

WLTFQR-121 | User Manual

Copyright

This DOCUMENT is copyrighted with all rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form by any means without the written permission of Gemtek Technology Co. Ltd.

Notice

Gemtek reserves the right to change specifications without prior notice.

While the information in this document has been compiled with great care, it may not be deemed an assurance of product characteristics. Gemtek shall be liable only to the degree specified in the terms of sale and delivery.

The reproduction and distribution of the documentation and software supplied with this product and the use of its contents is subject to written authorization from Gemtek.

Content

Copyright	1
Notice	1
About this Guide	4
Prerequisite Skills and Knowledge.....	4
Conventions Used in this Document	4
Introduction	5
Product Overview	5
Product Package	5
Connectors	6
LED Indicators	7
Installation	8
Web Interface.....	12
Icon Indicator.....	14
Reference Manual	15
Mobile Network	17
Mobile Network Status.....	17
Mobile Network Technology.....	18
Mobile Network PIN	19
Mobile Network Default PDN	20
Network.....	22
Network Status	22
Network Network Mode.....	23
Network DHCP Server.....	24
Network QoS.....	26
Network Port Forwarding	27
Network Port Trigger	28
Network Dynamic DNS	29
Network MGMT Service	30
WiFi.....	31
WiFi Status	31
WiFi Settings	32
Firewall	36
Firewall Basic	36
Firewall L3 MGMT Filter	38
Firewall L3 DATA Filter	39
Firewall L2 Filter.....	40
Firewall Access Restriction	41
Management	42
Management Account	42

Management Language	43
Management Device Setting	44
Management Restore Default	45
Management Software	46
Management RM Settings	48
Monitoring.....	49
Monitoring Status	49
Monitoring Iperf	50
Monitoring Diagnostic Tools	50
About.....	51
About Status	51

About this Guide

This document provides information and procedures on installation and configuration of Gemtek LTE Indoor CPE. You could utilize the theoretical information in this guide to setup your device.




Prerequisite Skills and Knowledge

To use this document effectively, you should have a working knowledge of Local Area Networking (LAN) concepts and wireless Internet access infrastructures. In addition, you should be familiar with the following:

- Hardware installers should have a working knowledge of basic electronics and mechanical assembly, and should understand related local building codes.
- Network administrators should have a solid understanding of software installation procedures for network operating system and troubleshooting knowledge. LTE Indoor CPE has a web GUI which supports http/https protocol; it could be used to configure the CPE settings through web browser by your PC. Please refer to following pages for more detail.

Conventions Used in this Document

The following typographic conventions and symbols are used throughout this document:

	Very important information. Failure to observe this may result in damage.
	Important information that should be observed.
	Additional information that may be helpful but which is not required.
bold	Menu commands, buttons and input fields are displayed in bold

Introduction


Product Overview

LTE Indoor CPE is an all-in-one device that integrates FDD-LTE and Wi-Fi service.

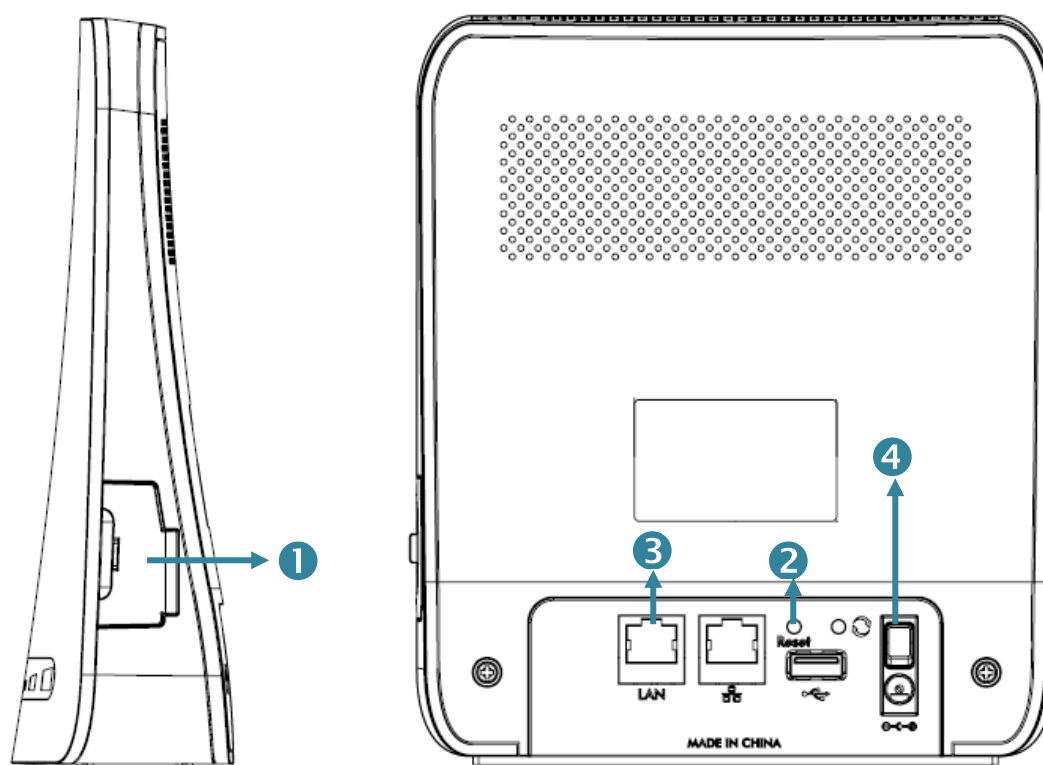
- Support FDD-LTE
- Support 3GPP Release 9 compliant
- Support LTE UE Category 4
- Support 2 LAN ports
- Support HTTP/HTTPS Web GUI

Product Package

	Item	Qty
1	LTE Indoor CPE	1
2	User Manual	1
3	Power Adapter	1
4	RJ-45 Ethernet cable	1

	If any items of mentioned above are missing or damaged, please contact our customer support immediately.
---	--

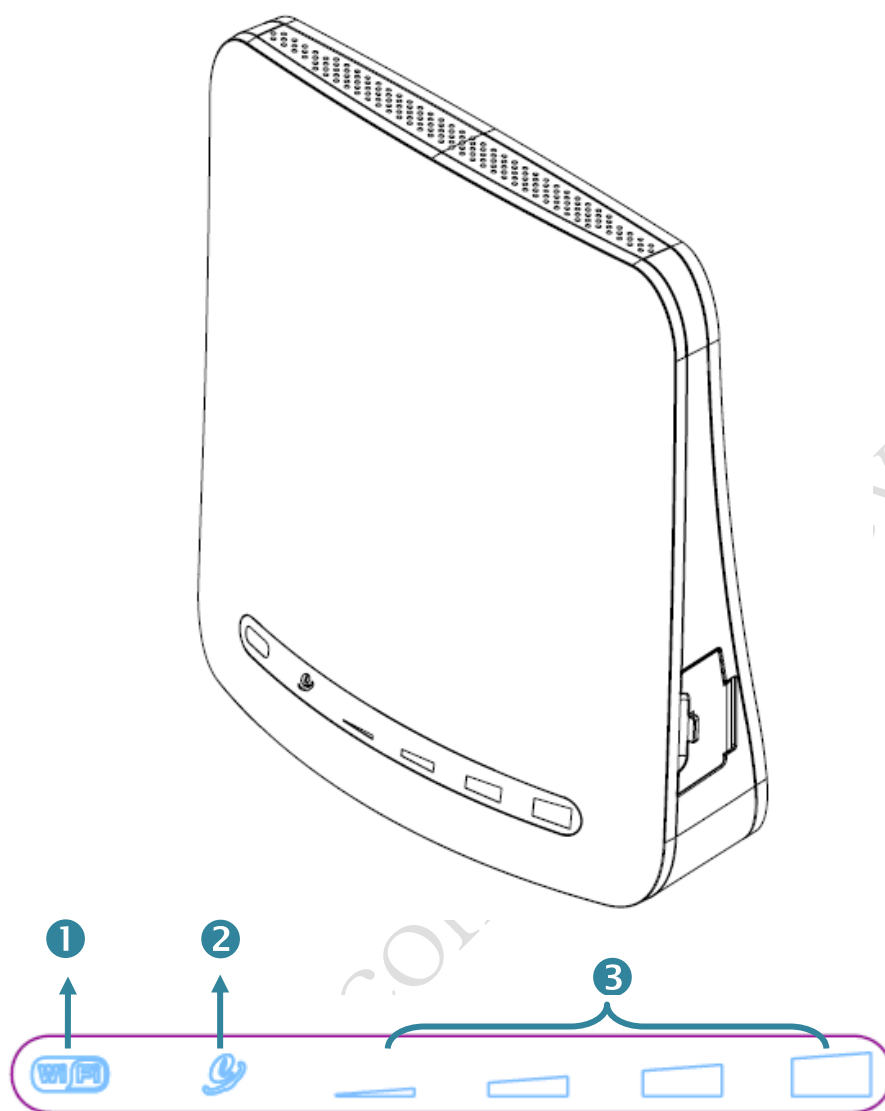
Connectors






LTE Indoor CPE Connectors

- 1. SIM card slot:** Insert SIM card into the slot with right direction.
- 2. Reset Button:** Use a pin to press “**Reset**” button for less than 5 seconds to reboot the device. Or press and hold the **Reset** button for more than 10 seconds to set the device to factory default settings.
- 3. LAN Port (RJ-45):** This port is for connecting LTE Indoor CPE to your PC or other network equipments (such as hubs or switches) with a RJ-45 Ethernet cable.
- 4. DC-12V Port (Power Adapter Socket):** Connect the power adapter provided with LTE Indoor CPE.

