JATONTEC JT3300V LTE-A CAT7 Indoor CPE

User Manual v2.0

Table of Contents

PLEASE READ THESE SAFETY PRECAUTIONS!

RF Energy Health Hazard

The radio equipment described in this guide uses radio frequency transmitters. Although the power level is low, the concentrated energy from a directional antenna may pose a health hazard. Do not allow human body to keep close contact with the device for long period of time while the transmitter is operating.

Protection from Rain and Lightning

The device needs to operate in an indoor environment where no rain or water leakage can be exposed to the device. Before connecting this instrument to the power line, make sure that the voltage of the power source matches the requirements of the instrument. The unit must be standards.

Disposal and Recycling Information

Pursuant to the WEEE EU Directive electronic and electrical waste must not be disposed of with unsorted waste. Please contact your local recycling authority for disposal of this product.

Reduction of Hazardous Substances

This CPE is compliant with the EU Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation (Regulation No 1907/2006/EC of the European Parliament and of the Council) and the EU Restriction of Hazardous Substances (RoHS) Directive (Directive 2002/95/EC of the European Parliament and of the Council).

FCC Notice, USA

This CPE unit can comply with Part 15B of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This device is specifically designed to be used under Part 90 & 90Z, Subpart E of the FCC Rules and Regulations. Any unauthorized modification or changes to this device may void the operator's authority to operate this device.

Furthermore, this device is intended to be used only when installed in accordance with the instructions outlined in this manual. Failure to comply with these instructions may also void the operator's authority to operate this device and/or the manufacturer's warranty.

EC Conformance Declaration

Marking by the above symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment can meet the following conformance standards:

• EN 60950-1 (IEC 60950-1) - Product Safety
• EN 301 489-1, EN 301 489-17, EN 300 328 - EMC requirements for radio equipment

This device is intended for use in all European Community countries.

1. Overview

The JT3300V CPE is an advanced 4G dual mode and multiple port indoor Wi-Fi & SIP VoIP CPE product designed to enable quick and easy LTE data service deployment for residential and SOHO customers. It provides high speed LAN, Wi-Fi and VoIP integrated services to end users who need both bandwidth and multi-media data service in home or enterprise environment.

■ Operator Device Specification

Model	Description & Operator Interface
JT3300V	- Built–in LTE antenna: up to 6dBi (4x2, B42/43, Omni) - Built-in Wi-Fi antenna: up to 3~5dBi (2x2, 2.4GHz/5GHz Omni) - 2 RJ45 10/100M ETH, 1 RJ11/FXS Port - SYS, NET, RF (4 Level LEDs), 2.4G Wi-Fi, 5GHz Wi-Fi, LINE - 12V/1A DC Adapter - Dimensions: 151mm x 122mm x 161.7mm - Weight: < 500g

■ Radio Interface Specification

Frequency Bands	Band 42 & 43
Radio Access	3GPP E-UTRA Release 10
Operation Mode	TDD
Output Power	23dBm (B42/43)
Throughput	Category 7
SIM Support	SIM card slot (2FF)

■ Wi-Fi Interface

Radio Access	802.11b/g/n/ac (2.4GHz 300 Mbps, 5GHz 867Mbps)
Output Power	15 ± 1dBm
Antenna	3±1dBi (2.4GHz) 5±1dBi (5GHz)
Security	64/128-bit WEP, WPA/WPA2

2. Getting Started

■ Packing list and CPE Unit

Upon receiving the product, please unpack the product package carefully. Each product is shipped with the following items:

Table 2-1 Packing List

Outdoor CPE Products	Quantity
Main System unit	1
12V/ 1A DC Power Adapter	1
PC Ethernet Cable	1

If you find any of the items is missing, please contact our local distributor immediately.

CPE Unit：

Unpacking the Equipment Table 2-1 lists all the standard parts that are supplied in your LTE CPE Unit Installation Package. Please take the time to unpack the package and check its contents against this list.

IDU

Power adapter

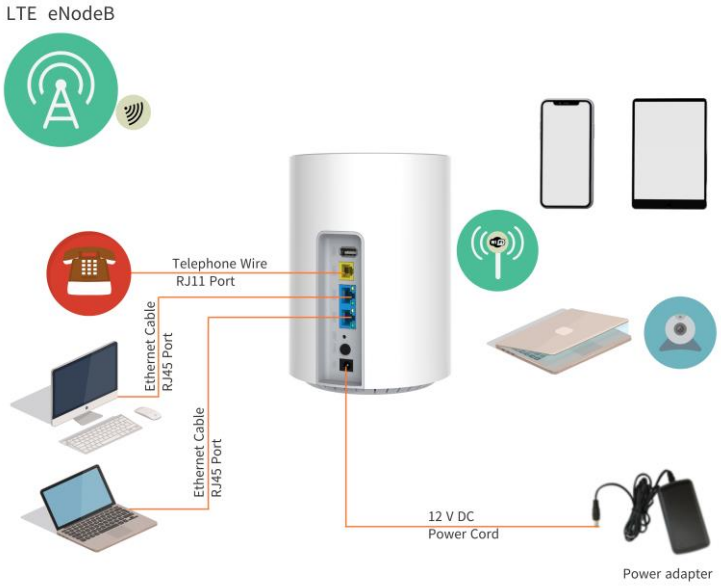
Ethernet cable

■ Installing and power on

To power on the device, the indoor CPE uses a 12V DC power supply from the adapter. All power adapters can operate in 100-240V AC range and therefore can be used in different countries. Once the device is powered, the operator should wait for about 2 minutes before the device becomes operational. The CPE SYS LED indicator will change from Blinking to Solid orange light to indicate the device has completed the startup procedure.

To connect PC, LAN switch or other type of Ethernet device to the CPE product, the operator should use standard CAT5 Ethernet cable and connect to the appropriate LAN port. Once connected, the corresponding CPE LAN Green LED indicator should light up.

To use the phone service, operator can simply plug the phone line to the CPE RJ11 port in the back. If the line is not registered or configured, a fast busy tone will be provided and the corresponding Line LED will be off.



■ LED Display

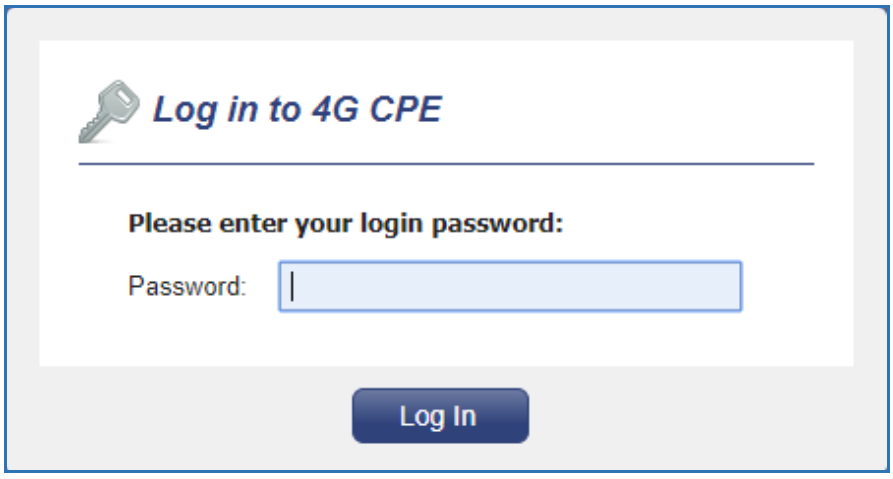
LED Indicator	Functions	Description
SYS	System indicator	Orange Color – Device is powered on and booting, Wireless access not ready. Blinking Orange – SIM card is error. Green Color —Network is available.
NET	WAN indicator	
RF	Wireless signal indicator	OFF – No wireless connection is established RF1: -115dBm <= RSRP < -110dBm RF2: -110dBm <= RSRP < -105dBm RF3: -105dBm <= RSRP < -97dBm RF4: -97dBm <= RSRP
2.4G	2.4GHz Wi-Fi & WPS status indicator	Green Light – Wi-Fi is enabled and working. Blinking Orange – Device WPS is triggered and at work
5G	5GHz Wi-Fi & WPS status indicator	Green Light – Wi-Fi is enabled and working. Blinking Orange – Device WPS is triggered and at work
Line	POTS line status indicator	OFF – Line is not registered or provisioned. Green Color – The line is ready and registered Green Blinking – Voice call is in progress
LAN(Backface)	LAN port status indicator	OFF – No LAN cable connected Solid Green – The LAN port is up Blinking Green – LAN data transmission in progress

3. Managing CPE Device

The JT3300V offers rich management features which facilitate the task of service provider. It supports local management access, Telnet, WEB, and centralized remote OTA configuration, upgrades management and device monitoring via standard TR-069 ACS systems. The following describes the basic procedures for configuring the device for LTE operation.

■ WEB Login

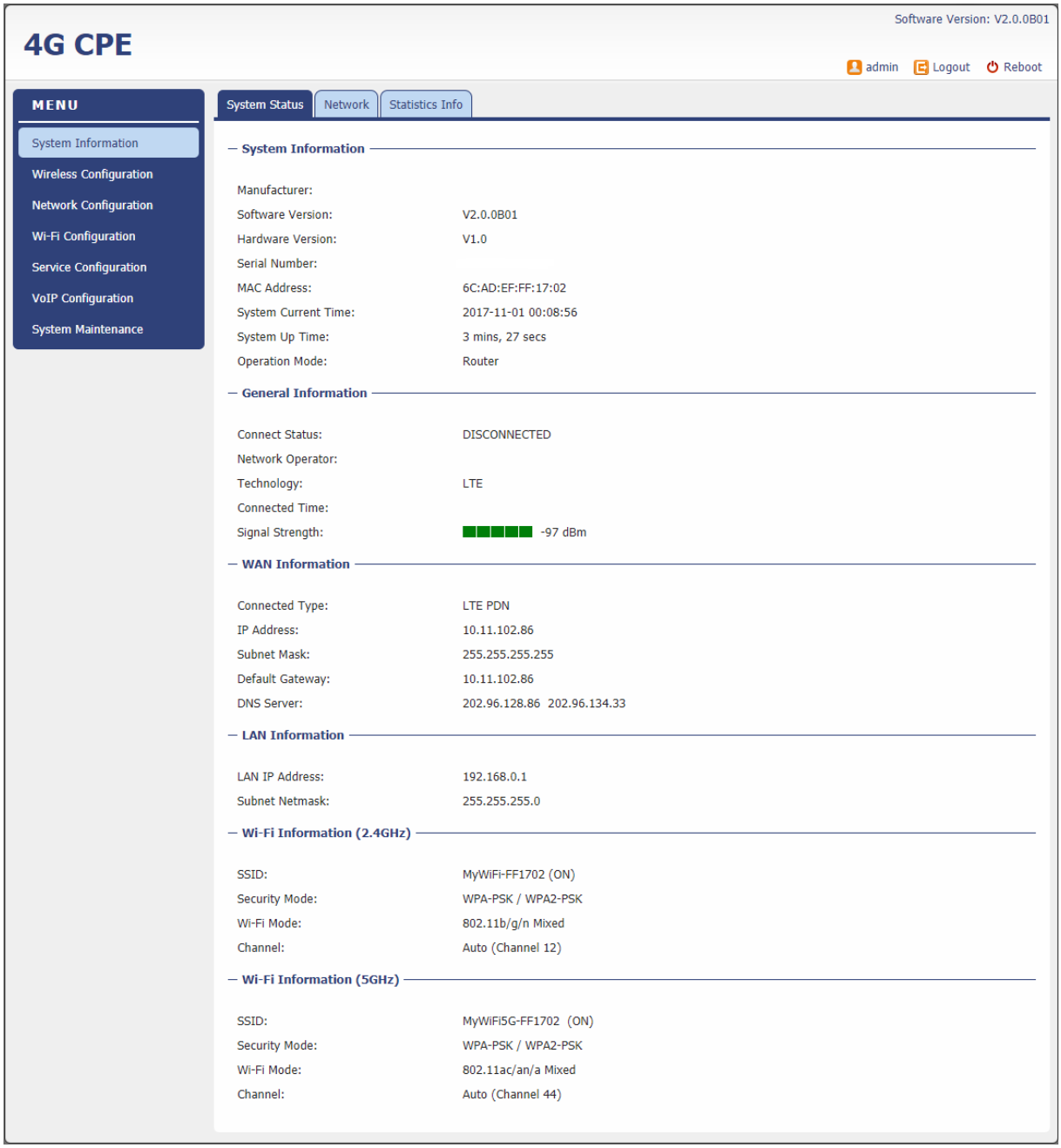
It is a preferred to setup the CPE using a Web browser from a local PC connected to device LAN port. The operator should ensure that the connected PC has acquired IP address via DHCP from the device. After IP connectivity is established between the PC and CPE device, the operator may launch a Web browser and specify http://172.16.1.1 in the address bar. A window will pop up requesting password. Input the user login password and then click the "**Log in**" button. After successful log on, the default home page of the WEB GUI interface will appear. Note the default password is "admin123".



4. System Information

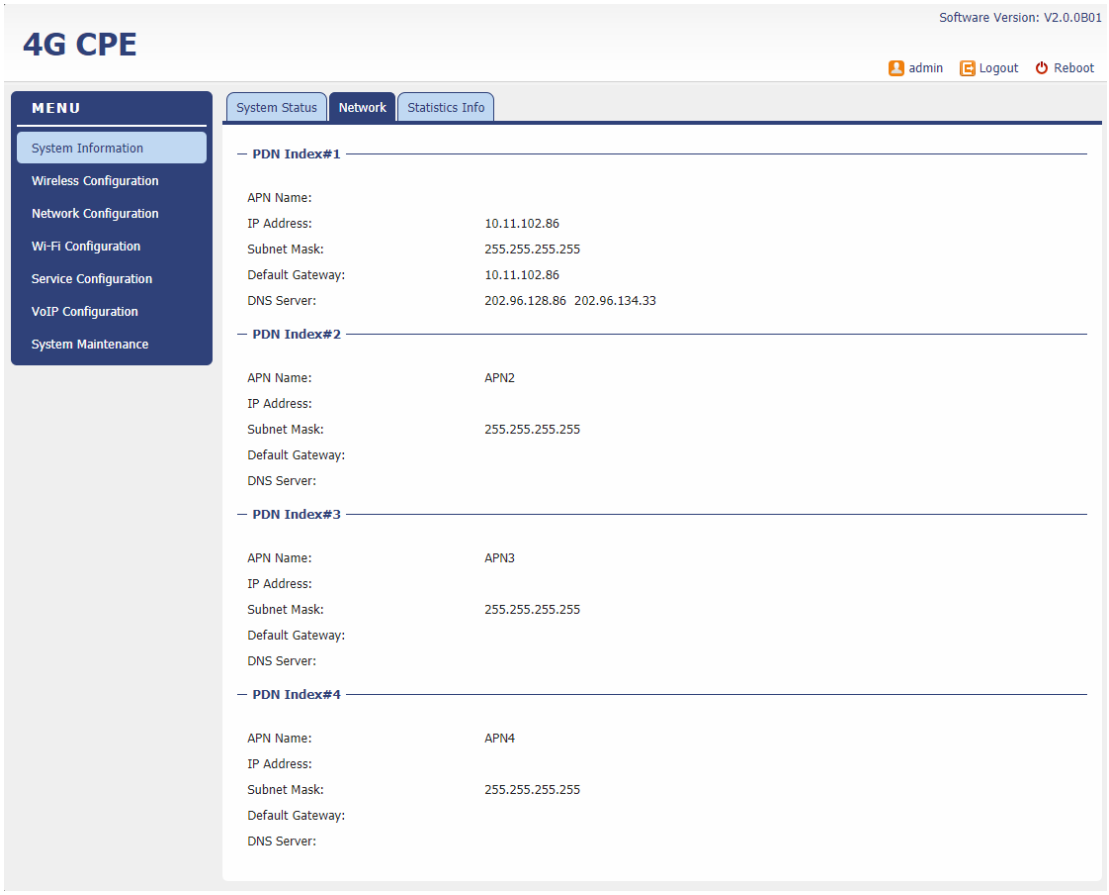
■ System Status

The menu shows the general system info of the CPE device. It includes system, general, WAN, LAN, Wi-Fi information.



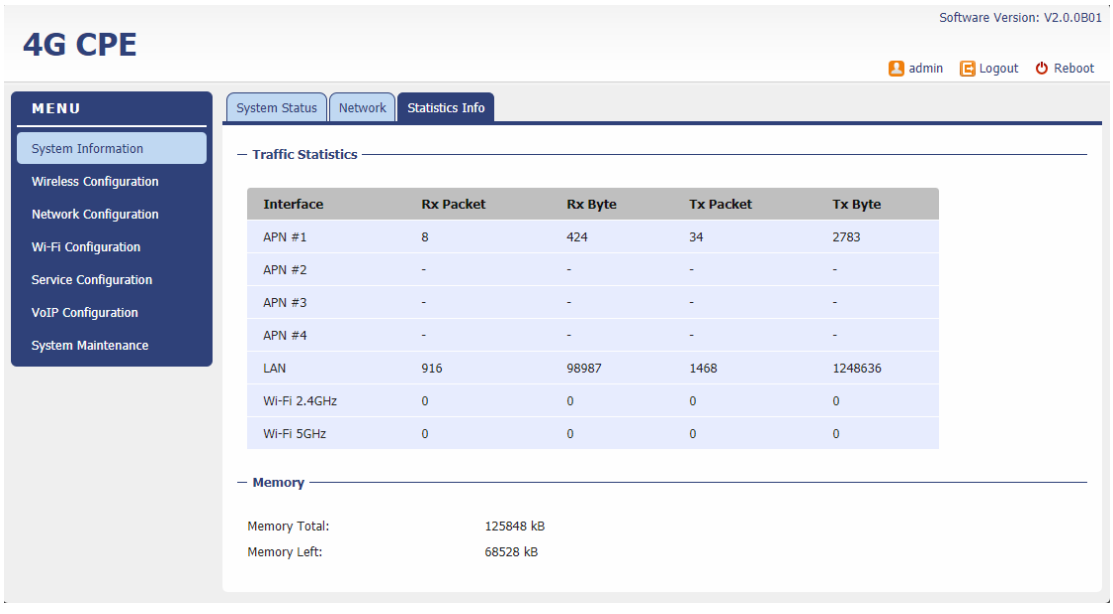
■ Network

The menu shows the general network status that includes PDN interface info.



