for the advertisement default preference.
AdvSourceLLAddress	Advertisement source link local address.
UnicastOnly	Unicast only.
Prefix1 Enabled	Enable or disable prefix.
Prefix	Enter the prefix and prefix length.
AdvOnLinkFlag	Advertisement on link flag.
AdvAutonomousFlag	Advertisement autonomous flag.

CPE-0001

AdvValidLifetime	Advertisement valid lifetime.
AdvPreferredLifetime	Advertisement preferred life time.
AdvRouterAddr	Advertisement router address.
If6to4	Enter the interface 6to4.

3.4.5.5 TUNNEL 6 over 4

The **TUNNEL 6 over 4** page enables users to either enable or disable tunnel 6 over 4.

Item	Description
Enable	Enable or disable tunnel 6 over 4.

CPE-0001

3.4.6   VPN

The **VPN** section enables the user to configure the settings for PPTP, L2TPv2, and L2TPv3 and view the Status of each.

CPE-0001

3.4.6.1 PPTP

The **PPTP** page enables user's to configure the parameters for the internet network which connects to the PPTP server.

Item	Description
Server	The name of PPTP Server.
Username	The user name provided by the cellular carrier.

CPE-0001

Password	The password provided by the cellular carrier.
MTU	You can keep the maximum transmission unit (MTU) as default.

3.4.6.2 L2TPv2

The **L2TPv2** page is used to configure the parameters for the internet network which connects to the L2TPv2 server.

Item	Description
Server	The name of L2TP Server.
Username	The user name provided by the cellular carrier.

CPE-0001

Password	The password provided by the cellular carrier.
MTU	You can keep the maximum transmission unit (MTU) as default.

3.4.6.3 L2TPv3

FW:v1.1.4

Home Wizard **Settings** Features Management Logout

WAN Operation Mode Wi-Fi LAN **VPN**

This page is used to configure the parameters for the Internet network which connects to the L2TPv3 server.

PPTP	L2TPv2	**L2TPv3**	GRE	Status

Enable: ☑

Local Host Address: `0.0.0.0`   (0.0.0.0 is autoconfig)

Remote Host Address: [   ]

Tunnel Address: [   ]   (172.10.12.1/24)

Remote Tunnel Address: [   ]   (172.10.13.1/24)

Tunnel Id: [   ]   (1 ~ 4294967295)

Remote Tunnel Id: [   ]   (1 ~ 4294967295)

Session Id: [   ]   (1 ~ 4294967295)

Remote session Id: [   ]   (1 ~ 4294967295)

MTU: `1488`   (1360-1488 bytes)

NAT: ☐

Save & Apply

CPE-0001

The **L2TPv3** page is used to configure the parameters for the internet network which connects to the L2TPv3 server.

Item	Description
Local Host Address	The address of the LAN side device of the local, eg:192.168.0.2.
Remote Host Address	The address of the LAN side device of the remote host, eg:192.168.8.2.
Local Udp Port	Lan side device udp port.
Remote Udp Port	Remote device udp port.
Tunnel Address	Wan interface ip address.
Remote Tunnel Address	Remote device wan interface ip address.
Tunnel Id	Local device tunnel id.
Remote Tunnel Id	Remote device tunnel id.
Session Id	Local device session id.
Remote session Id	Remote device session id.
MTU	You can keep the maximum transmission unit (MTU) as default.

CPE-0001

3.4.6.5 GRE

The **GRE** page is used to configure the parameters for the internet network which connects to the Generic Routing Encapsulation tunneling protocol.

FW:v1.1.4	Home	Wizard	Settings	Features	Management	Logout

WAN	Operation Mode	Wi-Fi	LAN	VPN

This page is used to configure the parameters for the Internet network which connects to the GRE.

PPTP	L2TPv2	L2TPv3	GRE	Status

Enable: ☐

Local Host Address: [   ] (0.0.0.0 is autoconfig)

Remote Host Address: [   ] (10.10.10.10)

Tunnel Address: [   ] (172.10.12.1)

Remote Tunnel Address: [   ] (172.10.13.1)

NAT: ☐

Save & Apply	Reset

GRE Table

Local Host	Remote Host	Tunnel	Remote Tunnel	NAT Status	Status	Select

Delete Selected	Delete All	Reset

CPE-0001

3.4.6.4 Status

FW:v1.1.4

Home   Wizard   Settings   Features   Management   Logout

WAN   Operation Mode   Wi-Fi   LAN   VPN

This page shows the status information for PPTP, L2TP and L2TPv3.