LED Indicators



IDU LED Indicators

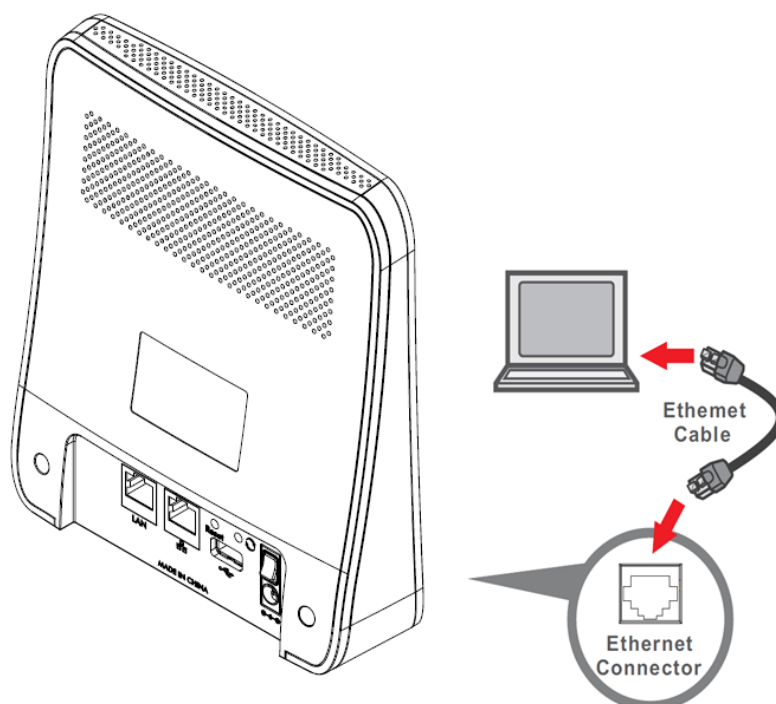
1	Power & WiFi		Red	Power on (system boot up)
			Blue	WiFi Enabled
			Fast Blinking	WiFi Transmitting data
2	2G/3G/4G		Fast Blinking	Connecting
			Blinking every 2 seconds	2G connected
			Blinking every 1 second	3G connected
			ON	4Gconnected
3	Signal Strength		4 level strength meter	Display signal strength

Installation

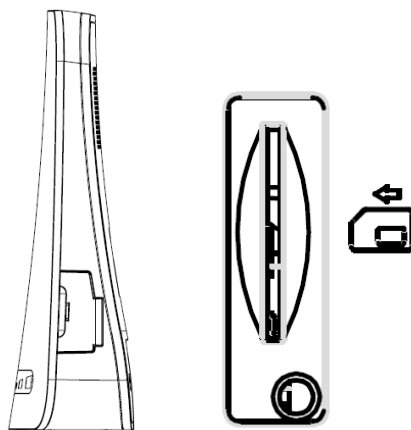
Please follow the steps below to install the device:

Step1: Place your LTE Indoor CPE on a flat work surface.

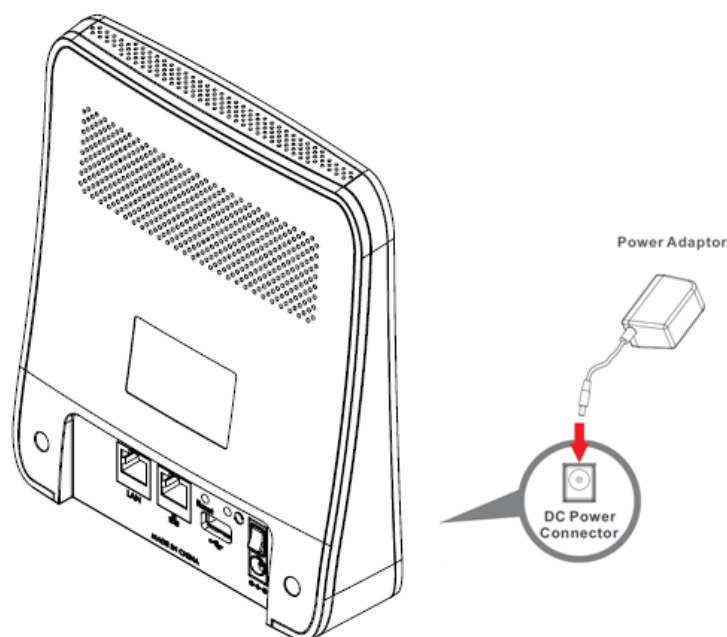
Step2: Connect the device **LAN** port to your PC with a RJ-45 Ethernet cable that is supplied.



Step3: Insert SIM card into the device with right direction.

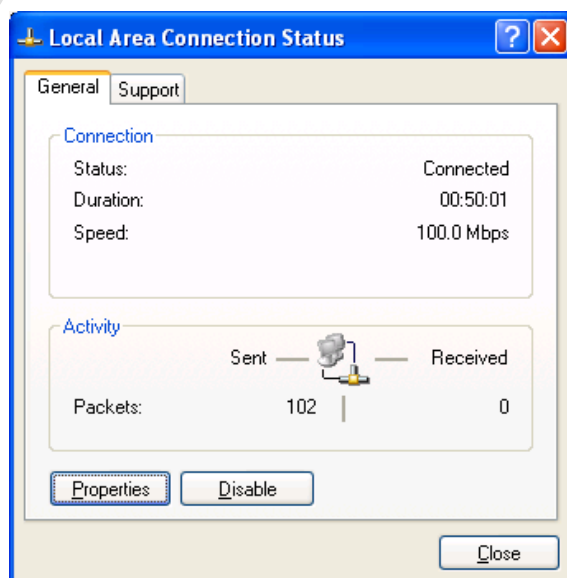


Step4: Insert the power cord into the LTE Indoor CPE's **DC-12V** power jack; and then insert the plug into power outlet.



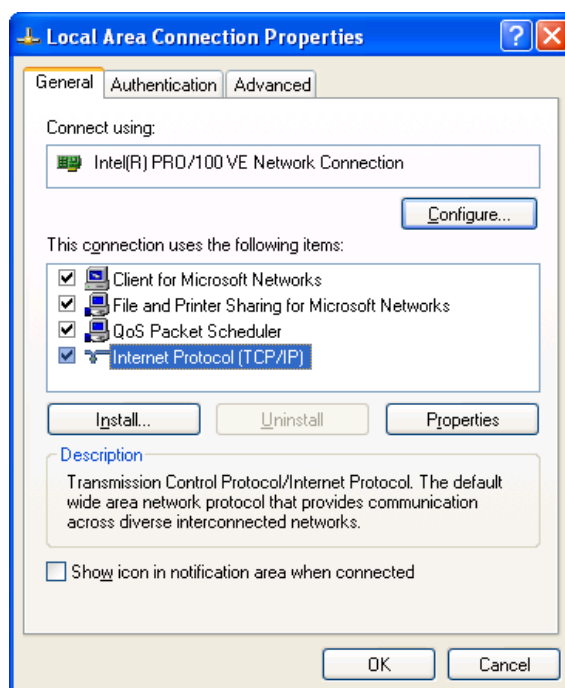
Step5: The device will start the booting process once the power has been connected.
Please wait for a minute to let the booting process complete.

Step6: Select **Local Area Connection Status** from Windows task bar and click **Properties**.



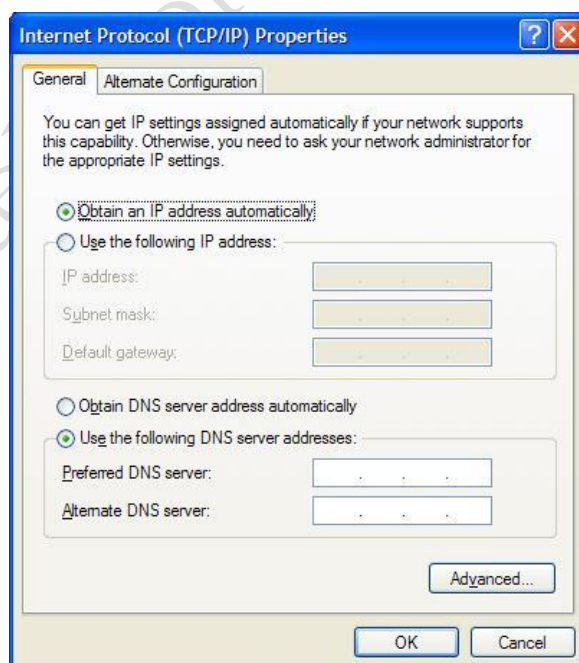
Local Area Connection Status

Step7: Double click on the **Internet Protocol (TCP/IP)**.



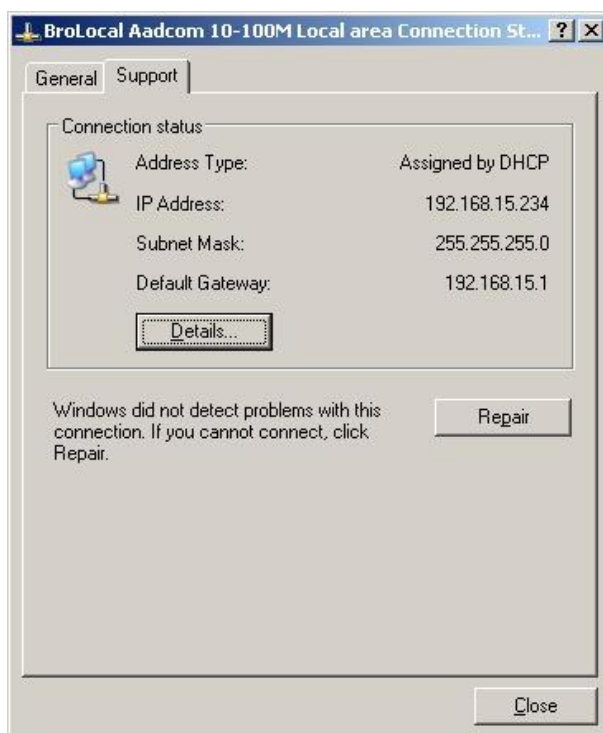
Local Area Connection Properties

Step8: Select **Obtain an IP address automatically** and click **OK**.



Internet Protocol (TCP/IP) Properties

Step9: By now, the device should have got IP address from your DHCP server.