■ Statistics Info

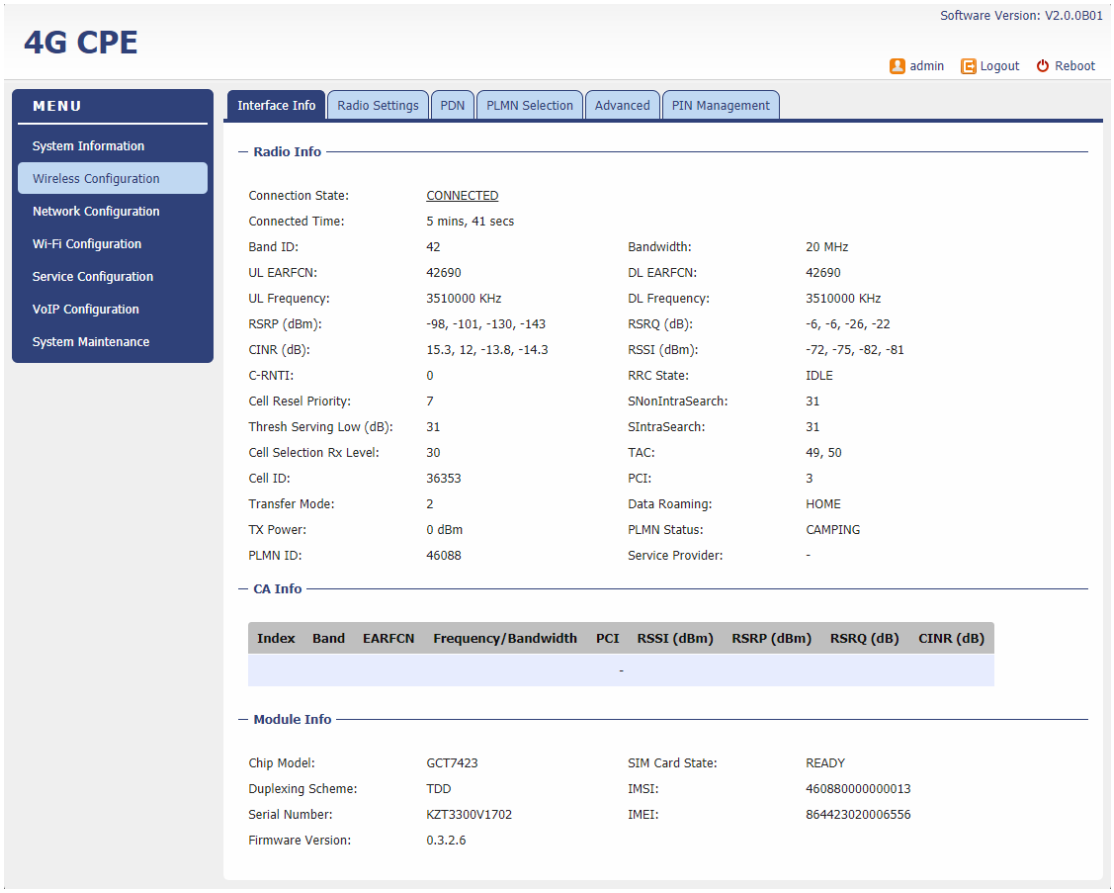
The menu shows the CPE device traffic statistics and memory usage information.



5. LTE Configuration

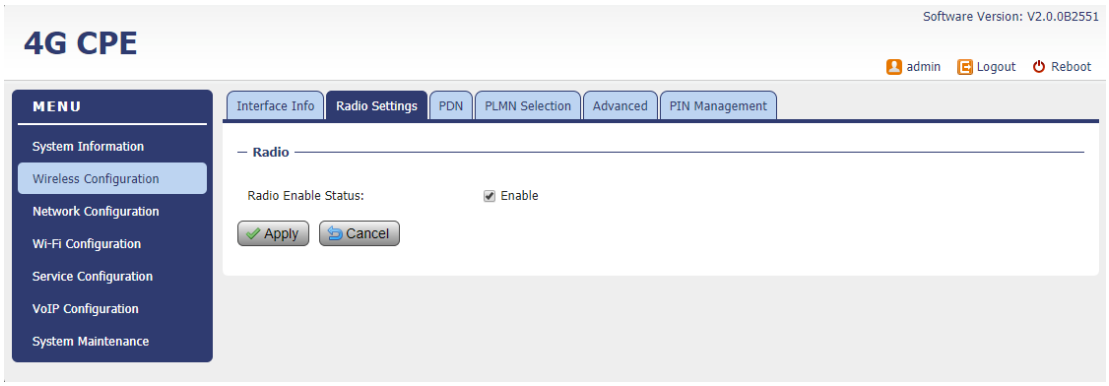
■ Interface Info

The LTE interface info GUI gives detailed LTE information about the radio connection, the UL/DL Bandwidth, UL/DL Frequency, the receiving signal strength of the device by the LTE Info WEB GUI.



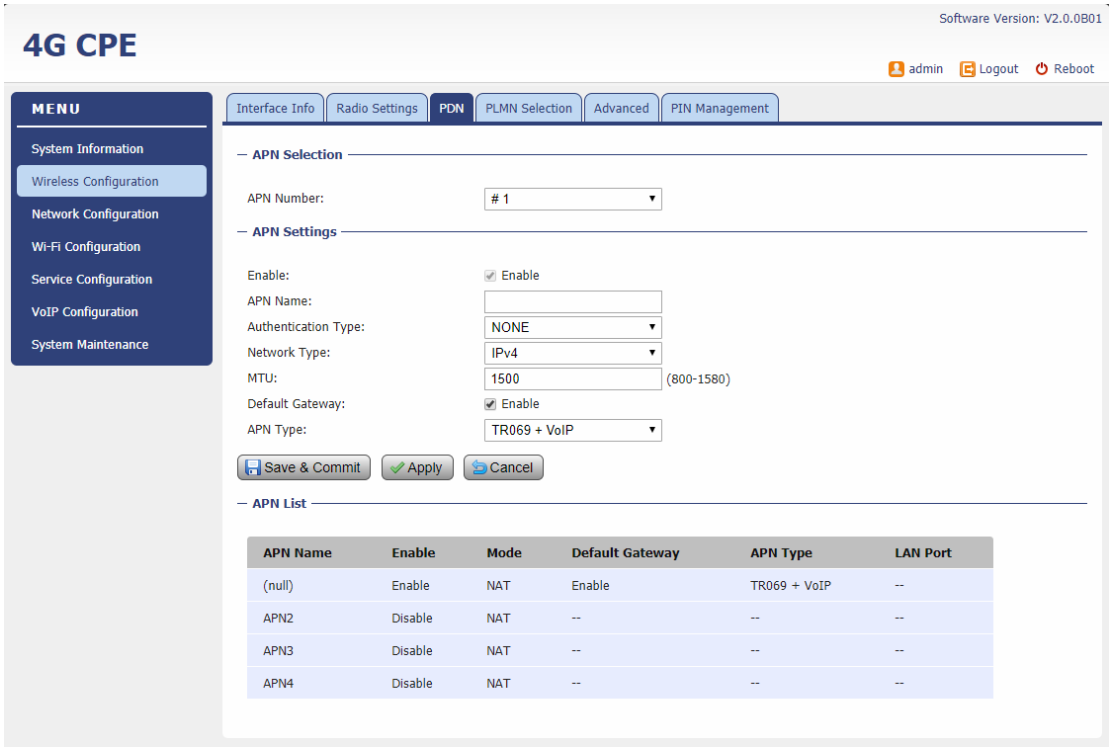
■ Radio Settings

The LTE radio can be enabled or disabled via 4G Radio setting. The radio can also be reset via Reconnect.



■ PDN

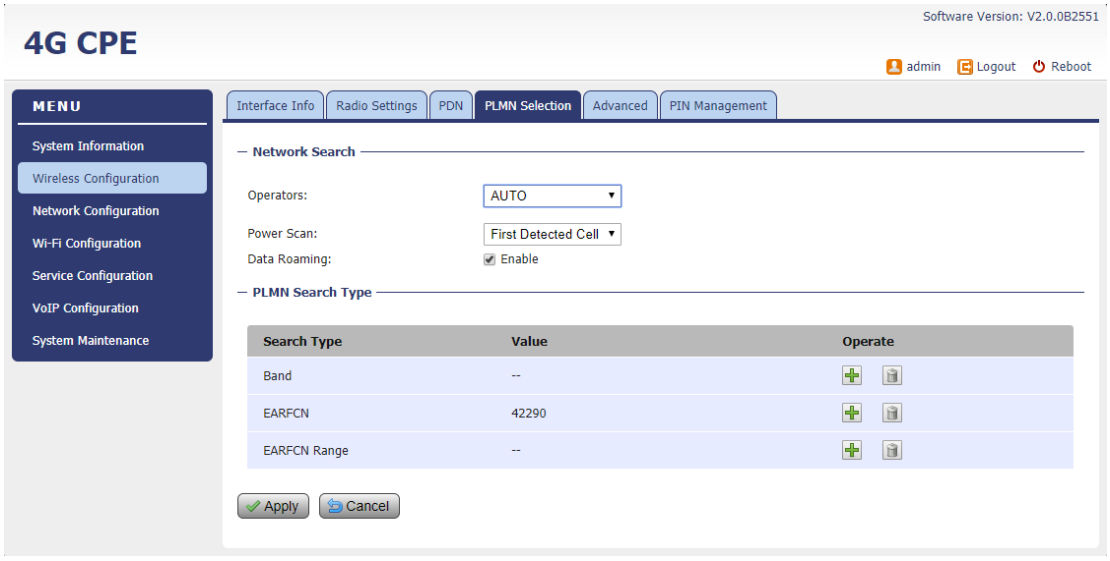
This menu is used to configure the operator APN profile. You can configure single or multiple APNs for the operator network. The below shows an example of two APN configuration.

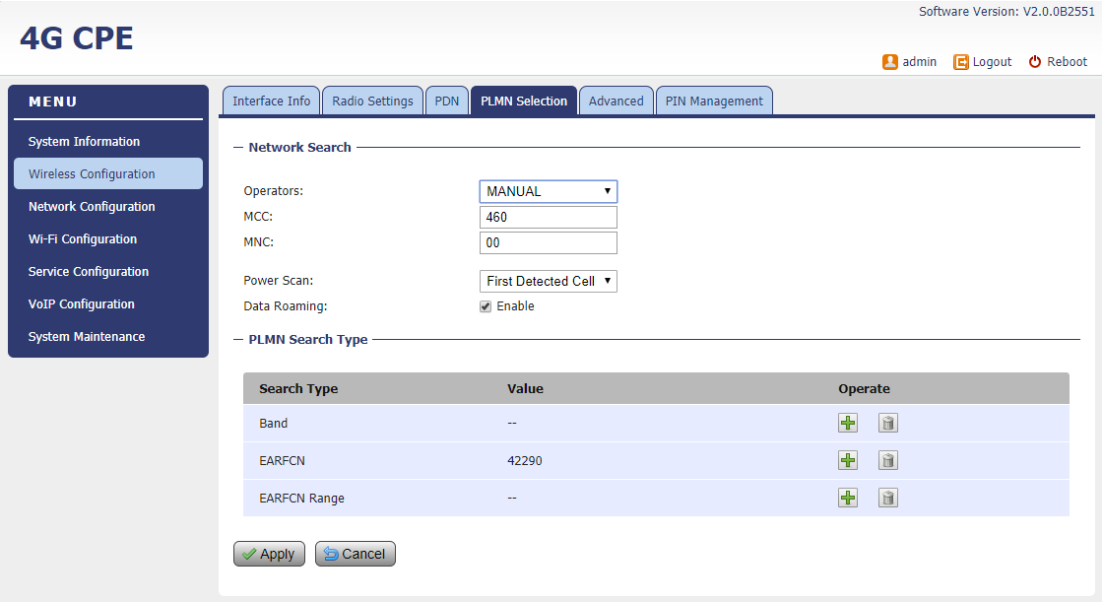


The user can view the APN status info in the System Information - Network menu.

■ PLMN Selection

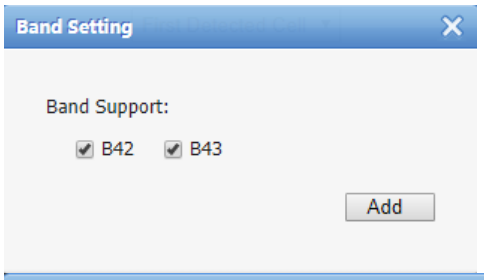
The user can add and configure the PLMN list to restrict the CPE to attach. The CPE will attach to network according to the PLMN priority assigned. It is recommended to use Auto selection for normal user.

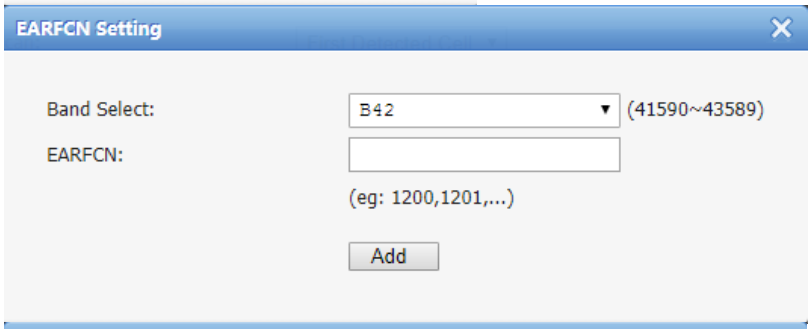


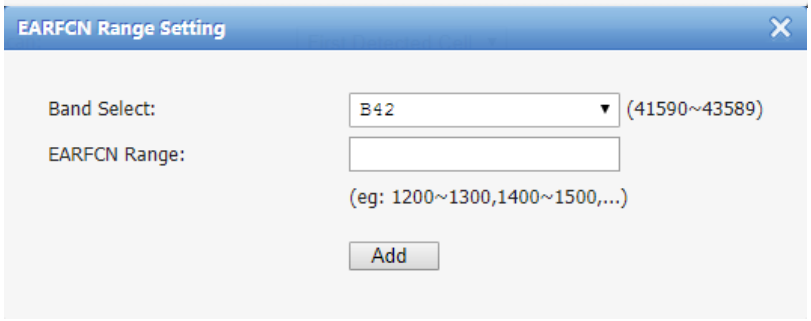


The “First Detected Cell” scan will allow you to quickly connect to good cell when they are first found instead of search the best cell. The ZUC encryption support is only required when your core network (EPC) force to use the ZUC encryption for access authentication.

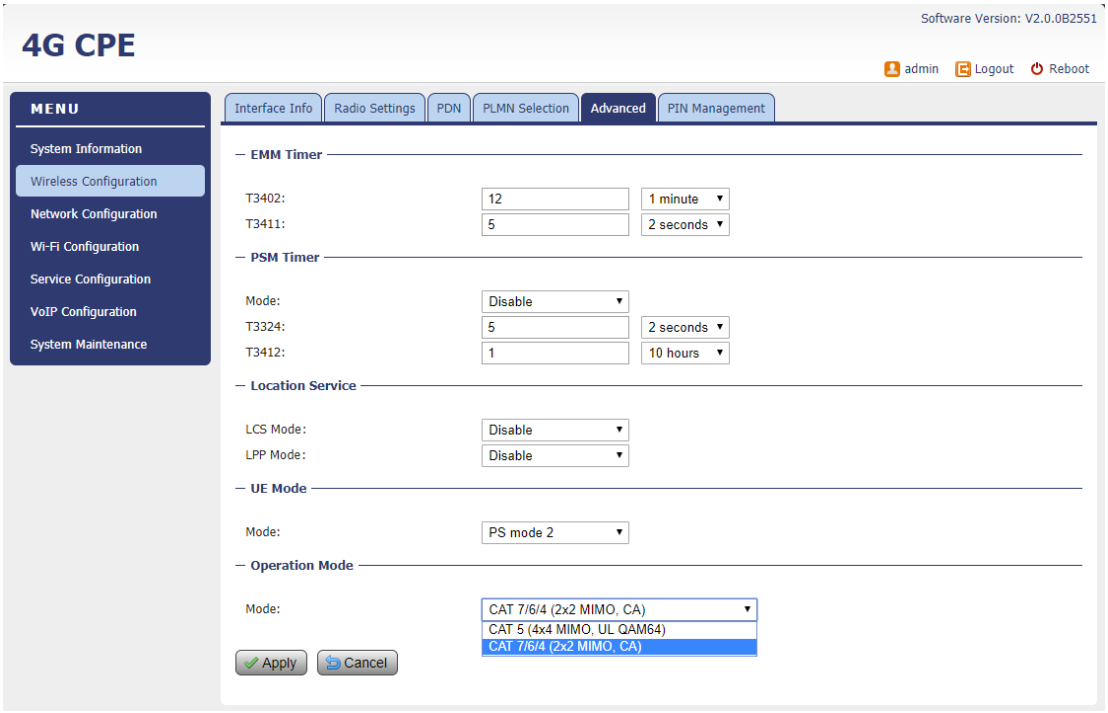
User can also configure the scan band or EARFCN for the PLMN search. Data roaming option can be configured or disabled.