PPTP	L2TPv2	L2TPv3	GRE	Status

Connection Name	Enable	Server IP Address	Local IP Address	Remote IP Address	Status
PPTP	Disabled				
L2TPv2	Disabled				
L2TPv3	Disabled				

The **Status** page presents an overview of the status information for PPTP, L2TPv2, and L2TPv3.

CPE-0001

Chapter 3

Accessing the Web User Interface: Features

3.5.   Features

The **Features** section enables the user to configure QoS, Firewalls, Port Forwarding, URL filtering, Routes, and Dynamic DNS.

FW:v1.1.4   Home   Wizard   Settings   **Features**   Management   Logout

CPE-0001

3.5.1 QoS

Entries in this table improve your online gaming experience by ensuring that your game traffic is prioritized over other network traffic, such as FTP or Web.

Enable QoS: ☑

Automatic Uplink Speed: ☑
Automatic Downlink Speed: ☑

Name: [ ]

QoS Type: [IPv4 ▾]

protocol: [Both ▾]

Local IP Address: [ ] - [ ]

Local Port: [ ] - [ ]

Remot IP Address: [ ] - [ ]

Remote Port: [ ] - [ ]

Mode: [Guaranteed minimum ▾]

Uplink Bandwidth (Kbps): [ ]

Downlink Bandwidth (Kbps): [ ]

Priority: [ ] (0-7,7 is highest priority)

Remark DSCP: [ ] (0-63)

Comment: [ ]

[Save & Apply]   [Reset]

Current QoS Rules Table

Name	IP Version	Protocol	Local IP Address	Local Port	Remote IP Address	Remote Port	Local IPv6 addr	MAC Address	Phyport	DSCP	Mode	Uplink Bandwidth	Downlink Bandwidth	Priority	Weight	Remark DSCP	Select

[Delete Selected]   [Delete All]   [Reset]

CPE-0001

The **Quality of Service (QoS)** page enables user's to limit the upload and download speeds that a specific mobile device is receiving.

Quality of Service is an excellent and underutilized tool that allows you to train your CPE-0001 to divide up your available bandwidth between applications. With good QoS rules, you can ensure that your streaming video doesn't stutter because a big file is downloading at the same time, or that your work laptop isn't sluggish when you're trying to meet that last-minute deadline while your kids are playing games online.

Item	Description
Automatic Uplink Speed	Automatic uplink speed.
Manual Uplink Speed (Kbps)	Set the download speed of your internet access.
Automatic Downlink Speed	Automatic downlink speed.
Manual Downlink Speed (Kbps)	Set the upload speed of your internet access.
Name	QoS rule name.

CPE-0001

3.5.2 Firewall

The **Firewall** page enables user's to set up a plethora of firewall-related features and functions.

3.5.2.1 Advanced

The **Advanced** page contains a series of checkboxes allowing user to toggle on or off specific fire-wall related functions, access, and VPN pass throughs.

CPE-0001

FW:v1.1.4

Home | Wizard | Settings | **Features** | Management | Logout

QoS | **Firewall** | Port Forwarding | URL Filter | Route | Dynamic DNS

Your router's high-performance firewall feature continuously monitors Internet traffic and protects your network and connected devices from malicious Internet attacks.

| **Advanced** | DoS | IP Filtering | Port Filtering | MAC Filtering |

Enable DMZ: ☐
Enable UPNP: ☑
Enable IGMP Proxy: ☐
Enable Ping Access on WAN: ☐
Enable Web Server Access on WAN: ☐
Enable IPsec pass through on VPN connection: ☑
Enable PPTP pass through on VPN connection: ☑
Enable L2TP pass through on VPN connection: ☑

Save & Apply | Reset

Item	Description
Enable DMZ	DMZ function.
Enable UPnP	UPnP function.
Enable IGMP Proxy	IGMP Proxy function.
Enable Telnet Access on WAN	Telnet by wan access.
Enable Ping Access on WAN	Ping Access on WAN function.
Enable Web Server Access on WAN	Enable Web Server Access on WAN function.
Enable IPSec pass through on VPN connection	IPSEC to pass through IPSEC communication data.
Enable PPTP pass through on VPN connection	PPTP to pass through PPTP communication data.