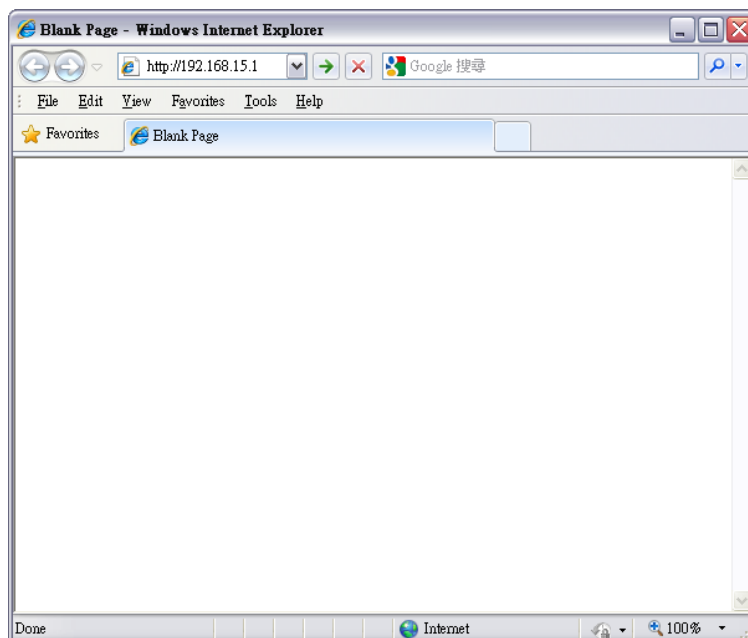


Step10: How to verify CPE has a successful connection to the LTE eNodeB? This can be verified by observing the signal strength LEDs (Please refer **LED Indications** section in **Introduction** chapter of this manual to find the location of these LEDs on the device). At least one of these LEDs glowing continuously is an indication of successful connection to the eNodeB. Now you can start browsing the Internet.

Web Interface

Please follow the steps below to configure your device through the web interface:

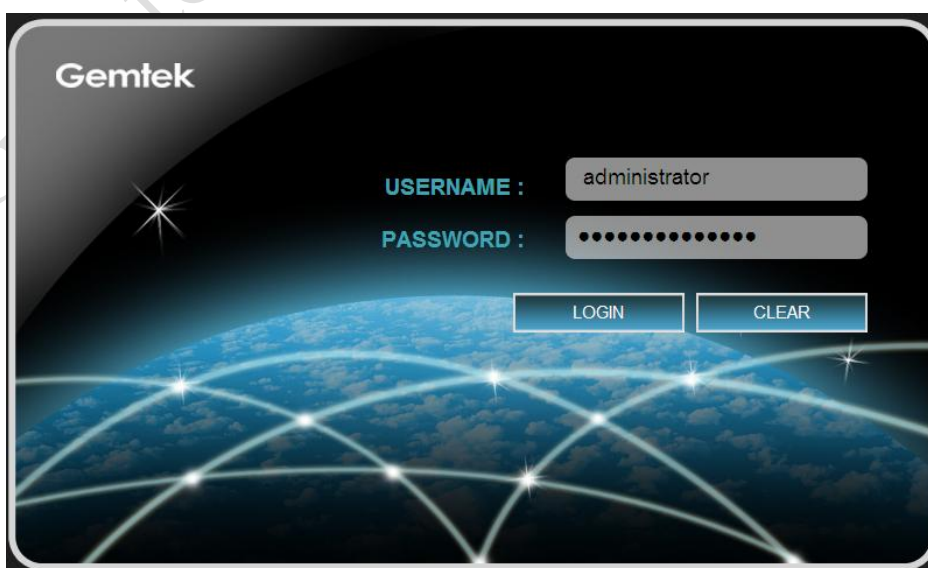
Step1: Open the Web browser (Internet Explorer) and enter the default IP address of the IDU CPE, which is: **http://192.168.15.1**



Web browser

Step2: Enter IDU administrator login username/password to access the web management interface.

The default username / password is **administrator/administrator**.



Web management interface







Step3: The page shown here gets displayed in your browser after login; you can now configure the device settings.



GUI Interface








Icon Indicator

In the upper side of GUI interface, there is a banner contains lots of different icons which indicate different meanings. Users can refer to below table for further explanation.

	Press this button to get back to "Home" screen.
	Press this button to log out from GUI.
	Press this button to reboot the CPE.
	Please insert SIM card.
	Signal strength status. The more bars showed, the better signal strength.
	WiFi Enabled / Disabled.

Reference Manual

The main menu is located at the center of the screen and each main menu item contains sub-items. You can refer to the menu structure which is given below:

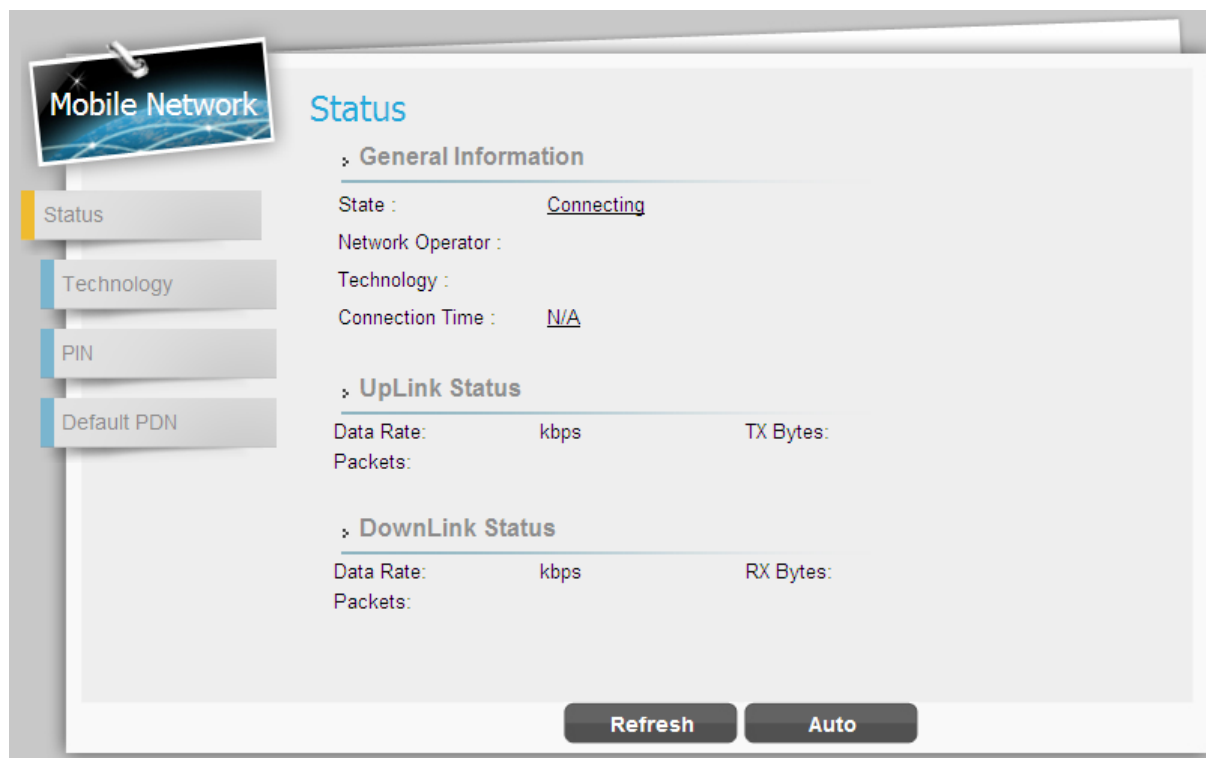
	Mobile Network	Status
		Technology
		PIN
		Default PDN
	WiFi	Status
		Settings
	Firewall	Basic
		L3 MGMT Filter
		L3 DATA Filter
		L2 Filter
		Access Restriction
	Network	Status
		Network Mode
		DHCP Server
		QoS
		Port Forwarding
		Port Trigger
		Dynamic DNS
		MGMT Service
	Management	Account
		Language
		Device Setting
		Restore Default
		Software
		RM Settings
	Monitoring	Status
		Iperf
		Diagnostic Tools
	About	Status

Menu Structure Table

"Gemtek confidentiality"

Mobile Network

Mobile Network | Status



Mobile Network > Status

This page is to display the LTE connection status. When LTE Indoor CPE connects to eNodeB, you can view related LTE connection status.

Refresh button	Click the "Refresh" button to receive the latest LTE connection status.
Auto button	This button will update the status information periodically.

Mobile Network | Technology

Mobile Network

Status

Technology

PIN

Default PDN

Technology

Start/Stop Mobile Network

Start Stop

Mobile Tech Mode Settings

☐ LTE Only

☐ 3G Only

☐ 2G Only

☒ Multi-mode

LTE First

Cancel Apply

Status > Technology

This page is designed for you to start/stop mobile network and you can choose which mobile tech mode settings you want.

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

Mobile Network | PIN

Mobile Network

PIN

Enable PIN

Enable PIN Code check ☐

Change PIN

Change PIN:

Status > PIN

- ◆ **Enable PIN:** Tick the checkbox and click **"Apply"** button to enable PIN protection.
- ◆ **Change PIN:** Enter old PIN code, new PIN code, and confirm PIN code; and then click **"Apply"** button to apply the change you've made.

Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes made and save to the device, new settings will be reloaded.

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

Mobile Network | Default PDN

Mobile Network

Default PDN

PDN Connection CID for MGMT

APN for network attach: Auto

Authentication Type: NONE

PDN Type: IPv4

Cancel Apply

Status > Default PDN

Packet Data Network (PDN) Gateway is responsible for acting as an anchor of mobility between 3GPP and non-3GPP technologies. It provides connectivity from the device to external packet data networks by being the point of exit and entry of traffic for the device.

- ◆ **APN for network attach:** Select **"Auto"** to let CPE to automatically capture APN from your service provider or **"Manual"** to manually type APN name in **"APN"** field.
- ◆ **Authentication Type:** Select authentication type for APN from drop-down list; **"None"**, **"PAP (Password authentication protocol)"**, or **"CHAP (Challenge Handshake Authentication Protocol)"**. Enter the corresponding username and password in below fields if PAP or CHAP is selected.
- ◆ **PDN Type:** Only **"IPv4"** available at this moment.

Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes made and save to the device, new

	settings will be reloaded.
--	----------------------------

"Gemtek confidentiality"

Network

Network | Status

Network

Status

LAN Information

Type :	Static
LAN MAC :	f8:35:dd:1d:14:5f
LAN IP Address :	192.168.15.1
LAN Subnet Mask :	255.255.255.0
TX Bytes :	1123549
RX Bytes :	746730
TX Packets :	3029
RX Packets :	3956

WAN Information

Type :	DHCP
WAN MAC :	f8:35:dd:1d:14:60
WAN IP Address :	N/A
WAN IP Subnet Mask :	N/A
WAN IP Default Gateway :	N/A
IP Connection :	OFF

Refresh **Auto**

Network > Status

This page is to display the status of CPE such as LAN/WAN and lease status/information.

Refresh button	Click the "Refresh" button to receive the latest device status.
Auto button	This button will update the status information periodically.

Network | Network Mode

Network Mode

Internet Protocol Settings

Operation Mode: NAT Mode

Connection Mode: DHCP

Host Name: Gemtek_1D1460

LAN IP Address: 192 . 168 . 15 . 1

LAN Subnet Mask: 255 . 255 . 255 . 0

WAN IP Address:

WAN Subnet Mask:

WAN Gateway Address:

WAN MTU: 1400

DNS1:

DNS2:

Buttons: Cancel, Apply

Network > Network Mode

- ◆ **Operation Mode:** Only NAT Mode is available at this moment.
- ◆ **Connection Mode:** There are two connection mode provided from the CPE, "DHCP" or "Static".
 - If "DHCP" mode is selected, CPE would automatically acquire configuration information from a DHCP server and uses it to configure its host; enter the host name in "Host Name" field. If successfully get the IP information from DHCP server, they will be shown on each field with grey font.
 - Static IP addresses are manually assigned to a device by an administrator; if "Static" mode is selected, manually enter required information in below fields.

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

Network

DHCP Server

» **DHCP Server Settings**

Enable DHCP Server ☒

DHCP Starting IP Address 192 . 168 . 15 . 2

DHCP Ending IP Address 192 . 168 . 15 . 254

Primary DNS . . . ☒ From ISP

Secondary DNS . . .

Tertiary DNS . . .

DHCP Lease Time 1 Days 0 Hours 0 Minutes 0 Seconds

» **Lease Reservation Table**

Please click on "Add" button to create a rule. [Add +](#)

Cancel **Apply**

Network > DHCP Server

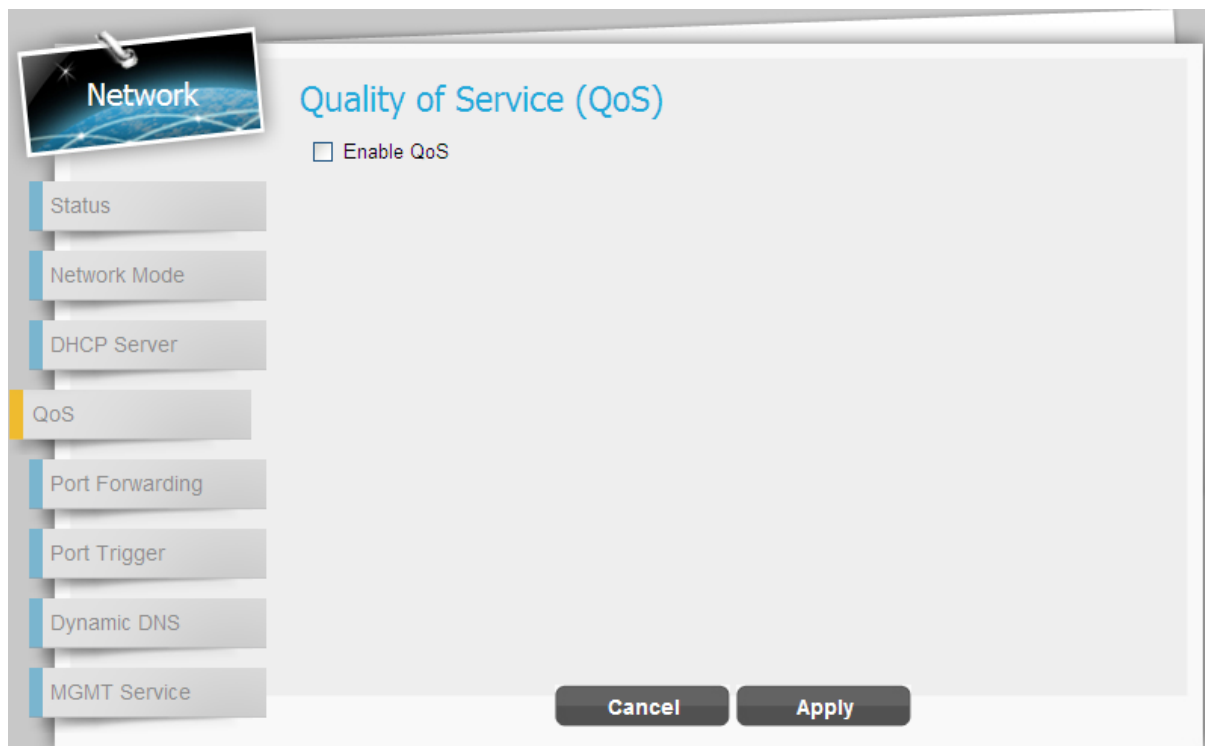
This device has a built-in DHCP server that can be used for managing the distribution of IP addresses for the devices connected to the local Ethernet ports and WiFi access point. In the DHCP Server page you could set DHCP parameters for dynamic IP assignment.

- ◆ **Enable DHCP Server:** Tick the checkbox dynamically assign a leased IP address to clients that connect to the device from the local network.
- ◆ **DHCP Starting IP Address:** Enter the first IP address assigned by the DHCP server.
- ◆ **DHCP Ending IP Address:** Enter the last IP address assigned by the DHCP server.
- ◆ **Primary/Secondary/Tertiary DNS:** You can specify three DNS server and select how the DNS Server is assigned. Tick the checkbox **"From ISP"** to gain the DNS server from ISP; the below three DNS fields will be disabled. If un-tick the checkbox, enter the DNS server IP by yourself.
- ◆ **DHCP Lease Time:** Set the lifetime for your DHCP IP. (Range: 2minutes~365days)
- ◆ **Lease Reservation Table:** This table displays information on reserved IP addresses for leasing. In this section you can assign the specific IP addresses to the specific client

device connected to the Ethernet ports and WiFi access point. Click "Add+" button to add a reserved IP for leasing.

- Host Name - Enter a name to the host
- MAC Address - Add a device MAC address
- IP Address - Specify a reservation IP address for a specified MAC address
- Enabled - Tick/un-tick the checkbox to enable or disable a specified IP setting
- Delete - Select an IP to delete

Add button	Click the "Add+" button to add a new rule setting.
Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes made and save to the CPE device, some services will be reloaded.



Network > QoS

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

Network | Port Forwarding

Protocol	WAN Port		LAN Port		LAN IP	Enable	Delete
	Begin	End	Begin	End			
TCP					192.168.15	<input checked="" type="checkbox"/>	

Network > Port Forwarding

Port Forwarding forwards the packet according to the routing table from WAN port to a designated IP port. This Port Forwarding page enables managing and setup of the rules for Port Forwarding. Click **"Add+"** button to add a new port forwarding rule.

- ◆ **Protocol:** Set the protocol for port forwarding: TCP or UDP
- ◆ **WAN Port:** Enter the range (begin and end ports) for the WAN
- ◆ **LAN IP:** Enter the IP address that identifies the IP subnet of the remote network
- ◆ **Enabled:** Select this check-box to enable/disable port forwarding for the specific IP
- ◆ **Delete:** Select an IP to delete

Add button	Click the "Add+" button to add a new rule setting.
Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes made and save to the CPE device, some services will be reloaded.

Network | Port Trigger

Network

Port Trigger

Please click on "Add" button to create a rule.

Application Name	Triggered Range	Forwarded Range	Enable	Delete
------------------	-----------------	-----------------	--------	--------

Cancel Apply

Network > Port Trigger

The tab allows you to configure Port Trigger rules; click the **"Add+"** button to add a new Port Trigger rule.

- ◆ **Application Name:** Name of the Port Trigger rule.
- ◆ **Triggered Range:** Which port range the outgoing packet will trigger the rule? Enter the starting and ending port range.
- ◆ **Forwarded Range:** Which port range the incoming packet will trigger the rule? Enter the starting and ending port range.
- ◆ **Enable:** Tick the checkbox to active the rule.
- ◆ **Delete:** Select a rule to delete.

Add button	Click the "Add+" button to add a new rule setting.
Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes made and save to the CPE device, some

	services will be reloaded.
--	----------------------------

Network | Dynamic DNS

Network > Dynamic DNS

Dynamic Domain Name System (DNS) is a mechanism used to map a domain name to the dynamic IP address of a network device. This page allows enabling the Dynamic DNS and selecting the service provider.

- ◆ **Enable DDNS:** Tick the checkbox if the unit has a non-static IP address to keep the domain name associated with an ever-changing IP address.
- ◆ **When DDNS is enabled,** select the DDNS service provider you registered from the drop-down list, and configure the following parameters: DDNS Service Provider, DDNS User Name, DDNS Password, and DDNS Host Name.

Cancel button	Reset fields to the last saved values.
----------------------	--

Apply button	Commit the changes made and save to the CPE device, some services will be reloaded.
---------------------	---

Network | MGMT Service

Network

- Status
- Network Mode
- DHCP Server
- QoS
- Port Forwarding
- Port Trigger
- Dynamic DNS
- MGMT Service**

MGMT Service

MGMT Service

HTTP Service Enable ☒ HTTP Port

HTTPS Service Enable ☒ HTTPS Port

Import Web Server Certificate

Web Server Certificate Passphrase

Network > MGMT Service

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

WiFi

WiFi | Status



WiFi > Status

This page is to display the information of WiFi, such as status, radio channel, working mode, network name (SSID) and SSID broadcast.