■ Advanced



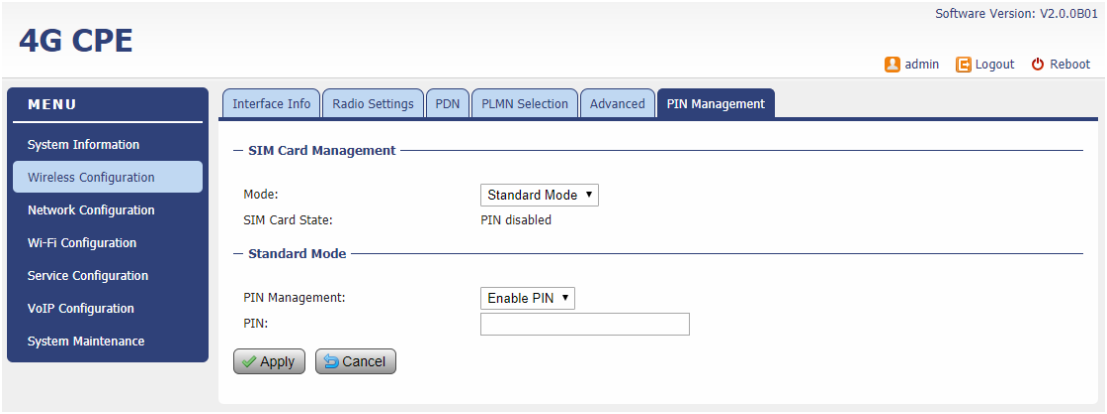
In this menu, you can configure advanced options for the CPE operation.

Fast scan will allow you to quickly connect to good cell when they are first found instead of search the best cell. The ZUC encryption support is only required when your core network (EPC) force to use the ZUC encryption for access authentication. The operation mode allows you to select the UE capability for receiving and transmitting. Depending on the hardware implementation, 4x4 MIMO or 2x2 MIMO & CA can be selected for downlink operation. If the RF hardware supports 2TX, then 2Tx operation can be enabled.

In addition, the PSM timer and location service UE settings can also be configured for advanced users. Default settings should be used for normal operation.

■ PIN Management

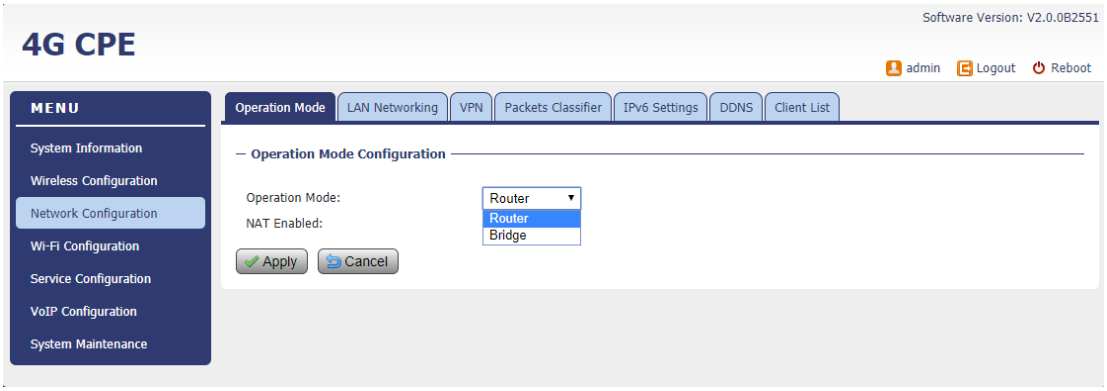
The PIN Management menu is used to view the SIM card status and perform PIN code management for SIM card. You disable or enable the SIM card PIN check on the CPE to bind the SIM card inserted.



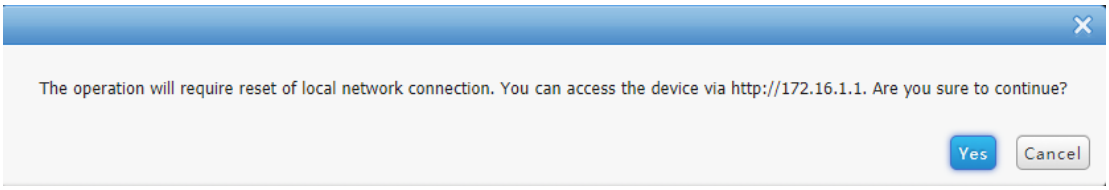
6. Network Configuration

■ Operation Mode Setting

The default device Operation Mode is Router, and the PC connected to device LAN port will obtain IP address via DHCP client.



The device operation mode could be changed from Router to Bridge if necessary as show by the following diagram:



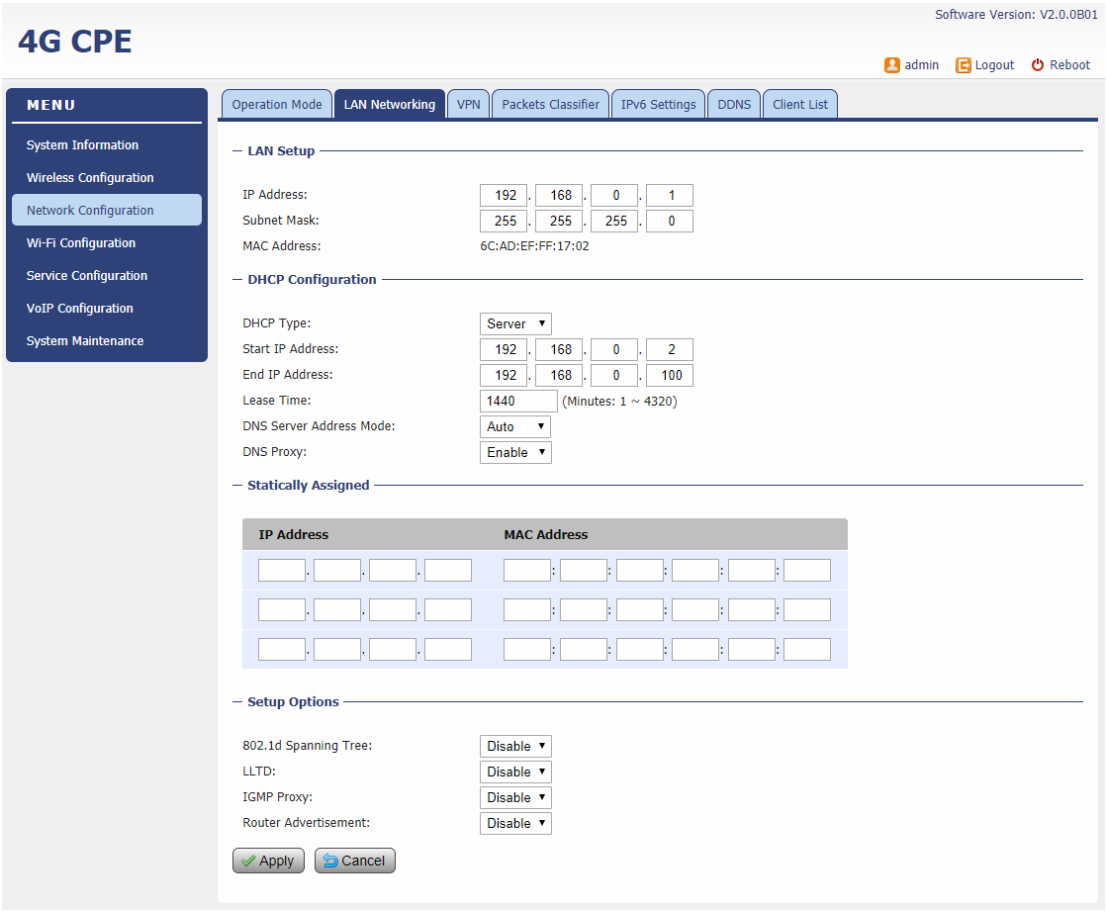
In Bridge mode, the PC which connected the LAN port of the CPE will obtain the IP directly from

the network. However, the device WEB GUI may still be accessed via port 8080 from remote side if remote management is enabled. For local LAN access, the user or operator can configure LAN PC with a static IP address as 172.16.1.x and login the WEB GUI via http://172.16.1.1.

■ LAN Networking

The LAN setting allows user to specify the device LAN IP, DHCP server setting, Local DNS and etc. When Router mode is selected, the DHCP server should be enabled by default.

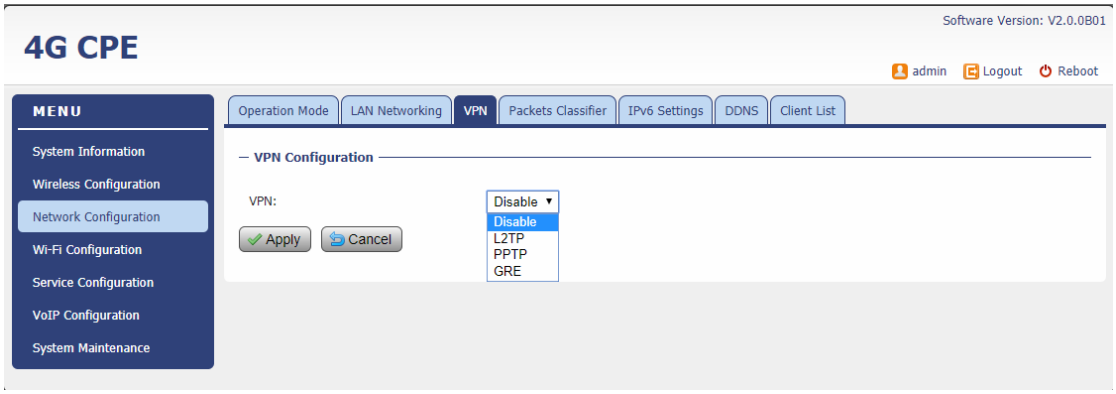
User is advised to leave the default setting unchanged for quick configuration and smooth device operation.



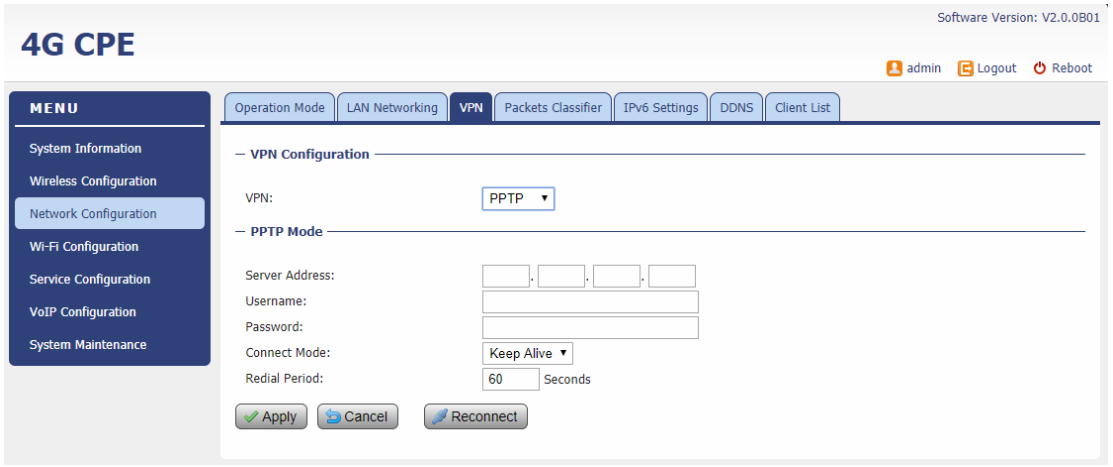
■ VPN Setting Under Router Mode

This section allows user to configure VPN service for selected connection mode. In router mode, PPTP, L2TP and GRE can be selected. In L2 Bridge mode, only L2 GRE can be configured.

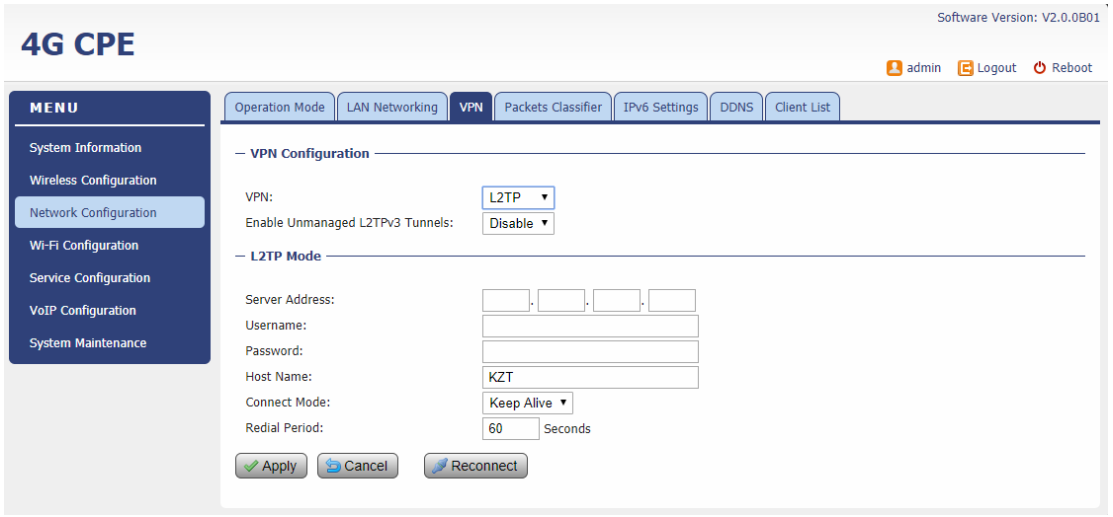
The router mode VPN configuration is shown below.



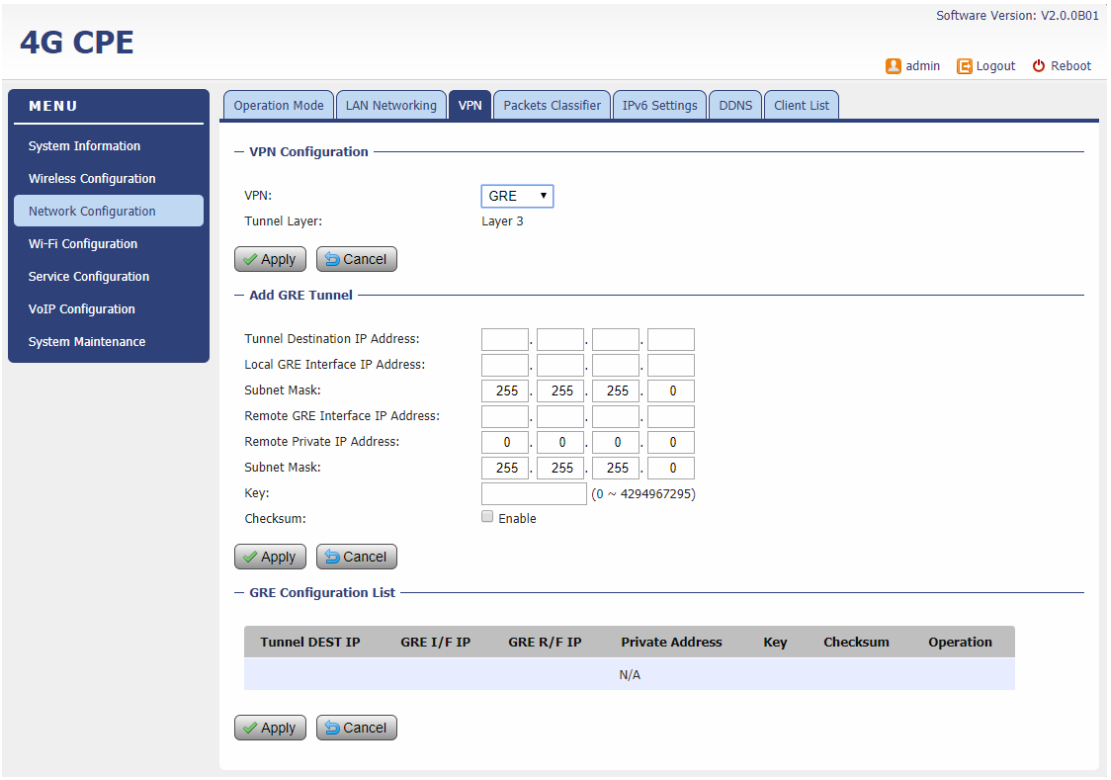
The PPTP configuration under router mode is shown below.



The L2TP configuration under router mode is shown as follows.