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Enable L2TP pass through on VPN connection	Enable or disable L2TP to pass through L2TP communication data.

3.5.2.2 Dos

The **Denial-of-Service (DoS)** page enables users to protect their CPE-0001 from DoS attack's by setting certain parameters relating to network security.

A denial-of-service (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

Advanced	DoS	IP Filtering	Port Filtering	MAC Filtering

Enable DoS Prevention ☐

Whole System Flood: SYN ☐ `0` Packets/Second

Whole System Flood: FIN ☐ `0` Packets/Second

Whole System Flood: UDP ☐ `0` Packets/Second

Whole System Flood: ICMP ☐ `0` Packets/Second

Per-Source IP Flood: SYN ☐ `0` Packets/Second

Per-Source IP Flood: FIN ☐ `0` Packets/Second

Per-Source IP Flood: UDP ☐ `0` Packets/Second

Per-Source IP Flood: ICMP ☐ `0` Packets/Second

TCP/UDP PortScan: ☐ `Low Sensitivity ∨`

ICMP Smurf: ☐

IP Land: ☐

IP Spoof: ☐

IP TearDrop: ☐

PingOfDeath: ☐

TCP Scan: ☐

TCP SynWithData: ☐

UDP Bomb: ☐

UDP EchoChargen: ☐

Select ALL	Clear ALL

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3.5.2.3 IP Filtering

The **IP Filtering** page enables users to control what IP traffic will be allowed into and out of the CPE-0001's network.

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Item	Description
Enable IP Filtering	IP Filtering function.
Enable IPv4	IPv4 Filtering feature.
Enable IPv6	IPv6 Filtering feature.
Local IPv4 Address	LAN side source IPv4 address.
Local IPv6 Address	LAN side source IPv6 address.
Protocol	"TCP", "UDP" or" Both".

3.5.2.4 Port Filtering

The **Port Filtering** page enables users to allow or block certain network packers from following into and out of the CPE-0001's network based on their port number.

CPE-0001

Item	Description
Enable Port Filtering	Enable or disable IP Filtering function.
Enable IPv4	Enable or disable IPv4 Filtering feature.
Enable IPv6	Enable or disable IPv6 Filtering feature.
Port Range	Set the port range for port filtering.
Protocol	Select "TCP", "UDP" or" Both".
Comment	Comment for the rule.

3.45.2.5 MAC Filtering

The **Mac Filtering** page enables users to allow or block certain mobile devices from connecting to the CPE-0001's Wi-Fi network based on their MAC address.

CPE-0001

Item	Description
Blacklist	Block certain website URs from being accessed.
Whitelist	Allow certain website URLs from being accessed.
MAC Address	The MAC Address or the Media Access Control address is a unique serial number in the network circuitry of every Ethernet and Wi-Fi device.

3.5.3 Port Forwarding

FW:v1.1.4   Home   Wizard   Settings   **Features**   Management   Logout

QoS   Firewall   **Port Forwarding**   URL Filter   Route   Dynamic DNS

Entries in this table allow you to automatically redirect common network services to a specific machine behind the NAT Firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the private local network behind your Gateway's NAT Firewall.

Enable Port Forwarding: ☐

Local IP Address: _____

Local Port Start: _____

Local Port End: _____

Protocol: Both ▾

Remote IP Address: _____

Remote Port Start: _____

Remote Port End: _____

Comment: _____

[Save & Apply]   [Reset]

Current Port Forwarding Table

Local IP Address	Local Port Range	Protocol	Remote IP Address	Remote Port Range	Status	Comment	Select

[Delete Selected]   [Delete All]   [Reset]

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The **Port Forwarding** page enables users to enable or disable port forwarding and set the port IP addresses that will be used to engage in allowing incoming traffic from outside the network to be sent to a local connected mobile device based on the requested port.