Refresh button	Click the "Refresh" button to receive the latest device status.
Auto button	This button will update the status information periodically.

WiFi | Settings

WiFi

Status

Settings

Settings

Wireless Settings

Interface Status:

Network Name (SSID): Airtel_EF819B

Radio Channel:

Working Mode: 802.11b/g/n

Bandwidth (only 11n): 20M/40M

RTS Threshold: 2347 (range: 1~2347)

CTS Protect Mode: Auto

Preamble Length: Short Preamble

SSID Broadcast: Enable

Security

Security Types Setup

Authentication: Open System

Encryption: NONE

Wi-Fi Protected Setup (WPS)

Enable WPS: ☐

Access Control List

Filtering Policy: Disable

WiFi > Settings

◆ Wireless Settings

- **Interface Status:** Click **"Disable"** button to disable WiFi, or click **"Enable"** to activate WiFi function.
- **Network Name (SSID):** SSID (service set identifier) is a function performed by an device transmits its name so that wireless stations searching for a network connection can 'discover' it; the default value is "Airtel_EF819B".
- **Radio Channel:** Select wireless channel from Channel 1 to 11. "Auto" will allow CPE to choose the best channel automatically.
- **Working Mode:** Select the wireless protocol as you desired: "802.11b/g/n", "802.11b/g", "802.11g/n", "802.11b", "802.11g", or "802.11n".
- **Bandwidth (Only 11n):** The setting is only available when wireless protocol

802.11n is applied; select the bandwidth as required from the drop-down list.

- 20M – Setting the bandwidth to 20M.
- 20M/40M – The bandwidth setting will automatically be switched between 20M and 40M by CPE.

- **RTS Threshold:** RTS (Request-to-send) packets are a mechanism used by the 802.11 wireless networking protocols which establish an open communication to an AP or node; it is a signal sent from the transmitting station to the receiving station requesting permission to transmit. The range of RTS threshold is from 256 to 2432.
- **CTS Protect Mode:** Clear to send (CTS) protection mode is a wireless setting that ensures computers on a network can connect to a wireless router when many communications devices are present. When the setting is "Always On", a computer must receive a CTS frame from the wireless access point (WAP) before information can be sent. An "Auto" setting determines which computer can reach a WAP at a specific through a request to send (RTS) packet. If CTS Protect Mode is "Always Off", network computers may experience difficulty in reaching the Internet as they all try to connect at the same time.
- **Preamble Length:** The preamble is the first part of the Physical Layer Convergence Protocol/Procedure (PLCP) Protocol Data Unit (PDU); a length of null signal before data. It gives time for receivers on the network to detect the signal and prepare to receive the data. Short preamble takes less time to process and minimizes overhead, so it should be used in a good wireless network environment when all wireless clients support it; select "**Long**" if you have a 'noisy' network environment which long preamble could provide more reliable communication.
- **SSID Broadcast:** Having SSID broadcast disabled essentially makes your device invisible unless a wireless client already knows the SSID, or is using tools that monitor associated clients. The default setting of SSID Broadcast is "Enabled".

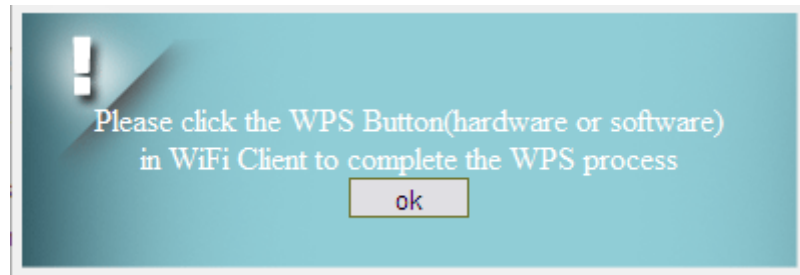
◆ Security

- **Security Types Setup:** There are 8 different security types provided as below;
select the authentication method and encryption you need, and then enter correspondent information into followed setting fields.

Authentication	Encryption	
Open Systems	None	
802.1x	WEP	802.1x Settings - Rekey Interval RADIUS Server RADIUS Port RADIUS Key
WEP Auto	WEP	Static Key Settings - Default Key Key
WPA2-Personal	TKIP AES TKIP/AES	Pre-shared Settings - Rekey Interval Key Pass Phrase
WPA-Personal	TKIP AES TKIP/AES	Pre-shared Settings - Rekey Interval Key Pass Phrase
WPA/WPA2-Personal Mixed Mode	TKIP AES TKIP/AES	Pre-shared Settings - Rekey Interval Key Pass Phrase
WPA2-Enterprise	TKIP AES TKIP/AES	802.1x Settings - Rekey Interval: RADIUS Server RADIUS Port RADIUS Key
WPA-Enterprise	TKIP AES TKIP/AES	802.1x Settings - Rekey Interval: RADIUS Server RADIUS Port RADIUS Key
WPA/WPA2-Enterprise Mixed Mode	TKIP AES	802.1x Settings - Rekey Interval:

	TKIP/AES	RADIUS Server RADIUS Port RADIUS Key
--	----------	--

- **Enable WPS:** When "Open Systems" authentication is selected; a WPS(Wi-Fi Protected Setup) function is available. Tick the checkbox to enable WPS, click **"Add WiFi Client by WPS"** button on GUI to add another client to be connected to the CPE.



- ◆ **Access Control List:** This option could allow you to control the access to wireless network from specific MAC address. Select **"Disable"** to disable this function, or select **"Allow"** / **"Deny"** to add a new rule for access permission/restraint. Click **"Insert"**, and then enter the MAC address no matter you would like to allow or prevent the specific wireless connection.

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

Firewall

The Firewall page enables to configure the firewall feature. The firewall feature can be used to block unauthorized access while allowing only authorized communications from the Internet network. This feature also allows the device to be managed over the Internet by authorized personnel.

Firewall | Basic

Firewall

Basic

Firewall Configuration

Enable Firewall	<input type="checkbox"/>
Allow Ping from WAN	<input checked="" type="checkbox"/>
Allow HTTPs login from WAN	<input type="checkbox"/>
HTTPs Login Port from WAN	<input type="text" value="8080"/>
DMZ IP Address	<input checked="" type="checkbox"/> 192.168.15.109
Redirect ICMP to the Host	<input type="checkbox"/>
Multicast Filter	<input type="checkbox"/>

Cancel Apply

Firewall > Basic

- ◆ **Lan Interface Status:** Click "**Enable**" button to enable two physical Ethernet (RJ-45) ports, and vice versa, "**Disable**" button would make two physical Ethernet ports invalid. No matter LAN interface is enabled or disabled, users could use WiFi connection to log in to GUI.
- ◆ **Enable Firewall:** Tick the checkbox to enable firewall which means set the default access policy to "deny".
- ◆ **Allow ping from WAN:** Tick the checkbox to enables the unit to respond to ping

commands for troubleshooting purposes.

- ◆ **Allow HTTPs login from WAN:** Tick this checkbox to access the device from other networks. When web login is enabled and a port is defined, you can access the device from another network simply by opening a browser and entering the address of the device. Please be noted that enable this function may have some unauthorized access from external networks. Available only if HTTPs Service is enabled in Network | MGMT Service.
- ◆ **HTTPs Login Port from WAN:** Define a specific port number for security access control. Available only if HTTPs Login from WAN is enabled.
- ◆ **DMZ IP Address:** Set a server that acts as a "neutral zone" (DMZ stands for "Demilitarized Zone") and separates an internal network from a public one in order to prevent outside access to private data. The DMZ forwards the network traffic to specific IP.
- ◆ **Multicast Filter:** This setting allows multicast traffic to be forwarded to the appropriate destination. Tick the checkbox to disable multicast packets to be forwarded to the appropriate destination via CPE.

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

Firewall | L3 MGMT Filter

The screenshot displays the 'L3 MGMT Filter' configuration window. On the left, a sidebar shows 'Firewall' as the active section, with sub-options: Basic, L3 MGMT Filter (highlighted), L3 DATA Filter, L2 Filter, and Access Restriction. The main area is titled 'L3 MGMT Filter' and contains an 'Add +' button. Below this is a configuration form with the following fields: 'Name' (text input), 'Enable' (checked checkbox), 'Action' (dropdown menu set to 'Permit'), 'Interface' (dropdown menu set to 'WAN'), 'Log' (dropdown menu set to 'No Log'), 'Protocol' (dropdown menu set to 'TCP'), 'Port' (text input), 'Src IP' (text input), 'Src Mask' (text input), 'Dst IP' (text input), and 'Dst Mask' (text input). At the bottom of the form are 'Cancel' and 'Apply' buttons.

Firewall > L3 MGMT Filter

Add button	Click the "Add+" button to add a new rule setting.
Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes made and save to the CPE device, some services will be reloaded.

Firewall | L3 DATA Filter

The screenshot shows the 'L3 DATA Filter' configuration window. On the left is a sidebar with a 'Firewall' icon and a list of options: 'Basic', 'L3 MGMT Filter', 'L3 DATA Filter' (highlighted), 'L2 Filter', and 'Access Restriction'. The main area is titled 'L3 DATA Filter' and contains an 'Add +' button. Below this is a form with the following fields: 'Name' (text input), 'Enable' (checkbox, checked), a trash can icon, 'Action' (dropdown, 'Permit'), 'Interface' (dropdown, 'WAN'), 'Log' (dropdown, 'No Log'), 'Protocol' (dropdown, 'TCP'), 'Port' (text input), 'Src IP' (text input), 'Src Mask' (text input), 'Dst IP' (text input), and 'Dst Mask' (text input). At the bottom are 'Cancel' and 'Apply' buttons.

Firewall > L3 DATA Filter

L3 DATA Filter could help you to set up the firewall rules to manage the network transmission no matter it is inbound or outbound traffic between computers inside LAN and WAN.