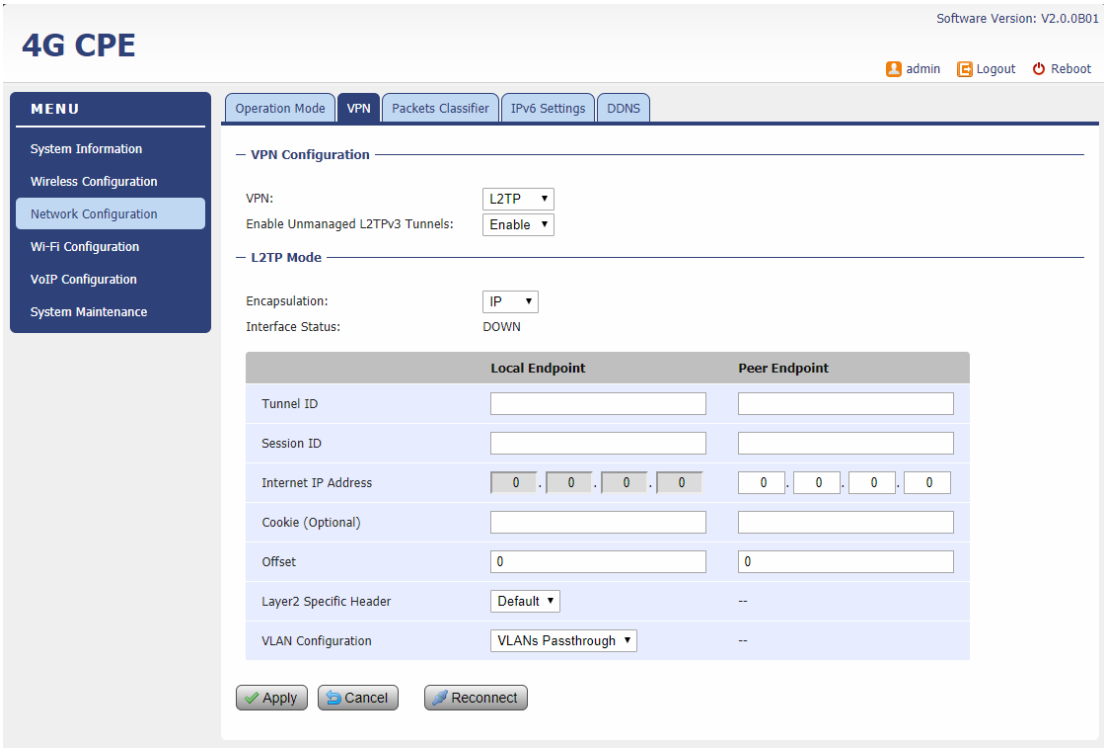


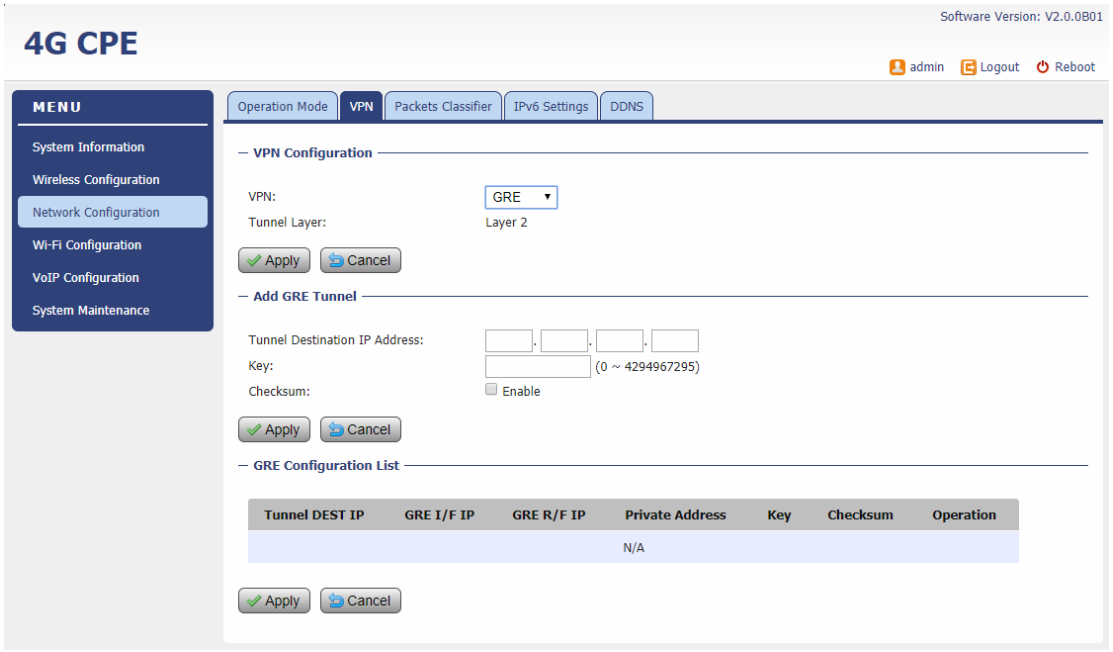
The L2 GRE configuration under router mode is shown below.



■ VPN Setting Under L2 Bridge Mode

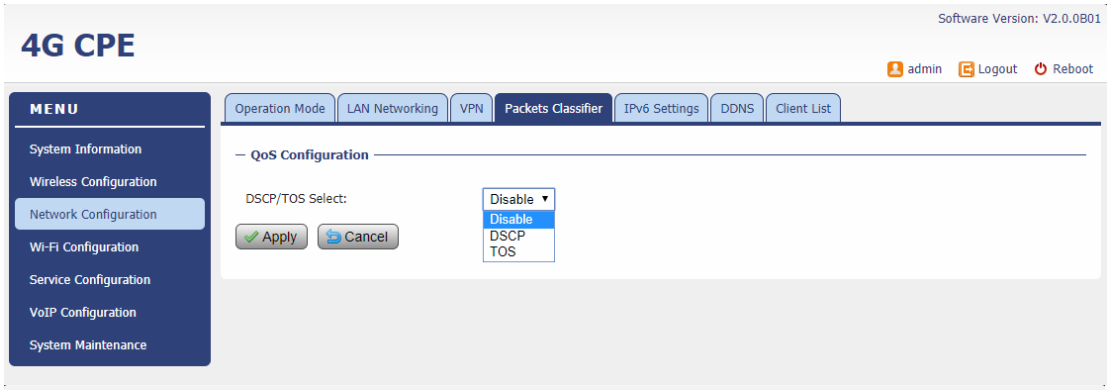
Under the L2 Bridge connection mode, L2 GRE or L2TP can be configured as follows.

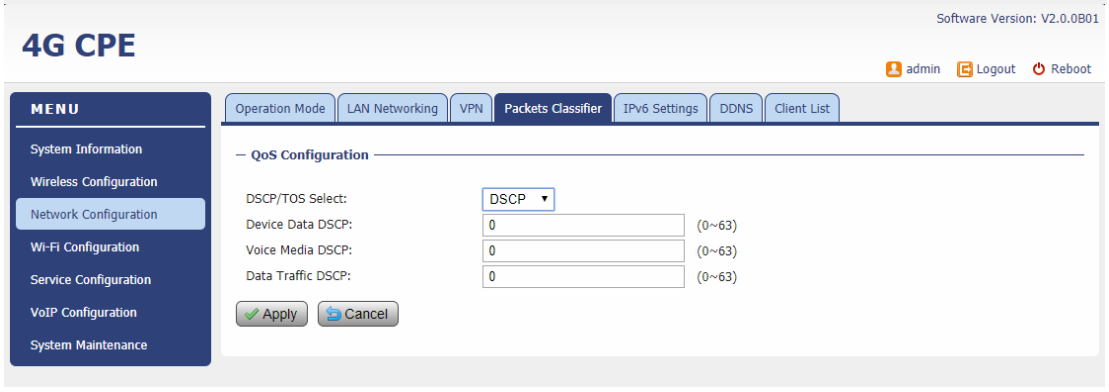


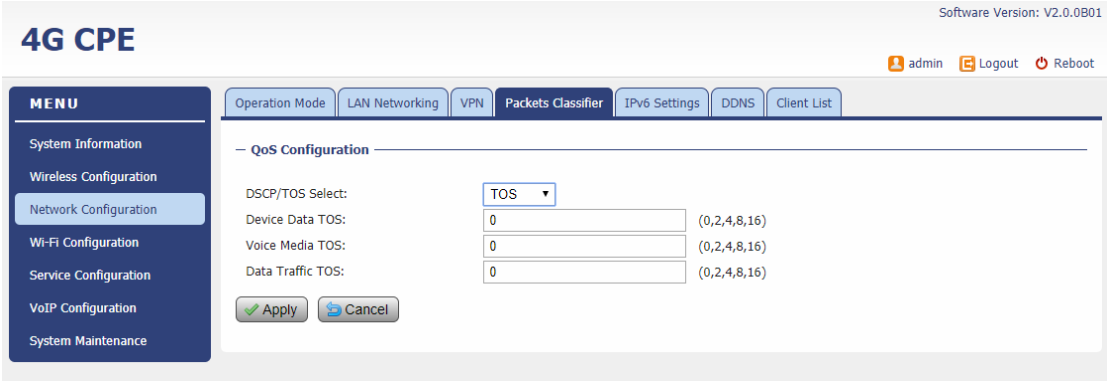


■ Packets Classifier

This configuration menu allows user to tag DSCP or TOS value for CPE local data (Management) and LAN port data (Data).

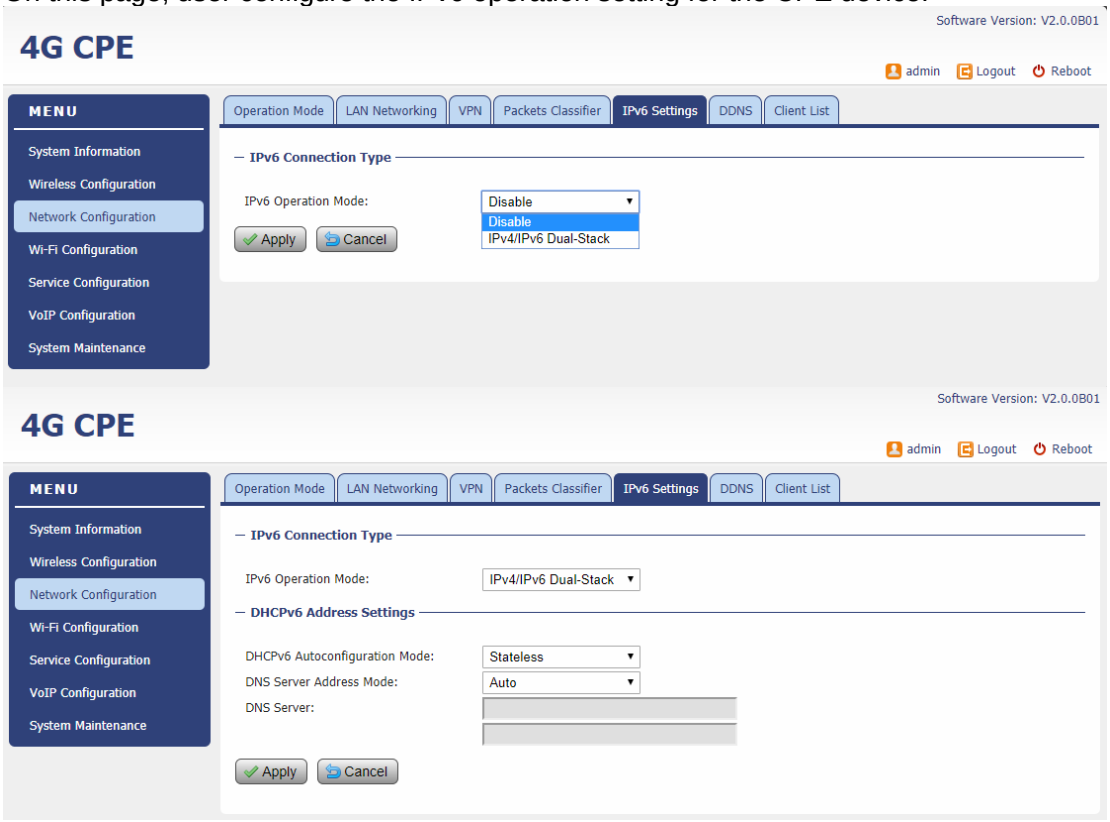






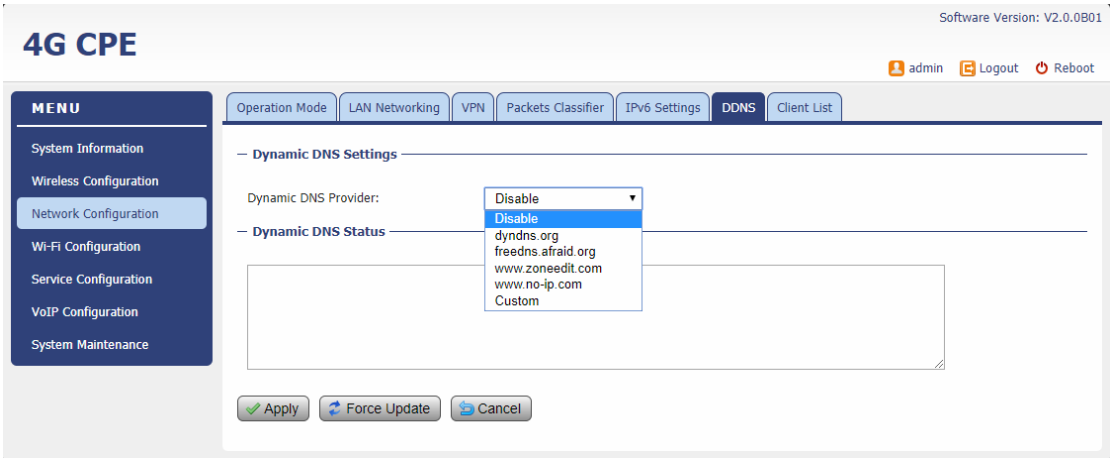
■ IPv6 Setting

On this page, user configure the IPv6 operation setting for the CPE device.



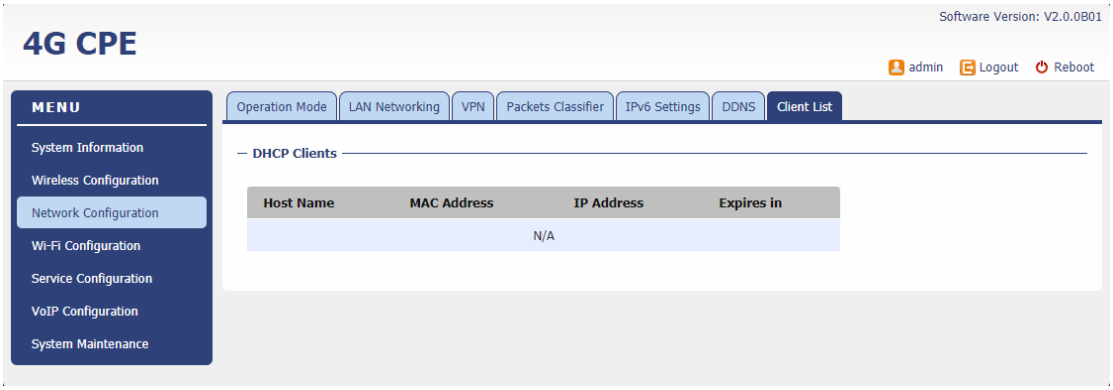
■ DDNS Setting Under Router Mode

This configuration menu allows user to configure use of different DDNS service for router mode operation.