Item	Description
Enable Port Forwarding	Port Forwarding function.
Local IP Address	LAN IP address.
Local Port Start	LAN side start port.
Local Port End	LAN side end port.
Protocol	"TCP", "UDP" or "Both".
Remote IP Address	WAN IP address.
Remote Port Start	External start port.
Remote Port End	External end port.
Comment	Port number.

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3.5.4 URL Filter

The **URL Filter** page is used to deny LAN users from accessing the internet. Users can block certain URLs that contain specific keywords.

Item	Description
Enable URL Filtering	Enable or disable URL Filtering function.
Deny URL address (black list)	Blocking access to the URL list.
Allow URL address (white list)	Allowing access to the URL list.

URL Address	Block or allow access URL.

3.5.5 Route

The **Static Route** page enables user's to enable or disable the Static route and input the items around it.

FW:v1.1.4　　Home　Wizard　Settings　**Features**　Management　Logout

QoS　Firewall　Port Forwarding　URL Filter　Route　Dynamic DNS

Once connected to the Internet, your LTE Router automatically builds routing tables that determine where traffic should be sent. Static routes can override this process, allowing traffic to be directed to a specific client or location.

Static Route

Enable Static Route: ☐
IP Address:
Subnet Mask:
Gateway:
Metric:
Interface: LAN

Save & Apply	Reset	Show Route Table

Static Route Table

Destination IP Address	Netmask	Gateway	Metric	Interface	Status	Select

| Delete Selected	Delete All	Reset

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Item	Description
Enable Static Route	Enable or disable Static route.
IP Address	An IP address, or Internet Protocol address, is a series of numbers that identifies any device on a network.
Subnet Mask	A number that resembles an IP address. It reveals how many bits in the IP address are used for the network by masking the network portion of the IP address
Gateway	The IP address of another router your CPE-0001 sends traffic too.
Metric	The routing metric.

3.5.6 Dynamic DNS

The **Dynamic Domain Name Services (Dynamic DNS)** page allows a dynamic public IP address to be associated with a static host name in any of the many domains and allows access to a specific host from various locations on the internet. DDNS requires that an account be set up with one of the supported DDNS service providers.
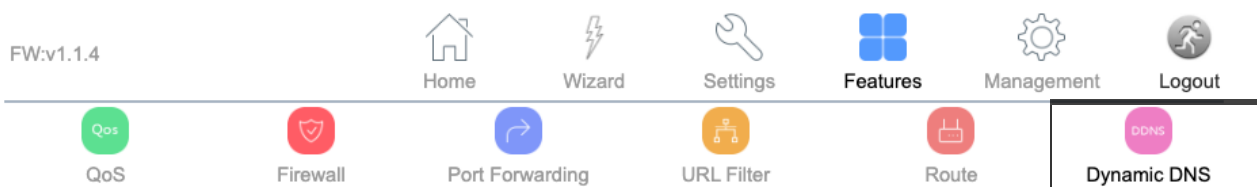
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| Item	Description
Server Provider	Select server from the drop-down list ■ DynDNS ■ TZO
Domain Name	The host name.
User Name/Email	The user name.
Password/Key	The password.

Chapter 3

Accessing the Web User Interface: Management

3.6. Management

The **Management** section enables the user to perform key system updates such as setting the CPE-0001's IP address log-in username and password, enabling or disabling TR069, and upgrading the CPE-0001's firmware.
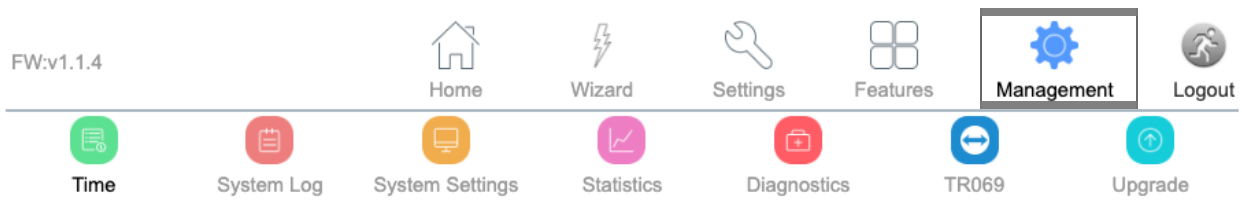
3.6.1 Time

The **Time** sub-section contains several pages related to time-related settings.