- ◆ Click **"Add+"** button to add a new rule or click the **"Trash Can"** icon to delete the rule.
- ◆ **Select:** Tick the checkbox to edit the rule, or click "Del" button to delete a specific rule.
- ◆ **Name:** Enter the name of the rule.
- ◆ **Enable:** Tick the checkbox to enable the rule.
- ◆ **Action:** Select "Permit" or "Deny" to allow the access of the traffic or reject the traffic.
- ◆ **Interface:** Select which interface you required to block/allow the traffic from; available options are "WAN", "LAN", or "BOTH".
- ◆ **Log:** Select "Log" to have log records, or "No Log" to disable it.
- ◆ **Protocol:** Protocol to filter on; available options are TCP, UDP, ICMP, or ANY.
- ◆ **Port:** Enter port number to filter on.

- ◆ **Src IP:** Enter the source IP to filter on.
- ◆ **Dst IP:** Enter the destination IP to filter on.
- ◆ **Src Mask:** Enter the source Mask to filter on.
- ◆ **Dst Mask:** Enter the destination Mask to filter on.

Add button	Click the "Add+" button to add a new rule setting.
Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes made and save to the CPE device, some services will be reloaded.

Firewall | L2 Filter

The screenshot displays the 'L2 Filter' configuration interface. On the left, a sidebar shows 'Firewall' as the active section, with sub-options: Basic, L3 MGMT Filter, L3 DATA Filter, L2 Filter (highlighted), and Access Restriction. The main area is titled 'L2 Filter' and contains an 'Add +' button in the top right. Below this is a configuration box with the following fields: 'Name' (text input), 'Enable' (checkbox, checked), 'Action' (dropdown menu, 'Permit' selected), 'Interface' (dropdown menu, 'LAN' selected), 'Log' (dropdown menu, 'No Log' selected), 'Ether Type' (text input, '0x'), 'VLAN ID' (text input), 'Src MAC' (text input), 'Dst MAC' (text input), 'Src Mask' (text input), and 'Dst Mask' (text input). At the bottom of the configuration box are 'Cancel' and 'Apply' buttons.

Firewall > L2 Filter

Add button	Click the "Add+" button to add a new rule setting.
-------------------	--

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

Firewall | Access Restriction

Firewall

Access Restriction

Add +

Name: **Enable:** ☒

Blocked Day / Blocked Time

☒ Every Day ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

☒ 24 Hours : To :

Blocked Device **Blocked Reason**

☒ Deny All Devices ☒ Deny All Traffic

☐ Deny Type ☐ Deny Type

Cancel **Apply**

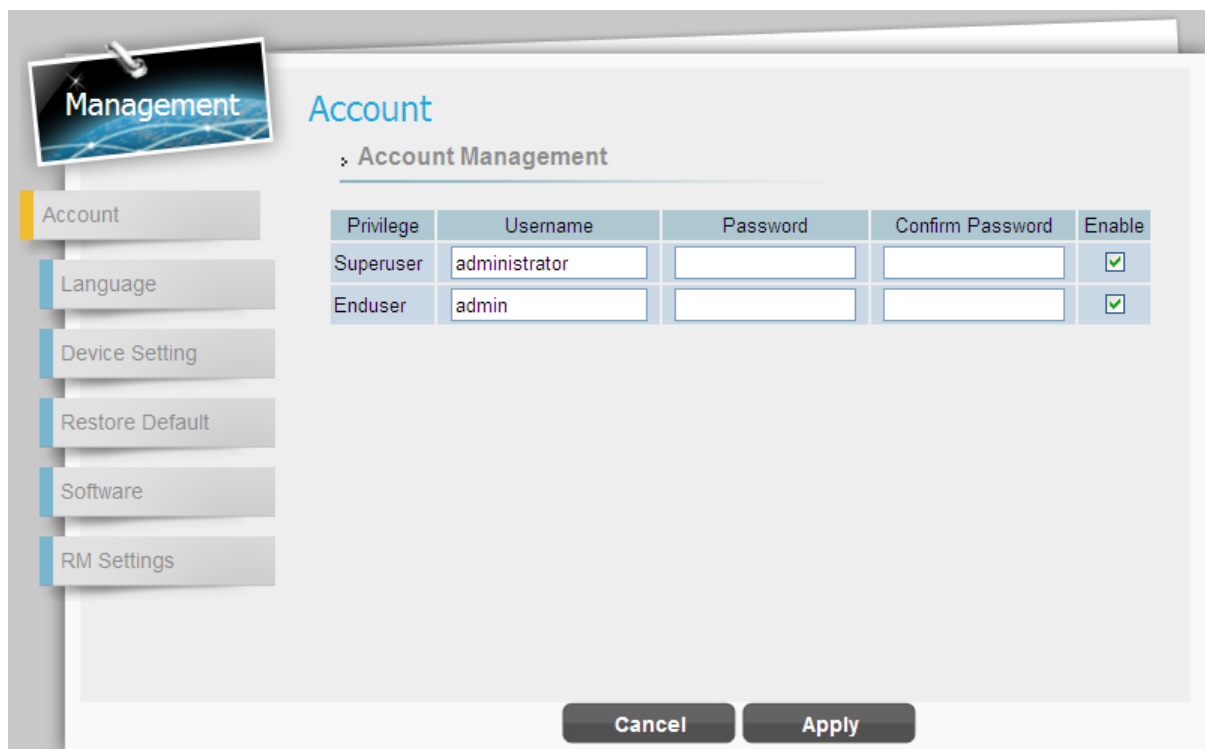
Firewall > Access Restriction

Add button	Click the "Add+" button to add a new rule setting.
Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes made and save to the CPE device, some services will be reloaded.

Management

The “Management” page allows you to configure the main system parameters; such as password change, language, device time/name, factory default, etc.

Management | Account



The screenshot shows the 'Management' page with a sidebar menu on the left containing 'Account', 'Language', 'Device Setting', 'Restore Default', 'Software', and 'RM Settings'. The 'Account' option is selected. The main content area is titled 'Account' and 'Account Management'. It contains a table with columns: Privilege, Username, Password, Confirm Password, and Enable. There are two rows: 'Superuser' with username 'administrator' and 'Enduser' with username 'admin'. Both rows have empty password and confirm password fields and an 'Enable' checkbox checked. At the bottom are 'Cancel' and 'Apply' buttons.

Privilege	Username	Password	Confirm Password	Enable
Superuser	administrator			<input checked="" type="checkbox"/>
Enduser	admin			<input checked="" type="checkbox"/>

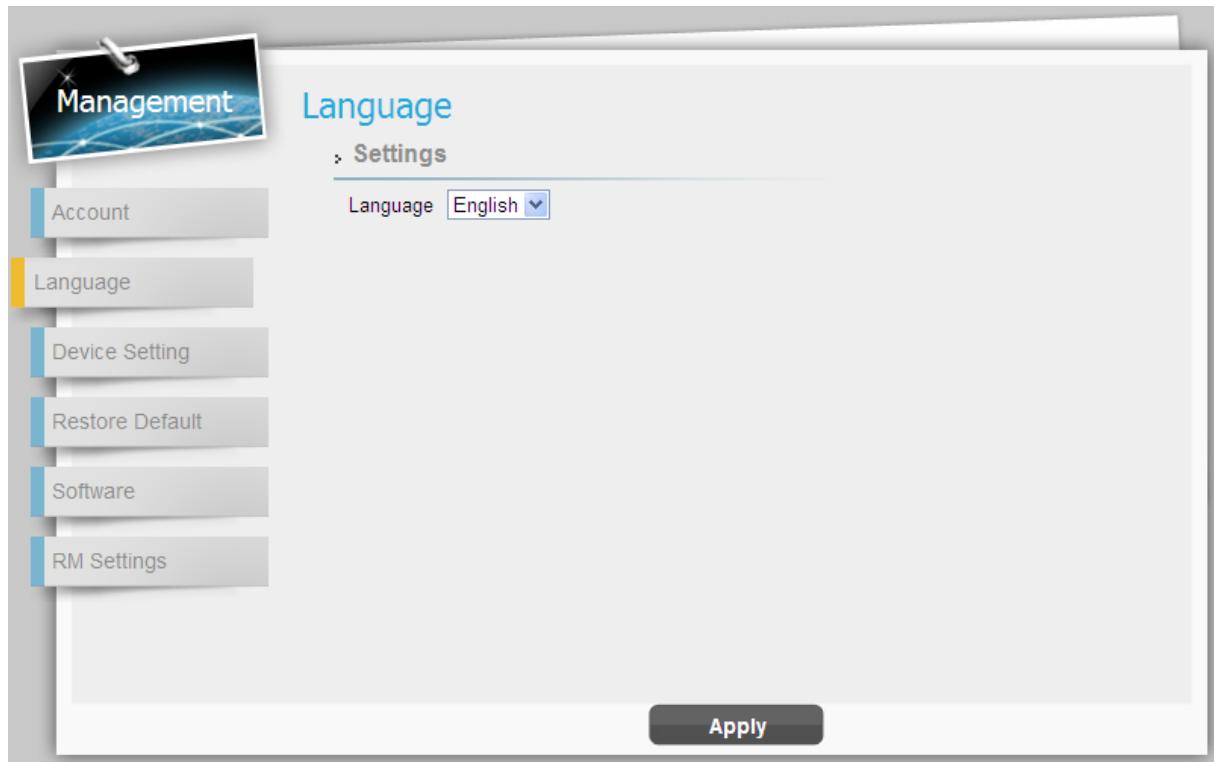
Management > Account

The Account Management page enables you to change the default username and password for remote and local access to the Graphical User Interface (GUI).

- ◆ Enter the new login information in the fields; there are at least 9 characters in password setting. Click **“Apply”** to save this change to the CPE.

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

Management | Language



Management > Language

The language page allows you to switch the GUI languages as desired. Select the language you want from the drop down list and then click **"Apply"** button to apply the changes to the CPE.