■ Client List

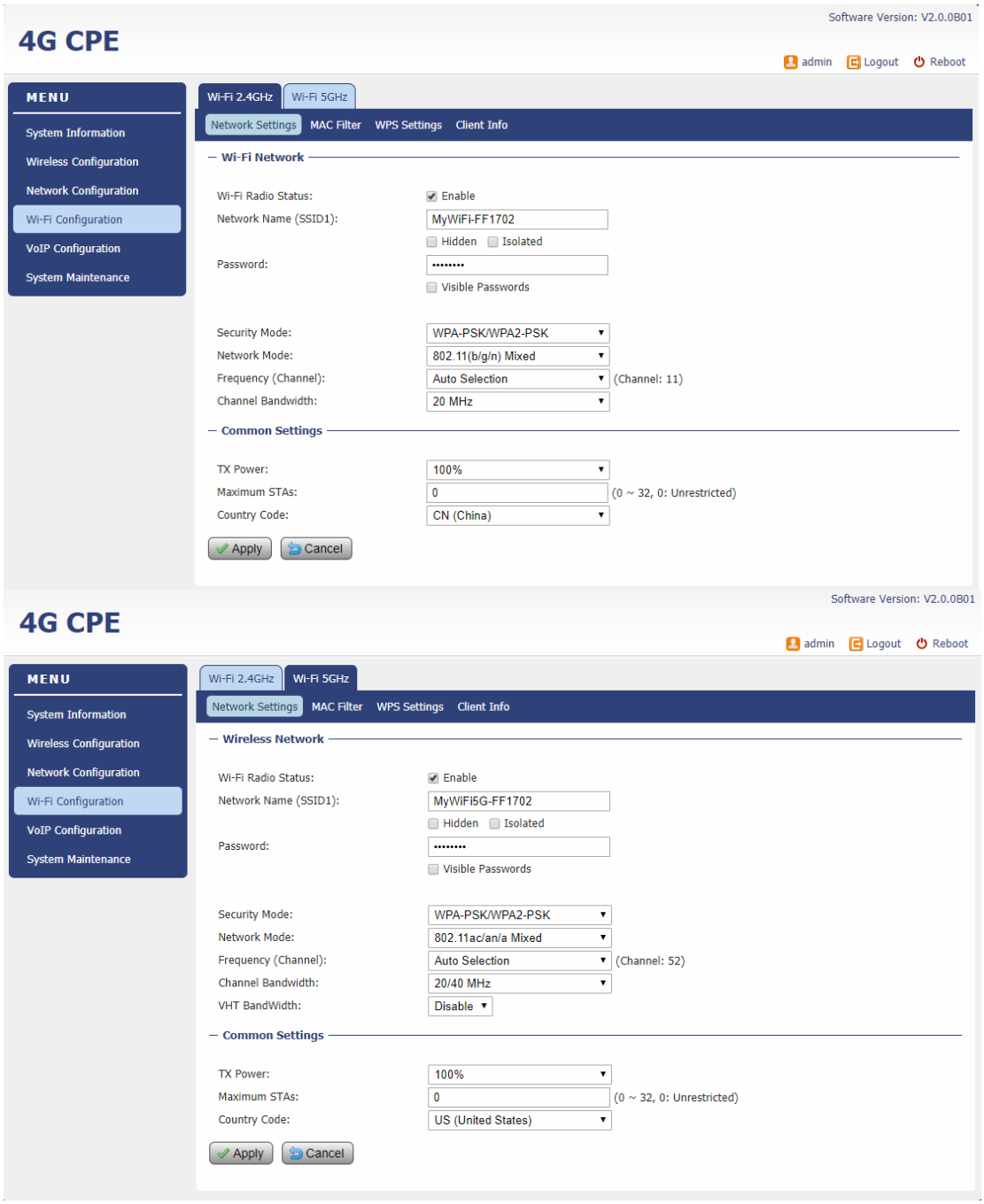
This shows all the LAN clients that are connected to the CPE device.



7. Wi-Fi Configuration

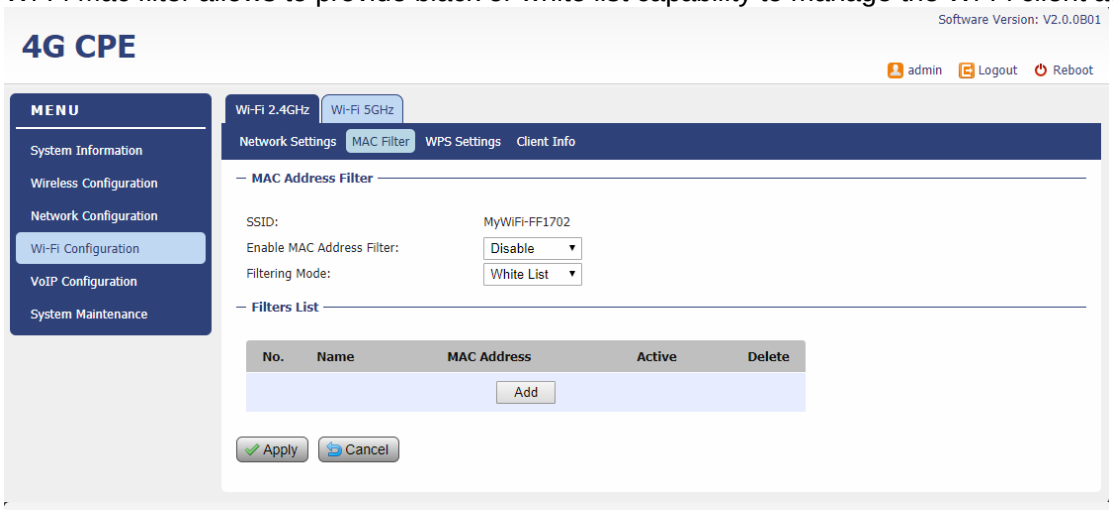
■ Network Settings

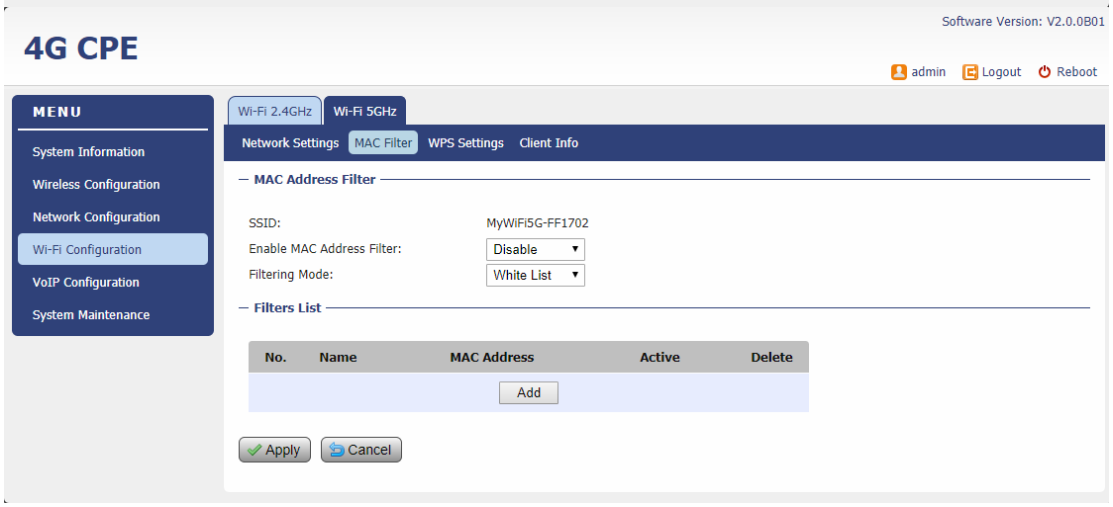
In the Wi-Fi configuration, the operator can modify the default SSID and select the desired Security Policy to protect device Wi-Fi access. For easy configuration, the operator can use one of the following three recommended common security policies for setup.



■ MAC Filter

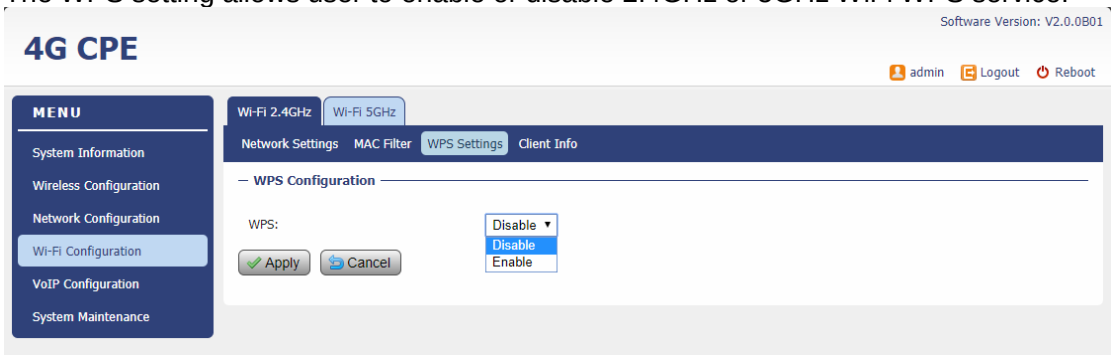
Wi-Fi Mac filter allows to provide black or white list capability to manage the Wi-Fi client access.

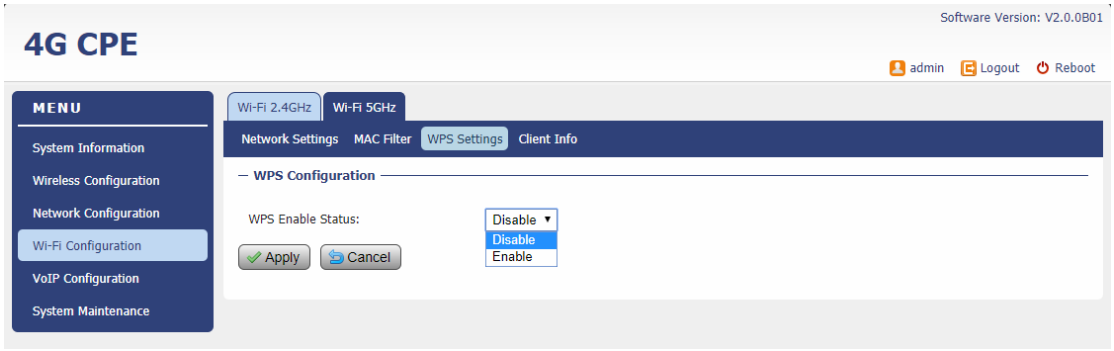




■ WPS setting

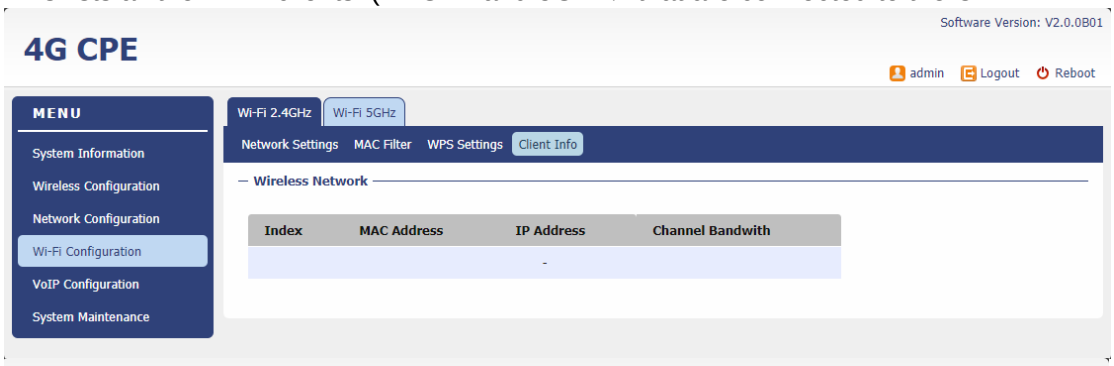
The WPS setting allows user to enable or disable 2.4GHz or 5GHz WiFi WPS service.

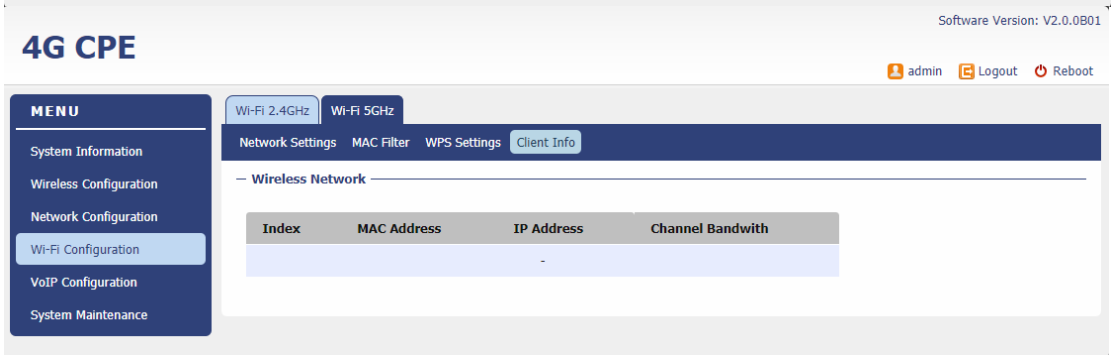




■ Client Info

This lists all the Wi-Fi clients. (2.4GHz and 5GHz）that are connected to the CPE.

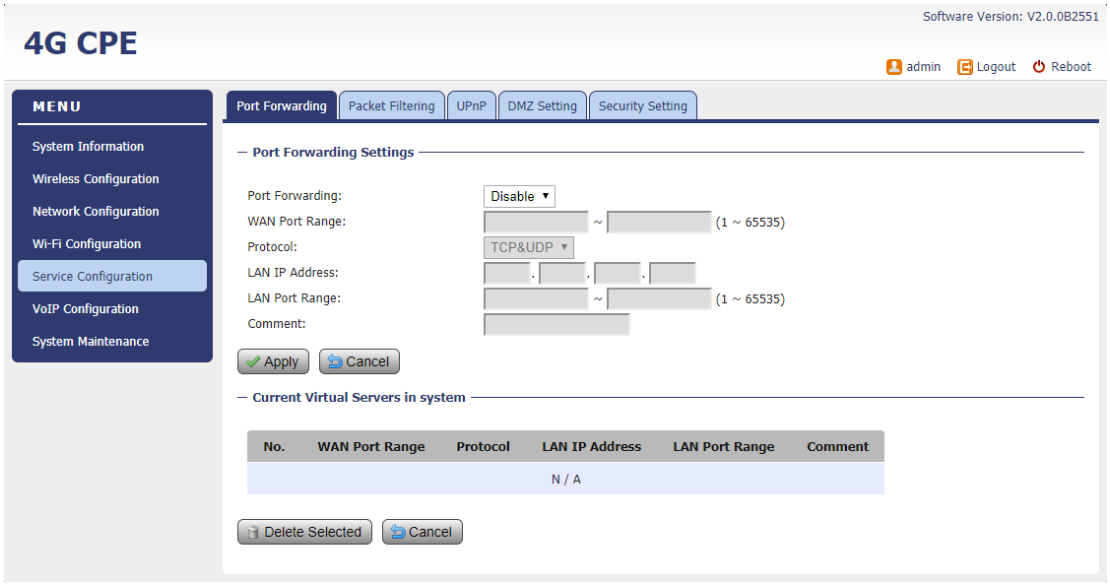




8. Service Configuration

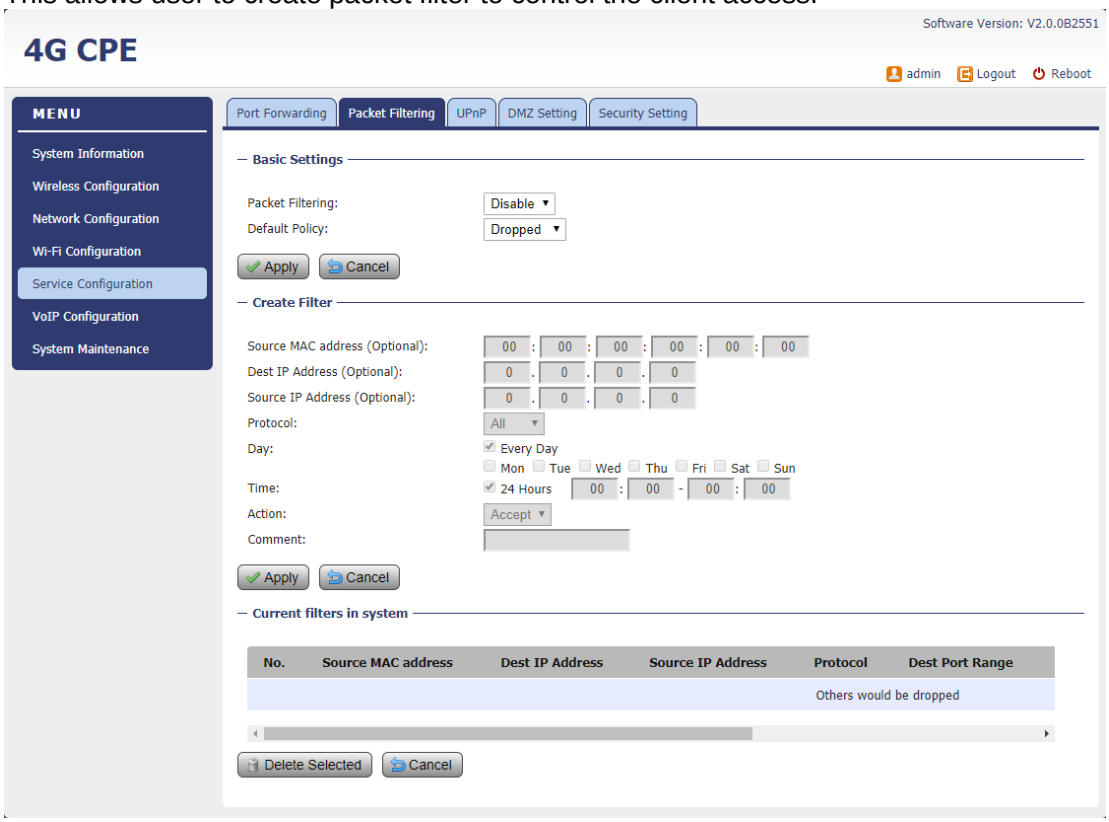
■ Port Forwarding

This menu allows user to configure the port forwarding rules for the CPE in router mode.