You can maintain the system time by synchronizing with a public time server over the Internet.

NTP Server	Reboot Schedule

Current Time: 2022 - 10 - 19 10 : 48 : 10

Copy LAN time: Copy Computer Time

Time Zone Select: (GMT-05:00)Eastern Time (US & Canada)

Enable NTP Client Update: ☑

Automatically Adjust Daylight Saving: ☐

NTP Server: ● 131.188.3.220

Save & Apply	Reset	Refresh

CPE-0001

3.6.1.1 NTP Server

The **NTP Server** page enables user's to set the current time and time zone onto their CPE-0001, in addition to setting NTP server.

Item	Description
Current Time	Select the time zone in your area.
Copy LAN time	Copy time from computer.
Time Zone Select	Select the time zone from the drop box.
Enable NTP client update	NTP client update.

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Automatically Adjust Daylight Saving	Daylight savings function.
NTP Server	Select the well known NTP Server.
Manual IP Setting	Enter the server manually.

3.6.1.2 Reboot Schedule

The **Reboot Schedule** page enables user's to allow their CPE-0001 to reboot automatically at a specified time.

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3.6.1 System Log

FW:v1.1.4   Home   Wizard   Settings   Features   **Management**   Logout

Time   **System Log**   System Settings   Statistics   Diagnostics   TR069   Upgrade

This page can be used to set the remote Log server and show the system Log.

Enable Log: ☐

Enable Remote Log: ☐

Log Server IP Address: [_____]

Apply Changes

Refresh   **Clear**

Item	Description
Enable Log	Log function.
System All	Print all log information.

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Wireless	Print wireless log information.
DoS	Print DoS log information.
Enable Remote Log	"Logging to Syslog Server".
Log Server IP Address	Enter the Syslog server IP address.

3.6.2 System Settings

The **System Settings** subsection contains several pages related to basic administration settings.

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3.6.2.1 Administrator

The **Administrator** page allows users to set the CPE-0001's IP address log-in username and password.

CPE-0001

3.6.2.2 System

This page allows you save current settings to a file or reload the settings from the file which was saved previously.

Administrator	System

Save Settings to File:	Save
Load Settings from File:	Select File	Upload
Reset Settings to Default:	Reset
Reboot The Device:	Reboot

Item	Description
Save settings to file	Save the settings to the local PC.
Load settings from File	Load the settings from the local PC.
Reset Settings to Default	Restore the device to factory default.
Reboot the device	Press the button to reboot the device.

The **System** page allows user's to back up, restore, and erase the CPE-0001's current settings. Once you provision your router to your liking, it is recommended to back up the settings so that they are saved as a file on your computer. In the future, you can then restore the CPE-0001's settings from this file.

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3.6.3 Statistics

The **Statistics** subsection contains several pages related to basic administration settings.

FW:v1.1.4		Home	Wizard	Settings	Features	Management	Logout
Time	System Log	System Settings	**Statistics**	Diagnostics		TR069	Upgrade

This Page shows each user's total traffic statistics.

User Statistics			Interface Statistics	
IP Addr	**Total Down**	**Total Up**	**LTE Down**	**LTE Up**
192.168.0.100	27 581 703 Bytes	98 062 808 Bytes	27 581 703 Bytes	98 062 808 Bytes
192.168.0.101	76 613 239 Bytes	265 626 731 Bytes	76 613 239 Bytes	265 626 731 Bytes
192.168.0.102	25 631 424 Bytes	9 430 205 Bytes	25 631 424 Bytes	9 430 205 Bytes
192.168.0.100	5 922 663 Bytes	78 757 639 Bytes	5 922 663 Bytes	78 757 639 Bytes
192.168.0.104	7 451 583 Bytes	241 455 758 Bytes	7 451 583 Bytes	241 455 758 Bytes

3.6.3.1 User Statistics

FW:v1.1.4		Home	Wizard	Settings	Features	Management	Logout
Time	System Log	System Settings	**Statistics**	Diagnostics		TR069	Upgrade

This Page shows each user's total traffic statistics.