Apply button	Commit the changes have been made and save them to the CPE device.
---------------------	--

The screenshot shows the 'Device Setting' window. On the left is a sidebar with a 'Management' header and several menu items: 'Account', 'Language', 'Device Setting' (highlighted with a yellow bar), 'Restore Default', 'Software', and 'RM Settings'. The main area is titled 'Device Setting' and contains three sections: 'Device Time', 'Timeout/Refresh Setting', and 'Device Name'. The 'Device Time' section includes 'Current Local Time' (Aug 23 2013 09:16), a 'Synchronize With PC' button, 'Time Zone' (set to '(GMT+08:00) Taipei'), and an 'Auto adjust for Daylight Saving Time' checkbox. The 'Timeout/Refresh Setting' section has 'Management Session Timeout' (10 Minutes) and 'GUI Refresh Time' (10 Seconds). The 'Device Name' section shows 'Current Device Name' (Gemtek_1D1460) and a text box for 'New Device Name'. At the bottom are 'Cancel' and 'Apply' buttons.

Management > Device Setting

◆ Device Time

- **Current Local Time:** Display current local time; or click **"Synchronize with PC"** button to synchronize the time in CPE with PC.
- **Time Zone:** Select the proper time zone for your location on the drop down menu.
- **Auto Adjust for Daylight Saving Time:** Please enable this option if your location observes Daylight Savings Time.

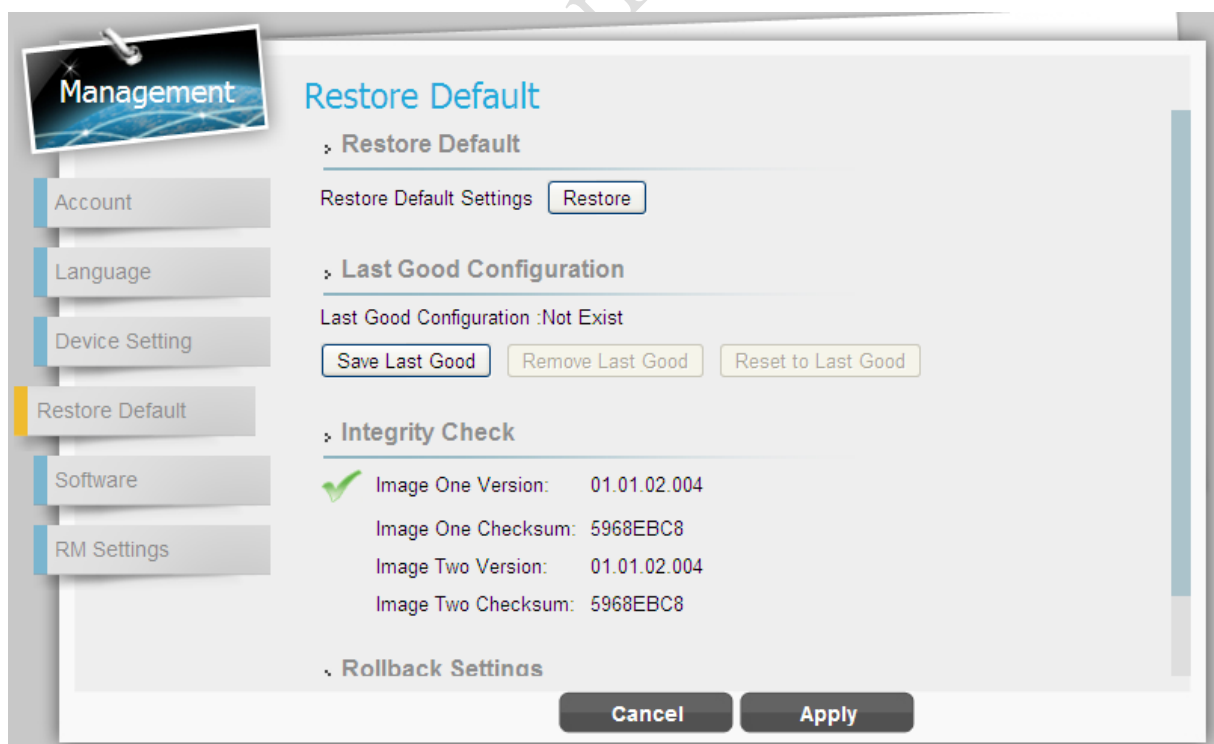
◆ Timeout/Refresh Setting

- **Management Session Timeout:** To prevent the number of sessions to increase infinitely, CPE would automatically logout after a certain time of period if idled. Enter the value in minute for a foundation to kill the session after this period. (Range: 0-10 Minutes; 0 means never expired)
- **GUI Refresh Time:** Enter the value in second for refreshing GUI in Status page. (Range: 5-60 Seconds)

- ◆ **Device Name:** Define a specific name for your device, so that you can login to this device from any PC on your internal network by entering the device name on the address bar. The default device name is "Airtel_EF819B".
 - **Current Device Name:** Display the current device name.
 - **New Device Name:** Enter a new name for your device (Maximum 20 ASCII Printable Characters allowed).

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

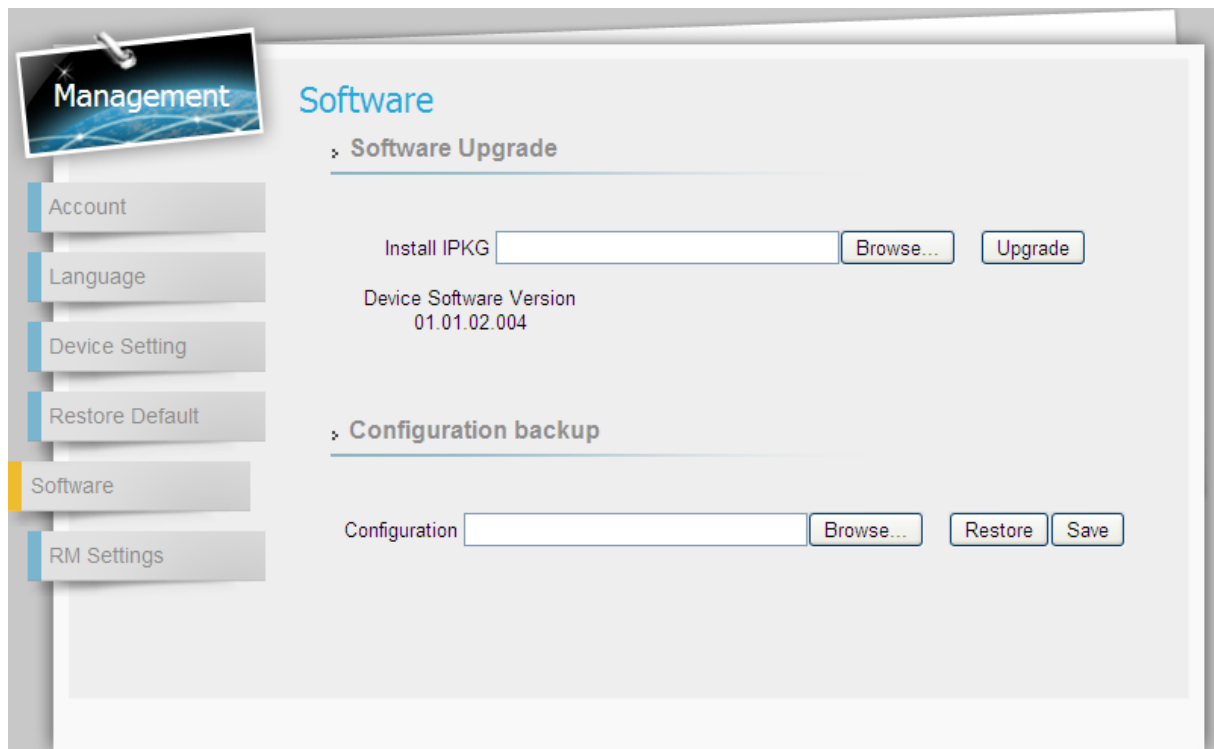
Management | Restore Default



Management > Restore Default

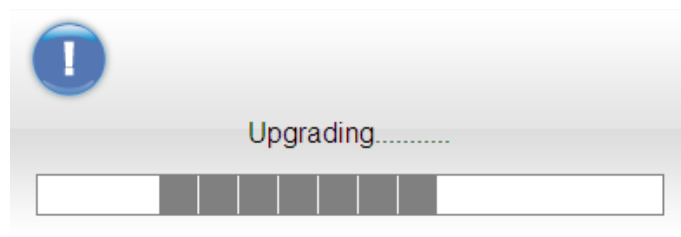
Cancel button	Reset fields to the last saved values.
Apply button	Commit the changes have been made and save them to the CPE device.

Management | Software



Management > Software

- ◆ **Software Upgrade:** Click **"Browse"** button to select update file, and then click **"Upgrade"** to install the selected file. The Upgrading window will be shown as below and then reboot process will be started to apply the change.

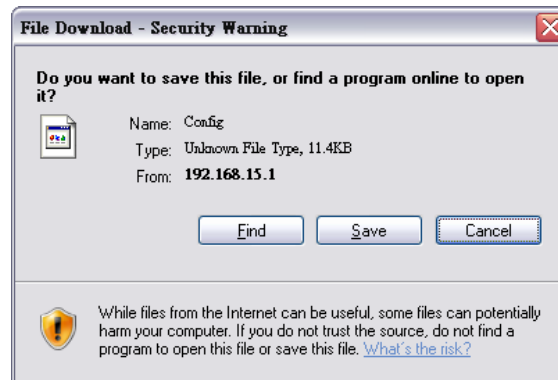


Management > Software > Upgrading Window



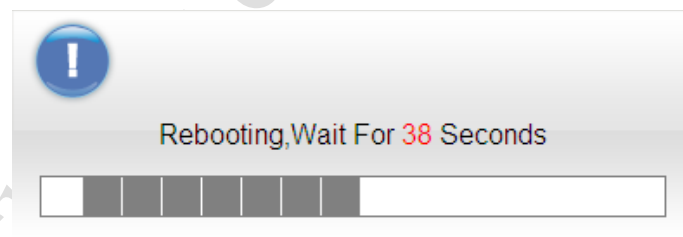
After pressing the “Upgrade” button, it will automatically reboot the CPE and upgrade the firmware with the specified file. You will be prompted to login to the CPE after the upgrade is complete.