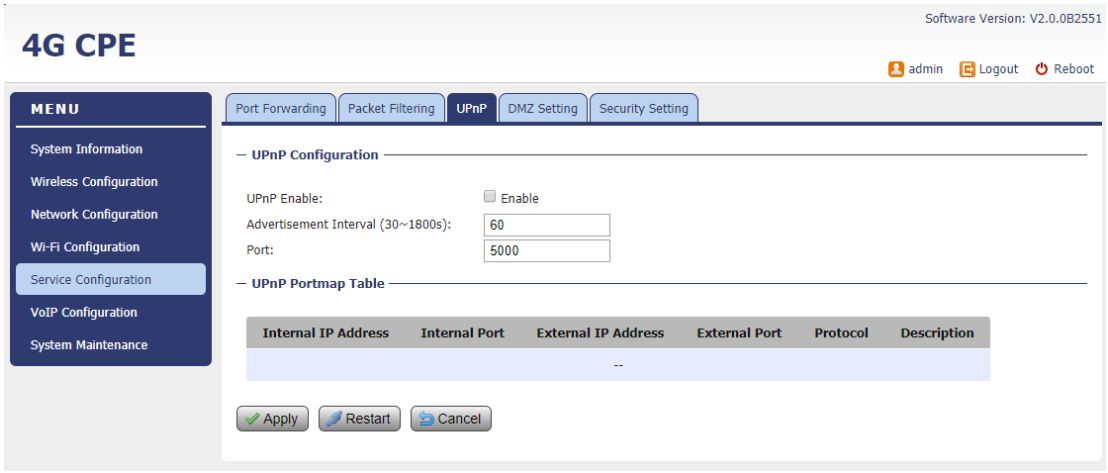
■ Packet Filtering

This allows user to create packet filter to control the client access.



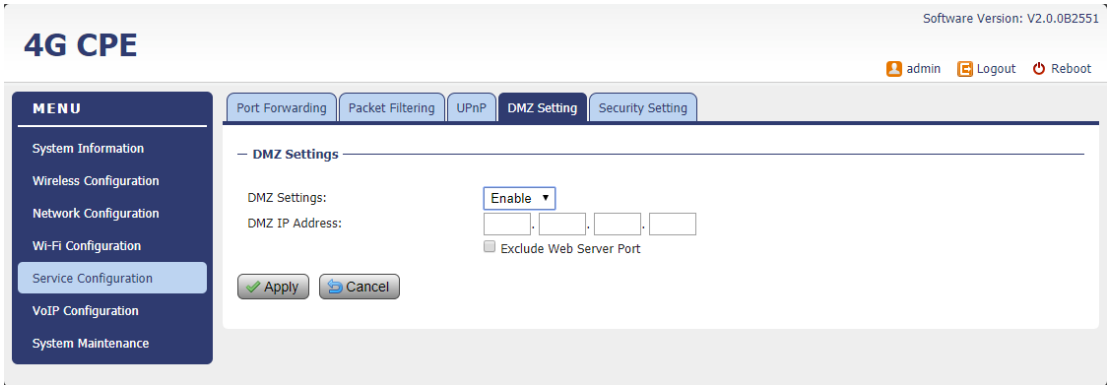
■ UPnP

This menu allows user to configure the UPnP application for on-demand “DMZ” support. The current forwarding rules created can be viewed and cleared if required.



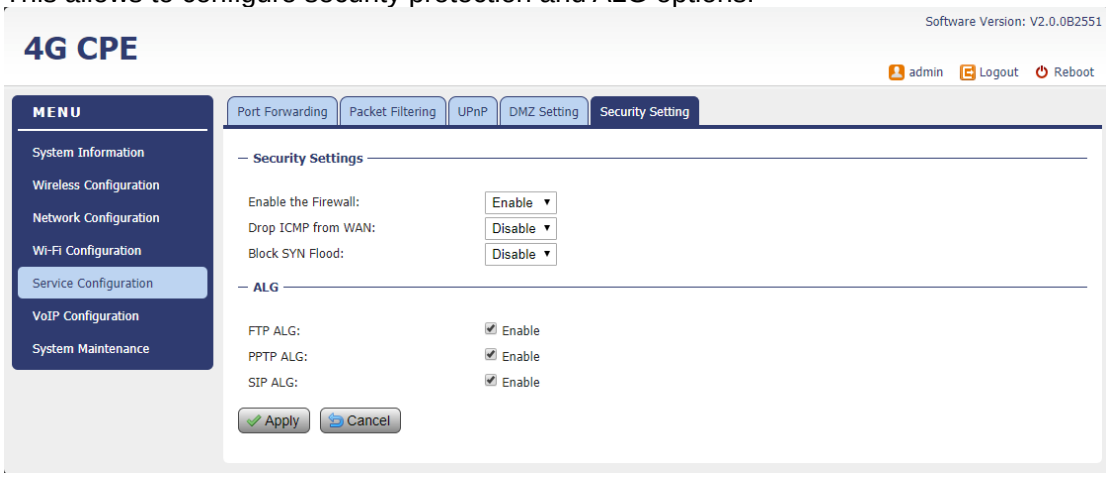
■ DMZ Setting

This menu allows user to configure the DMZ setting for CPE in router mode. Web server, Telnet/SSH and Ping Service port can be exempted from DMZ mapping if required. By enabling DMZ option will make the specified local LAN host (DMZ IP) exposed to Internet.



■ Security Setting

This allows to configure security protection and ALG options.



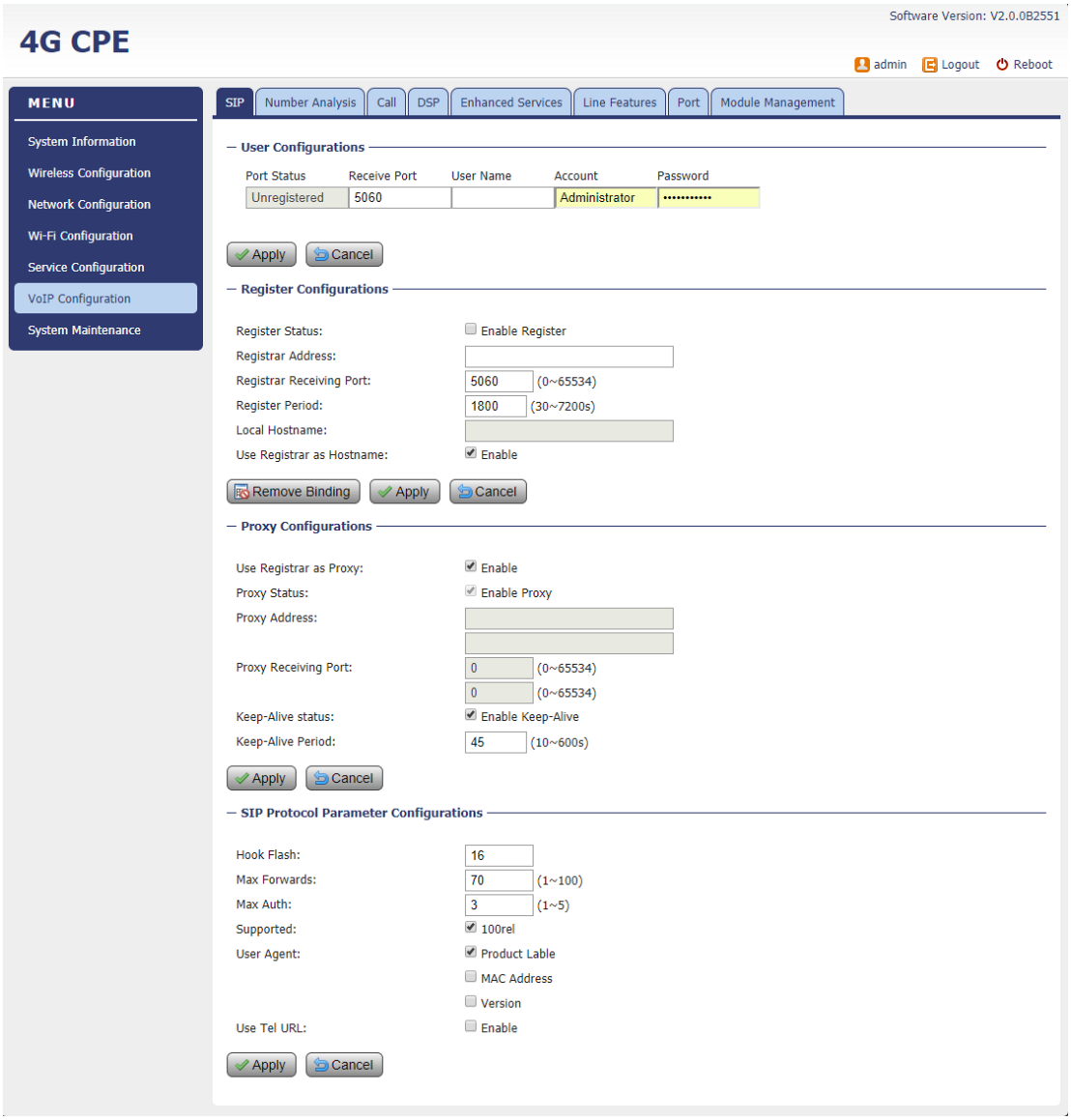
9. VoIP Configuration

In this configuration page, the operator requires to enter the SIP operator name, account and password information if he desires to configure the VoIP networking. The register status check box must be enabled to allow device SIP registration.

The SIP register and proxy server configuration should be performed by the network operator via administration management interface. The SIP account status is displayed for operator information. When the SIP line is registered and ready, the Line LED in the front panel will be light up. If the device VoIP function is not working properly, the operator is advised to contact the network operator for assistance.

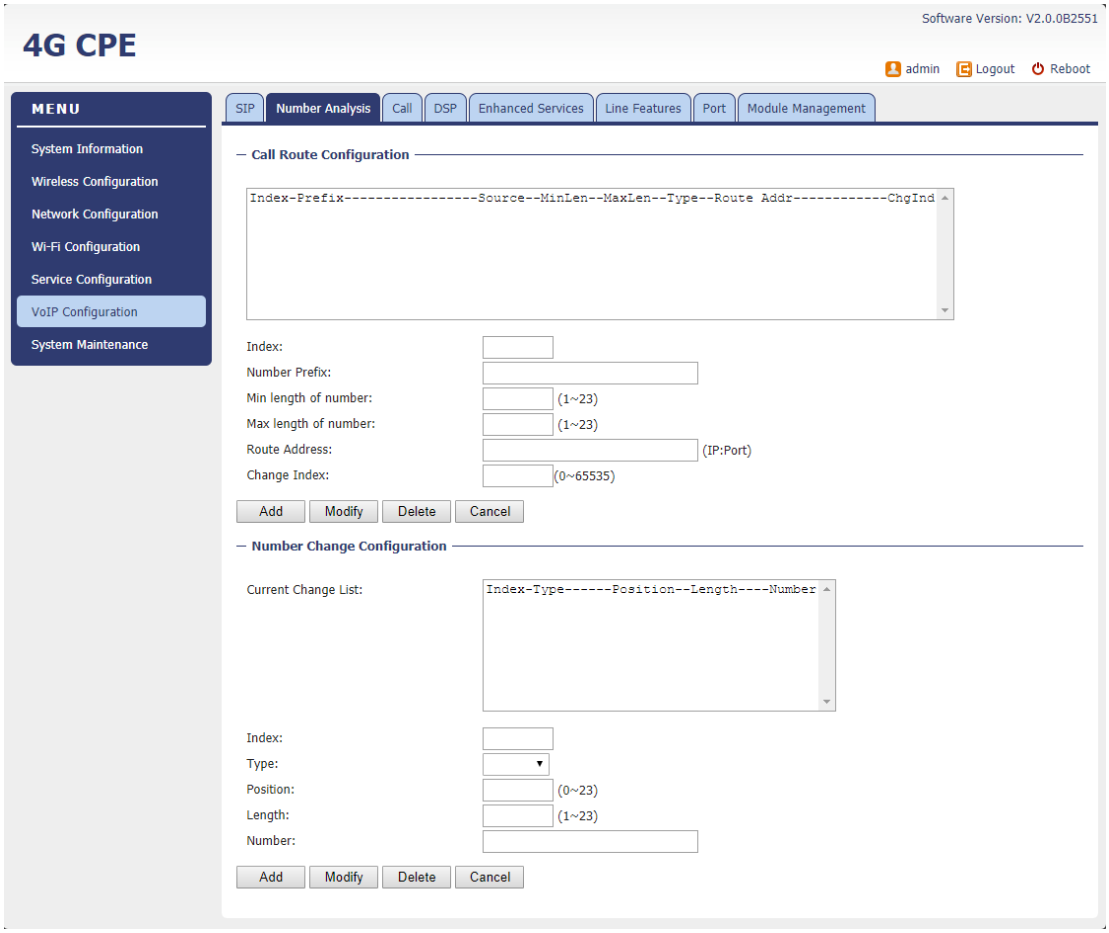
■ SIP

This page allows user to configure various SIP settings such as SIP register and proxy server, as well as SIP protocol parameters.



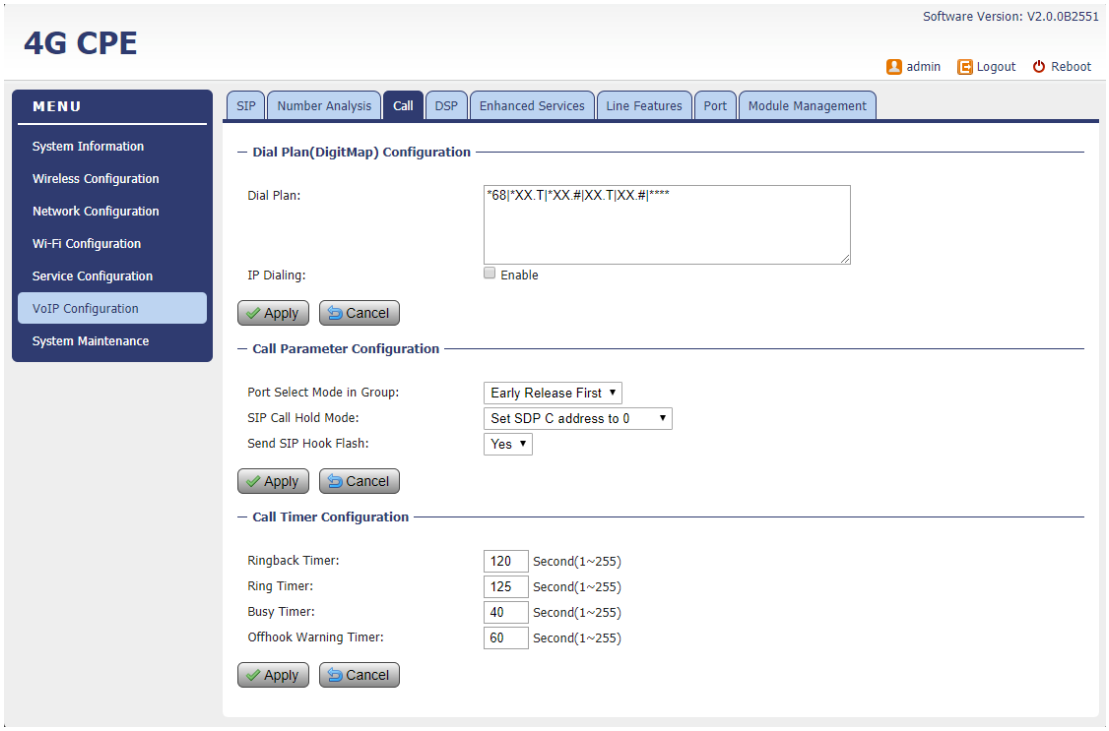
■ Number Analysis

This page allows user to create rules to manipulate the dialled digits. The SIP device is collects dial numbers from external phone or fax. Dialled digits are analysed before being sent out to other element in a VoIP network. Dial numbers can be modified according to specific needs. Rules can be setup to modify a dial number, if it meets certain condition.



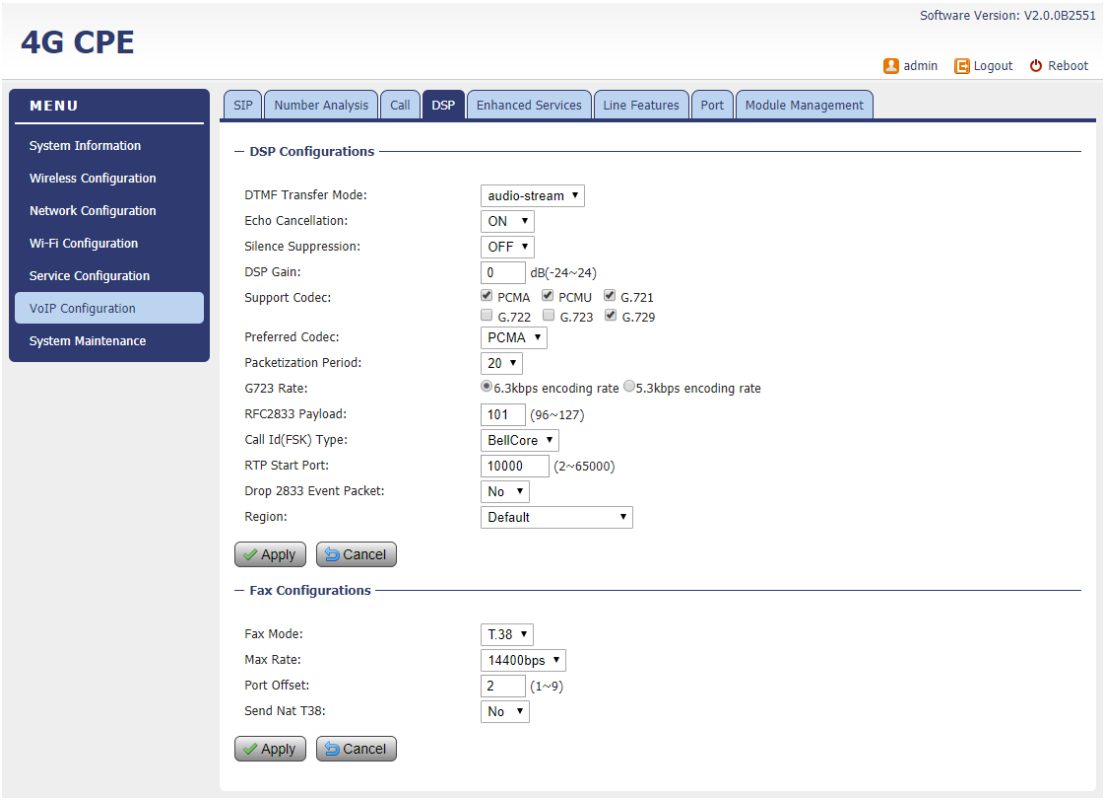
■ Call

Call configuration section allows user to configure the dial plan, SIP processing of hold and hook flash, and various call timers which are common in VoIP processing.