User Statistics			Interface Statistics	
IP Addr	**Total Down**	**Total Up**	**LTE Down**	**LTE Up**
192.168.0.100	27 581 703 Bytes	98 062 808 Bytes	27 581 703 Bytes	98 062 808 Bytes
192.168.0.101	76 613 239 Bytes	265 626 731 Bytes	76 613 239 Bytes	265 626 731 Bytes
192.168.0.102	25 631 424 Bytes	9 430 205 Bytes	25 631 424 Bytes	9 430 205 Bytes
192.168.0.100	5 922 663 Bytes	78 757 639 Bytes	5 922 663 Bytes	78 757 639 Bytes
192.168.0.104	7 451 583 Bytes	241 455 758 Bytes	7 451 583 Bytes	241 455 758 Bytes

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3.6.3.2 Interface Statistics

FW:v1.1.4

| Home | Wizard | Settings | Features | Management | Logout |

| Time | System Log | System Settings | Statistics | Diagnostics | TR069 | Upgrade |

This page shows each interface's total traffic statistics.

| User Statistics | Interface Statistics |

Wireless 1 LAN	*Sent Bytes*	2810423753
	Received Bytes	1669214975
Wireless 2 LAN	*Sent Bytes*	2810424373
	Received Bytes	1669216913
Ethernet LAN	*Sent Bytes*	0
	Received Bytes	0
WAN	*Sent Bytes*	0
	Received Bytes	0
LTE	*Sent Bytes*	1539188936
	Received Bytes	284444728

Refresh

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3.6.4 Diagnostics

The **Diagnostics** page provides various diagnostics surrounding ping and traceroute for IP connection.

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3.6.4.1 Ping

FW:v1.1.4

Home	Wizard	Settings	Features	Management	Logout

Time	System Log	System Settings	Statistics	Diagnostics	TR069	Upgrade

This page gives you various diagnostics about ping for IP connection.

Ping	Traceroute

Host Name or IP Address: [   ] RUN

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3.6.4.1 Traceroute

FW:v1.1.4

| Home | Wizard | Settings | Features | **Management** | Logout |

| Time | System Log | System Settings | Statistics | **Diagnostics** | TR069 | Upgrade |

This page gives you various diagnostics about traceroute for IP connection.

| Ping | Traceroute |

Host Name or IP Address: [   ]   RUN

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3.6.5 TR069

FW:v1.1.4

| Home | Wizard | Settings | Features | Management | Logout |

| Time | System Log | System Settings | Statistics | Diagnostics | TR069 | Upgrade |

This page is used to configure the TR-069.

TR069: ◉ Disabled ○ Enabled

ACS: `http://acs.iqonline.com`

User Name: `tr69-iqonline`

Password: `••••••••••••••••`

Periodic Inform Enable: ◉ Disabled ○ Enabled

Periodic Inform Interval: `86400`

Interface: `DEFAULT` ▾

Connection Request

Authentication: ◉ Disabled ○ Enabled

User Name: `admin`

Password: `•••••`

Path: `/`

Port: `30009`

| Save & Apply | Reset |

Certificat Management

CA Certificat: | Select File | Upload |

View CA Certificat: | View |

The **TR069** page is used to configure the TR069 functionalities in addition to setting the ACS's parameters.

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Item	Description
TR069	Technical Report 069
ACS	ACS server domain or IP Address.
User Name	Username for connection to ACS.
Password	Password for connection to ACS.
Periodic Inform Enable	Periodic inform.
Periodic Inform Interval	Periodic inform interval.
Connection Request User Name	User Name used form ACS connection to TR069.
Connection Request Password	Password used form ACS connection to TR069.
Path	Connection request path.
Port	Connection port.

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3.6.5 Upgrade

From time to time, new versions may be released of the CPE-0001's Firmware. Firmware updates contain improvements and fix existing problems.

The **Local Upgrade** page enables users to upgrade the CPE-0001's software.

The **Online Upgrade** section of the page enables users to upgrade the mobile module firmware to a new version.

Do not power off the device during the upload as it may crash the system.