- ◆ **Configuration Backup:** Backup current system configuration by clicking “**Save**” button; and then select the destination and save the file for further backup requirement.



File Download Window


If you want to restore the system to previous configuration, click “**Browse**” button to select the previous-saved configuration file, and then click “**Restore**” button to restore the system to previous settings.




Management > Software > Upgrading Window

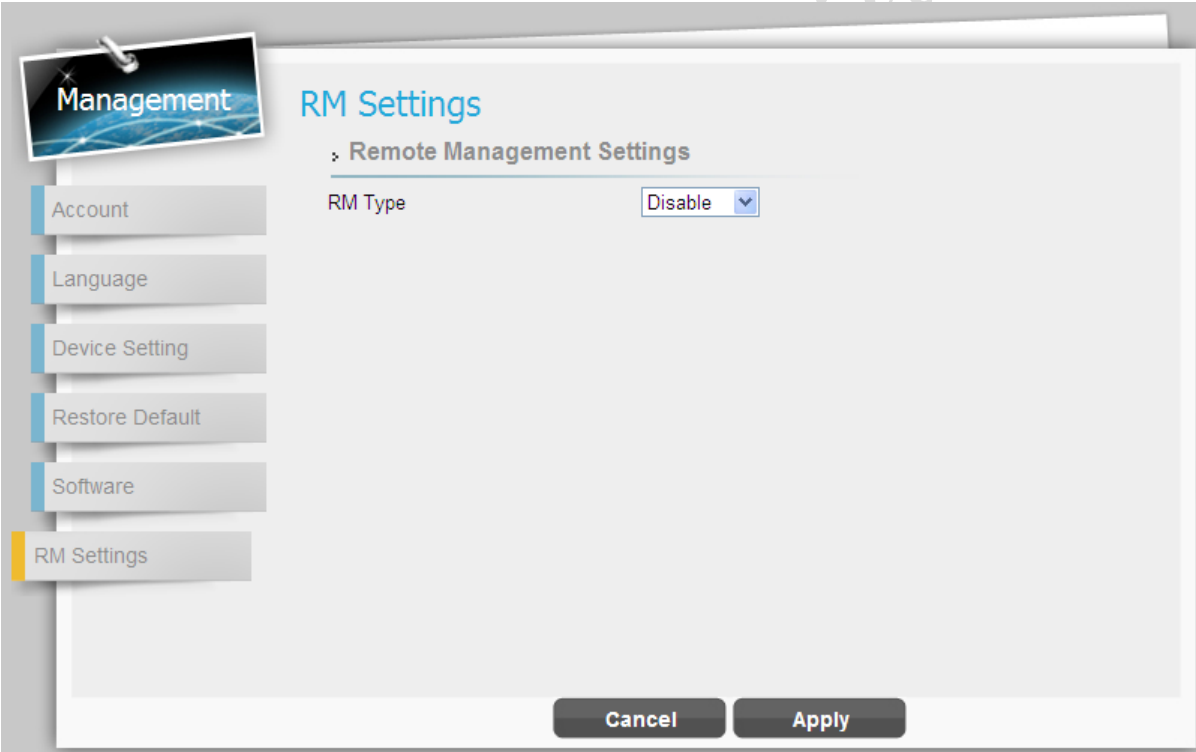


A Passphrase enter window will be popped up when save/restore the configuration; be noted that the entered passphrases need to be exactly the same to finish save/restore process.

	 <p>Please Input Download Passphrase</p> <input type="text"/> <p>Apply</p>
Enter Passphrase Window	

	<p>After pressing the "Restore" button, it will automatically reboot the CPE and upgrade the configuration with the specified file. You will be prompted to login to the CPE after the process is complete.</p>
---	---

Management | RM Settings

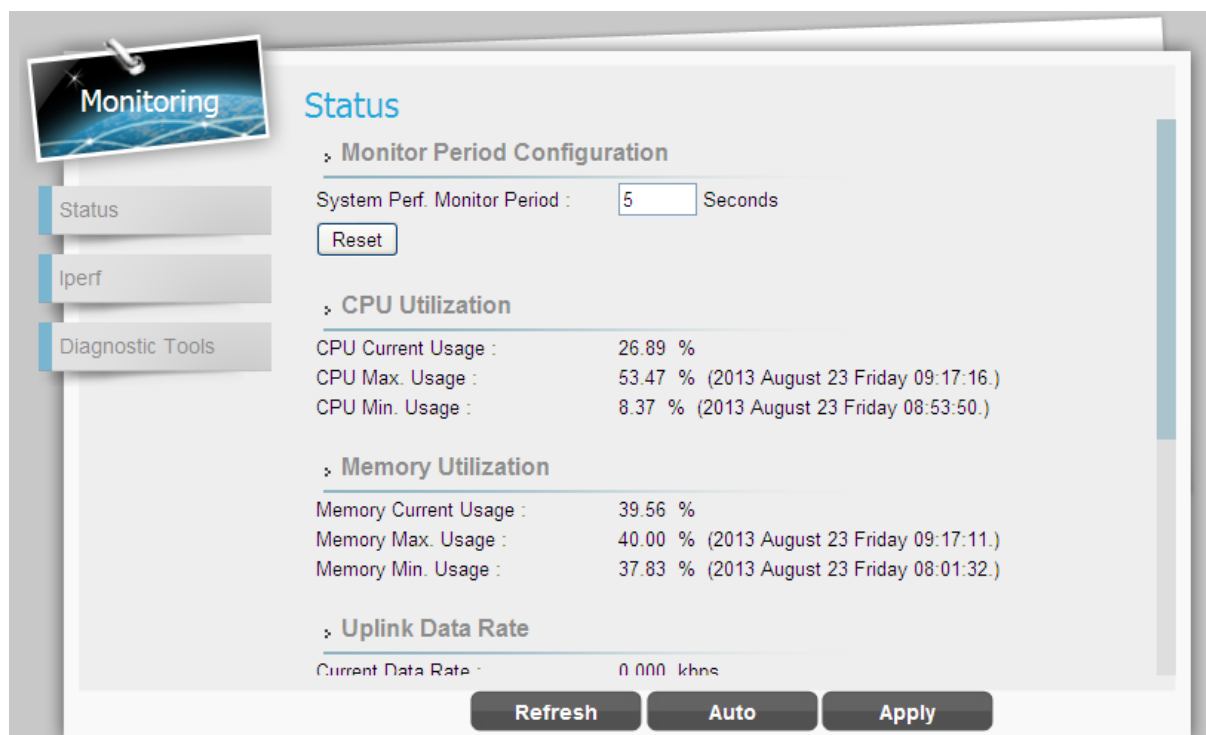


Management > RM Settings

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

Monitoring

Monitoring | Status



Monitoring > Status

This page allows users to view the current status of device, CPU/memory usage, and uplink/downlink data rate.

Refresh button	Click the "Refresh" button to receive the latest LTE connection status.
Auto button	This button will update the status information periodically.
Apply button	Commit the changes have been made and save them to the CPE device.

Monitoring | Iperf

The screenshot shows the 'Iperf' configuration page. On the left, there is a sidebar with three buttons: 'Monitoring' (highlighted with a blue bar), 'Iperf', and 'Diagnostic Tools'. The main content area is titled 'Iperf' and contains two sections: 'Settings' and 'Result'. The 'Settings' section includes fields for 'Status' (with 'Enable' and 'Disable' buttons), 'Last Measurement Date/Time', 'Server Address', 'Server Port' (set to 5001), 'Management Port' (set to 5001), 'Measurement Time' (set to 60) with a 'Seconds' label, 'Protocol Type' (set to TCP with a dropdown arrow), and 'TCP Client Number' (set to 1). The 'Result' section is currently empty, showing only labels for 'Uplink Speed' and 'Downlink Speed'.

Iperf Settings	
Status	<input type="button" value="Enable"/> <input type="button" value="Disable"/>
Last Measurement Date/Time	
Server Address	<input type="text"/>
Server Port	<input type="text" value="5001"/>
Management Port	<input type="text" value="5001"/>
Measurement Time	<input type="text" value="60"/> Seconds
Protocol Type	<input type="text" value="TCP"/>
TCP Client Number	<input type="text" value="1"/>

Iperf Result	
Uplink Speed	
Downlink Speed	

Monitoring > Iperf

Monitoring | Diagnostic Tools

The screenshot shows the 'Diagnostic Tools' configuration page. On the left, the sidebar has three buttons: 'Monitoring', 'Iperf', and 'Diagnostic Tools' (highlighted with a blue bar). The main content area is titled 'Diagnostic Tools' and contains two sections: 'Settings' and 'Diagnostic Result'. The 'Settings' section includes a 'Status' field with a 'Start' button, 'Diagnostic Type' (set to Ping with a dropdown arrow), 'IP Address/Domain' (empty text field), 'Ping Count' (set to 4), 'Packet Size' (set to 56) with a 'Bytes' label, 'Ping Timeout' (set to 10) with a 'Seconds' label, and 'Max Hops' (set to 30). The 'Diagnostic Result' section is a large empty text box for displaying the results.

Diagnostic Tools Settings	
Status	<input type="button" value="Start"/>
Diagnostic Type	<input type="text" value="Ping"/>
IP Address/Domain	<input type="text"/>
Ping Count	<input type="text" value="4"/>
Packet Size	<input type="text" value="56"/> Bytes
Ping Timeout	<input type="text" value="10"/> Seconds
Max Hops	<input type="text" value="30"/>

Diagnostic Result

Monitoring > Diagnostic Tools

About

About | Status



About > Status

Select **About > Status** to display the basic information of CPE such as: Service Provider, Product Name, Device Model ID, device Hardware Version, Serial ID, firmware version, and bootrom program version.