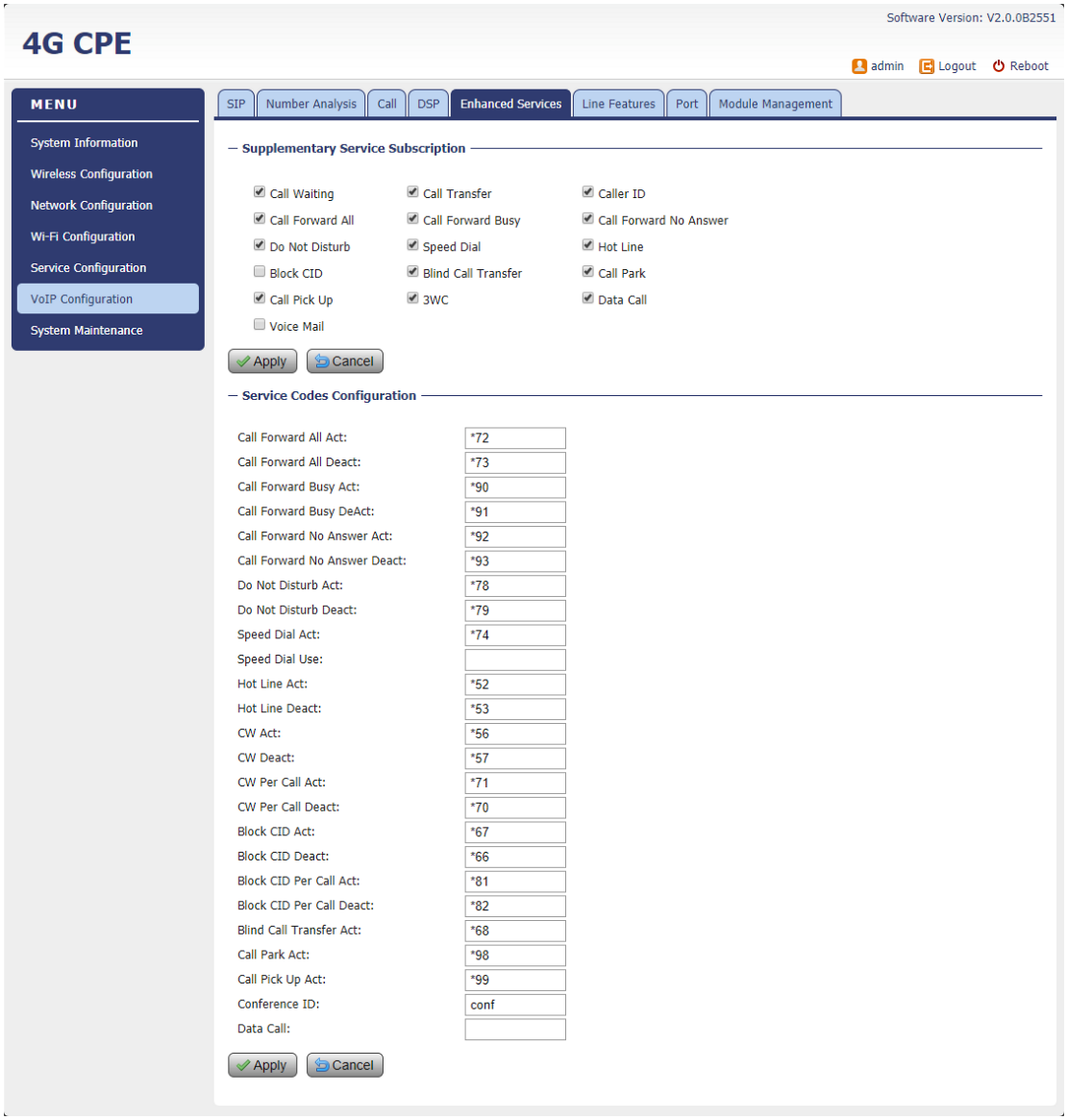
■ DSP

Voice is sampled and coded into digital bit stream, before they are packetized into IP packets. The page allows user to set various DSP processing configurations for audio codecs and fax handling by the SIP device.



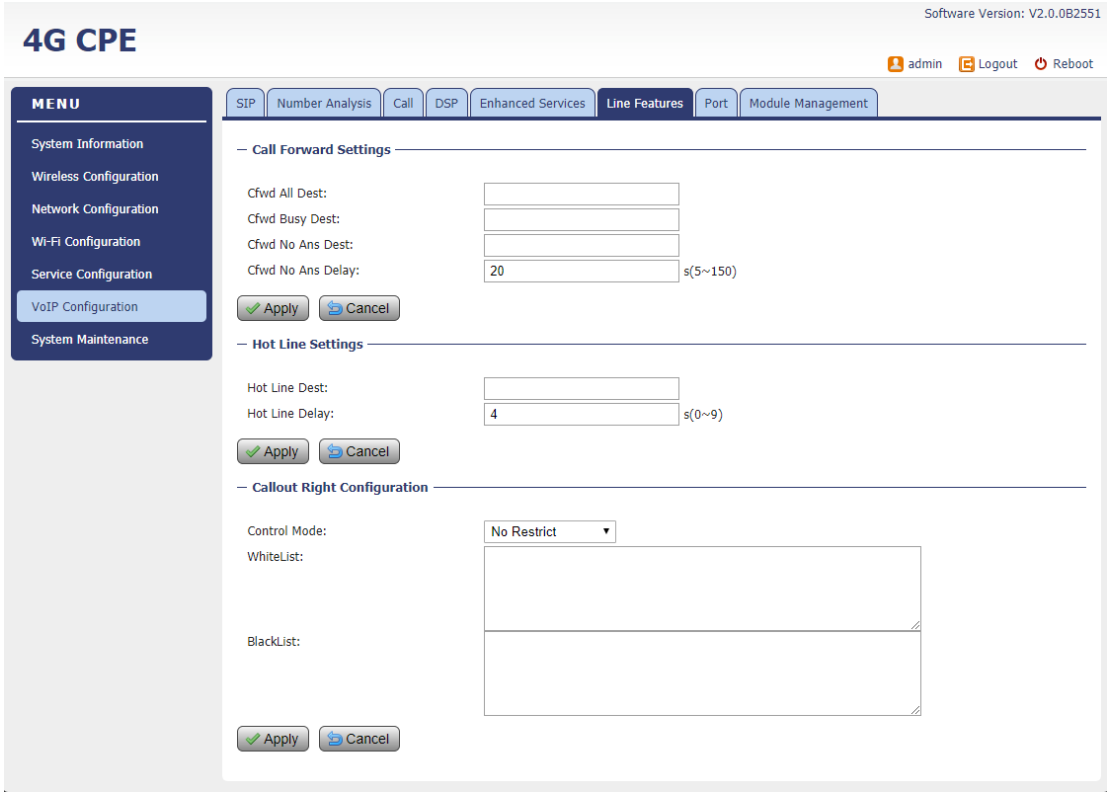
■ Enhanced Services

This page allows user to configure various supplementary voice services and define service activation codes for the supplementary services. The activation code is required in order to work properly with the soft switch. The default service codes are displayed below.



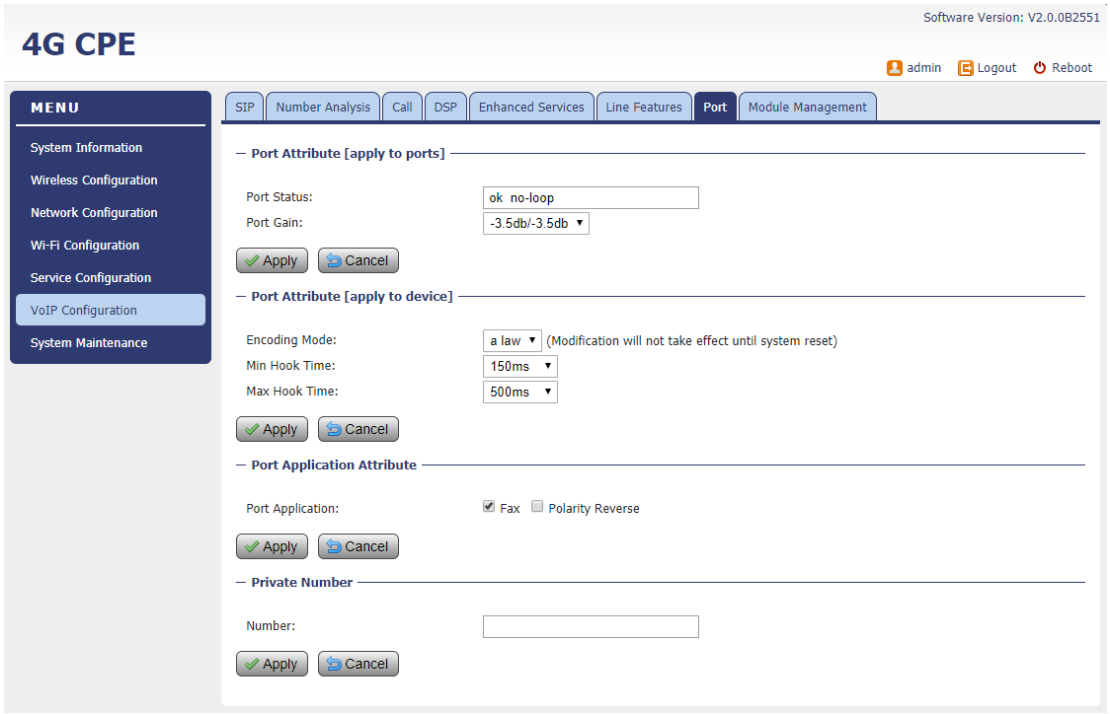
■ Line Features

This page is used to configure user specific parameters for device line supplementary services. Black and White list control is also supported for outbound calling. These settings will remain even their associated features are deactivated, so that users are not required to set them next time.



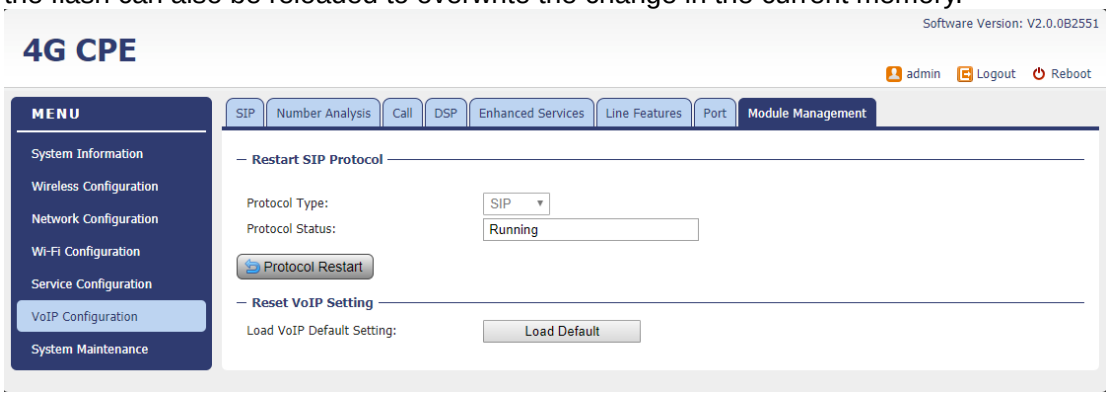
■ Port

Port configuration defines physical and electrical layer parameters, such as port transmit power, min and max hook time, fax control and polarity reverse settings.



■ Module Management

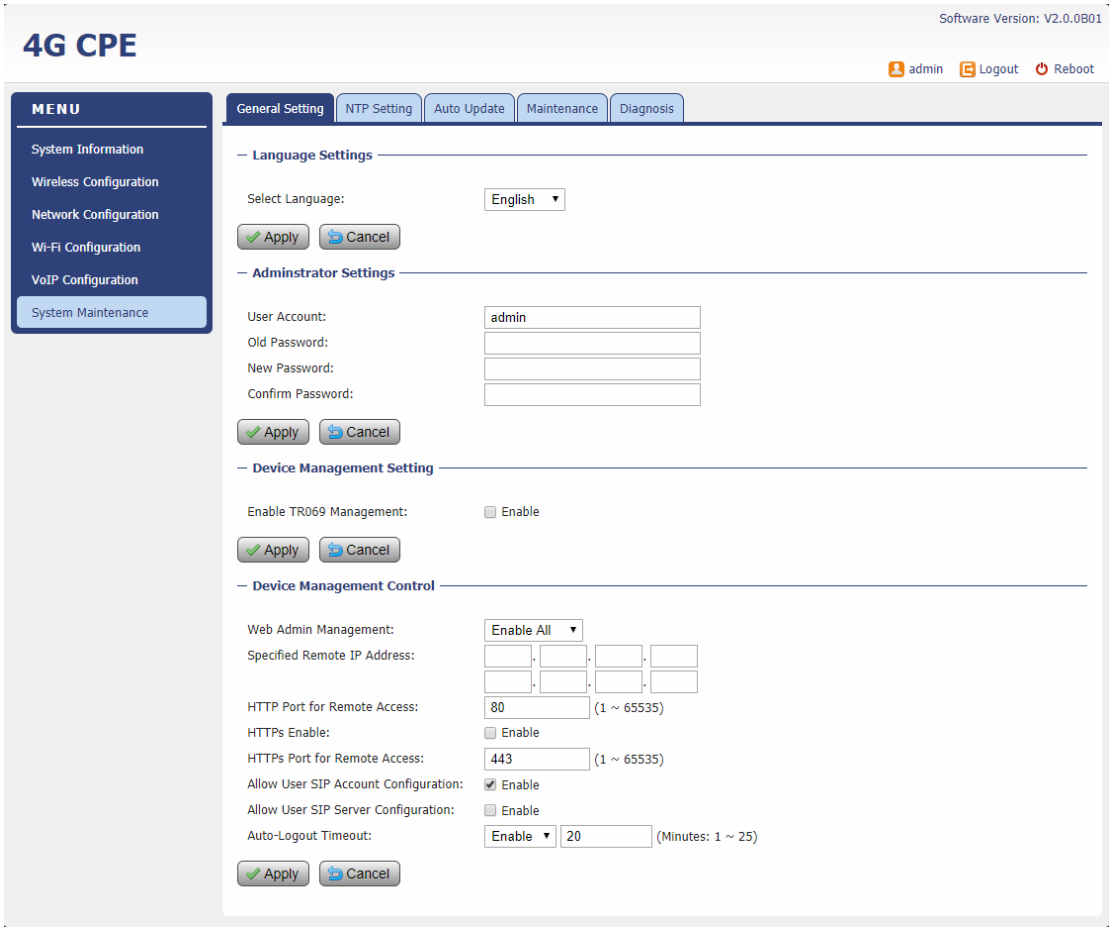
The VoIP software can be restarted to make the VoIP settings take effect. The default setting in the flash can also be reloaded to overwrite the change in the current memory.



10. System Maintenance

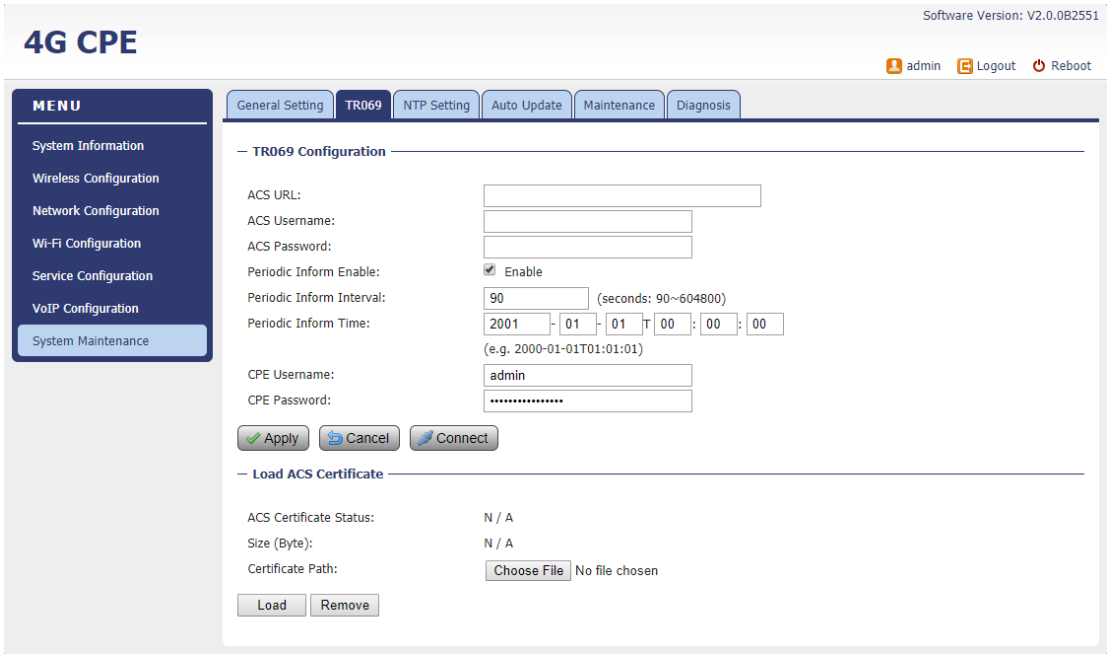
■ General Setting

The menu allows user to configure the WEB GUI login password, time and language setting.



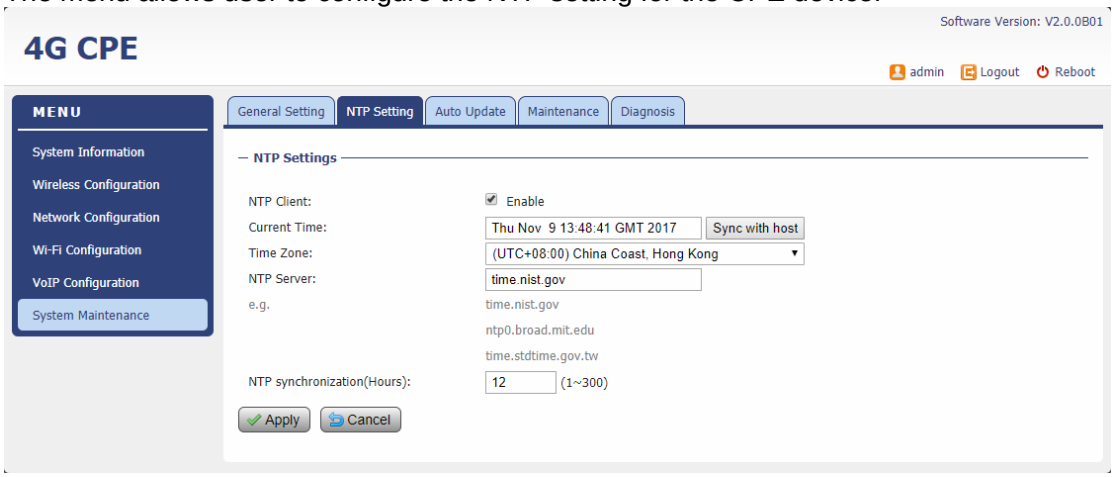
■ TR069

The menu allows user to configure the necessary setting for TR069 management of the CPE device.



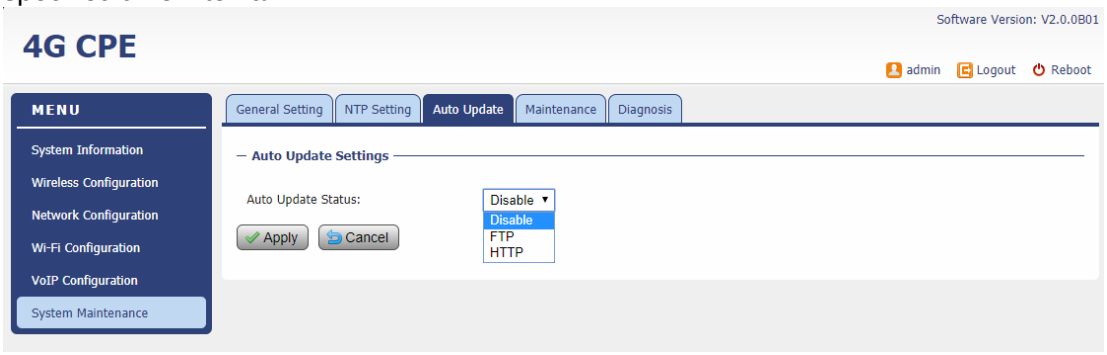
■ NTP Setting

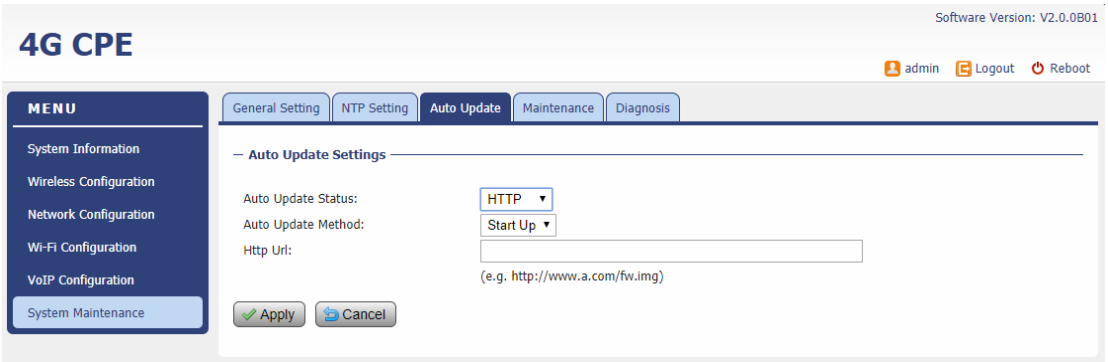
The menu allows user to configure the NTP setting for the CPE device.

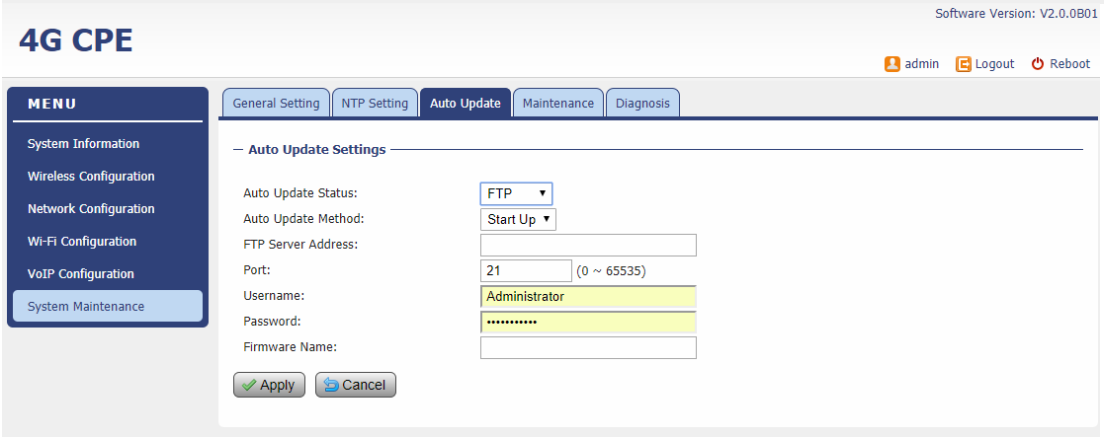


■ Auto Update

The user can select the Auto Update device's firmware. Remote upgrade via FTP or HTTP are supported today. Auto upgrade can be triggered either during WEB login or via regular polling at specified time interval.

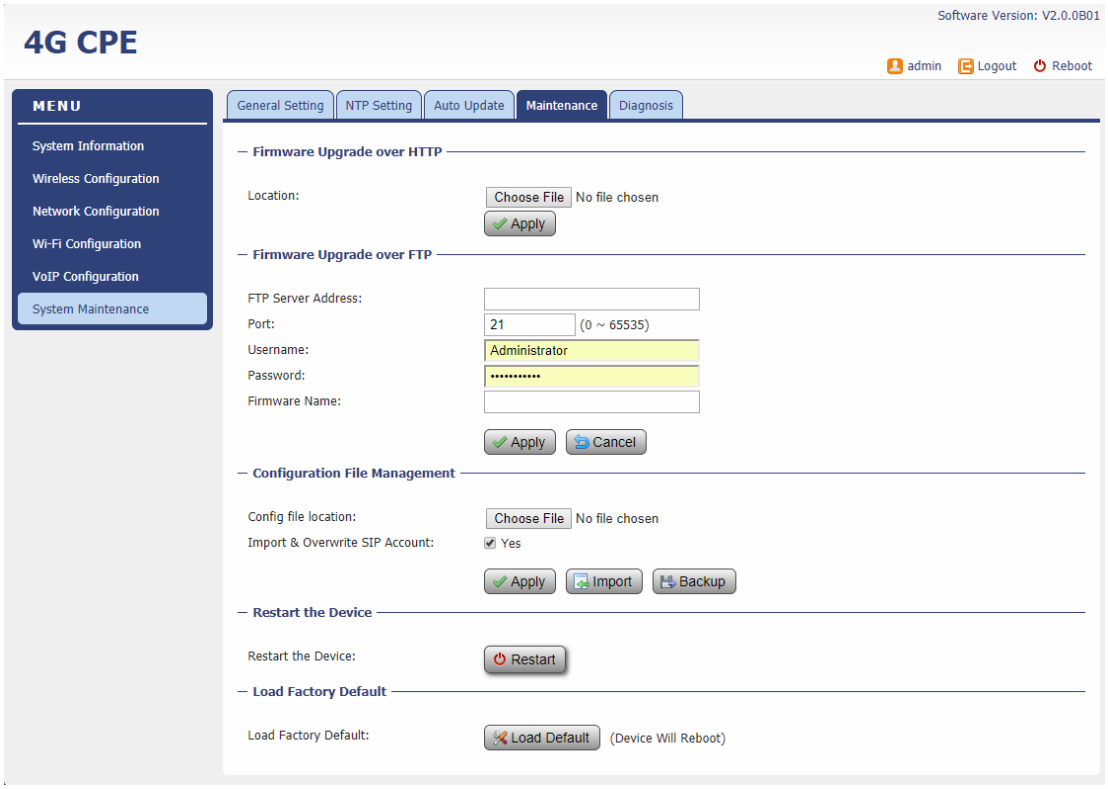






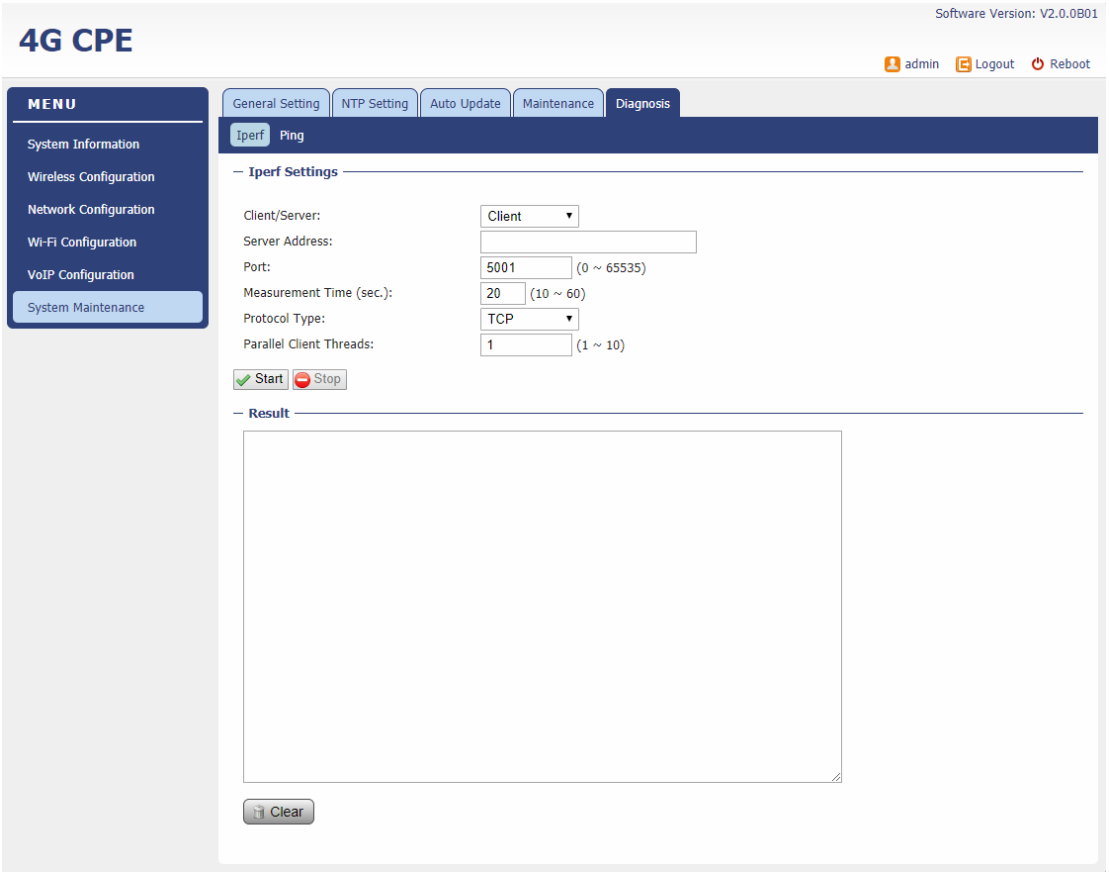
■ Maintenance

This menu allows user to perform firmware upgrade via WEG GUI with option to reset to factory setting. It can also configure the remote upgrade using FTP, TFTP or HTTP.



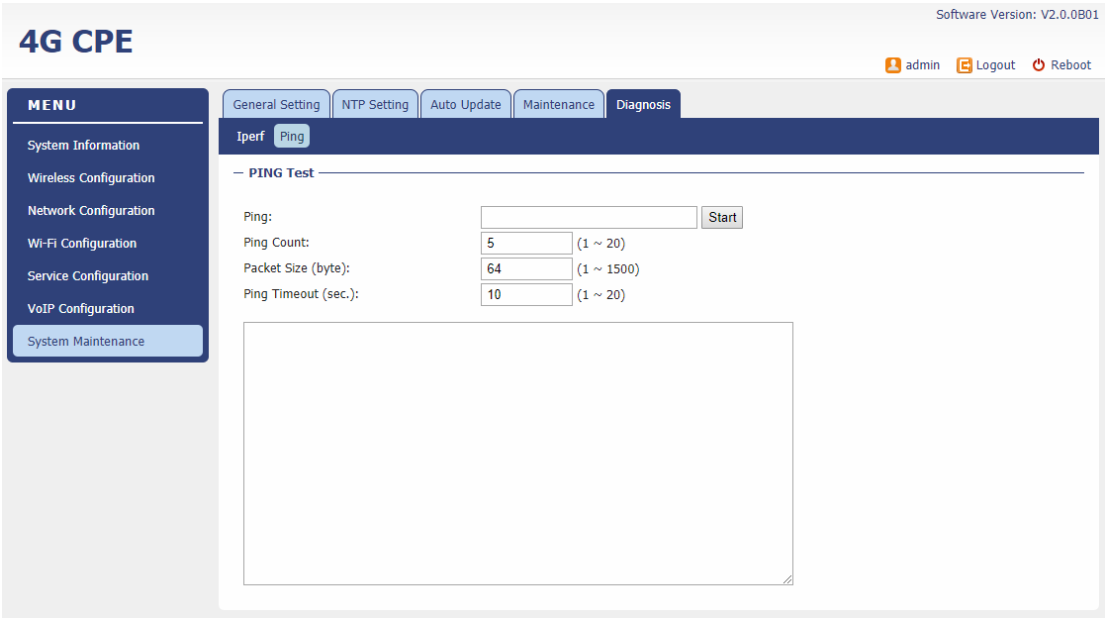
■ Iperf

This menu allows user to configure iPerf testing using WEB GUI interface. Both TCP and UDP tests can be supported. Remote iPerf server is required to conduct the tests.



■ Ping

This menu allows user to perform PING tests using WEB GUI interface. Both IPv4 and IPv6 can be supported.



11. FAQ and Troubleshooting

1) **My PC cannot connect to the CPE.**
   - Re-plug the PC Ethernet cable and check if the PC LAN connection is up or showing activity.
   - Check if the SYS LED is on. If it is not, check the power cord and make sure it is connected properly. Also verify that the AC power supply is available.
   - If the PC LAN shows no activity and CPE SYS LED is off but the power cord and ETH cable are connected properly and there is AC supply, then it is likely the power adapter is damaged. Please contact distributor to obtain replacement part.

2) **My PC cannot acquire IP from the CPE.**
   - First check if the Network card is up and working properly. Then check the PC Network card configuration and make sure the DHCP is enabled.
   - To release and renew the correct IP address, please unplug the Ethernet cable from PC and wait for about 5 seconds, then connect it again.
   - If the problem persists, please contact the operator or distributor for further diagnoses.

3) **My CPE networking is not working properly.**
   - You may want to check if the LTE connection is up and running properly. You can do this by login the WEB GUI and check the Interface Info page.
   - You may want to perform a factory reset and see if the problem is being corrected. You can do this by log into the WEB GUI using "**admin123**" password and perform restore the unit to default factory setting.
   - If the problem cannot be corrected by factory reset, please contact the operator or distributor for further diagnoses.

4) **I forget the login password and like to reset the unit to factory default.**
   - You may press and hold the RESET button in the back of the unit for 5 seconds. The unit will reset and reboot. Please wait until the unit finishes rebooting to regain access the device WEB GUI using default login credentials.
   - After device reset, if the device cannot connect to the network, please contact the operator or distributor for further support. Additional device provision may be required.