RT880 Wireless Router&Access Point

User Manual

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Chapter 1：Product Overview

1.1 Introduction

Thanks for purchasing RT880 broadband router. This router, equipped with the latest 4G and Wireless-N technology, is a full function network equipment. It can support you to freely access network connection in different occasions, such as meeting, exhibition, factory, or home. When using SIM card to access network, you could also make phone calls or send text messages simultaneously. RT880 has extraordinary performance, and is very easy to use and manage. It supports multiple devices sharing one broadband link and ISP account, to offer you great convenience and cost efficiency. In the meanwhile, it provides multiple management functions, to configure system, DHCP server, firewall, static route table. RT880 broadband router is easy to configure, so non-professionals could configure the device. Before you start to configure RT880, please read this user guide, to fully understand the functions of RT880.

1.2.1 Product Layout

7   8   9   10   11
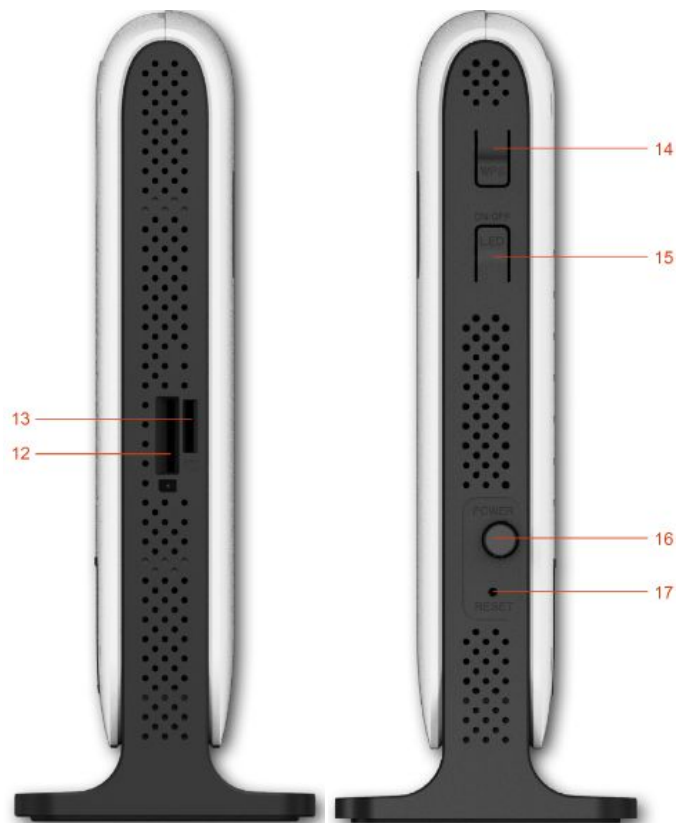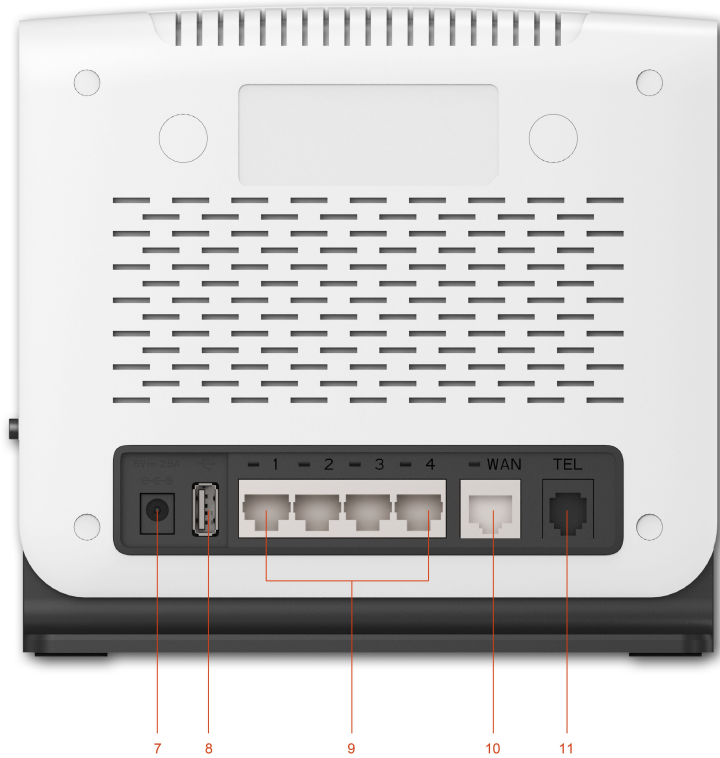
Number	LED	Description
1	Power	When build-in battery has low power, the light is yellow. When power is on or the build-in battery is full, the light is green.
2	WIFI	Light up in green when WIFI is enabled; blink when data transfer.
3	Internet	Light up in green when Internet is enabled. Blink when data transfer.
4	USB	Light up in green when USB is inserted.
5	Tel	Light up in green when you make a phone call.
6	Signal	Show signal strength.

Number	Connections	Description
7	Power Adapter	Connect Power to DC-Jack 5V/3A Power Adapter. Using power supplies with a different voltage from the one included with the RT880 will cause damage and void the warranty.
8	USB	Insert flash drive for file sharing only. No address info is exchanged between device and PC/LAPTOP by a USB cable.
9	LAN1-4	LAN ports provide connections to Ethernet enabled devices.
10	WAN	WAN port provides connection to the Ethernet cable or DSL modem.
11	TEL	Connect the telephone

Number	Connections	Description
12	SIM	Connect SIM card.
13	T-Flash	Insert T-Flash for file sharing, up to 64GB.
14	WPS	Click this button to start WPS encryption.
15	LED	Turn on/off front and back LED light.
16	Power	Turn on/off the router.
17	Reset	Press the reset button 3 seconds to restore the device to its factory default settings.

**Chapter 2：Quick Setup Guide**

2.1 System Requirements

● Ethernet ADSL/Cable with an Ethernet port (RJ-45) **OR** Internet SIM card

● Computer with Windows, Macintosh, or Linux-based operating system with an installed Ethernet adapter.

● Internet Explorer version 8.0 or above, Google Chrome, Safari, Firefox, Opera.

2.2.1 RT880 Placement

You can place RT880 on a desk or other flat surface. Please keep RT880 away from heating. For optimal performance, please place your RT880 in the center of your home (office), in a location that is away from any potential interference source, such as metal walls or microwave oven.

2.2.2Network Setup

2.2.2.1 WAN Setting
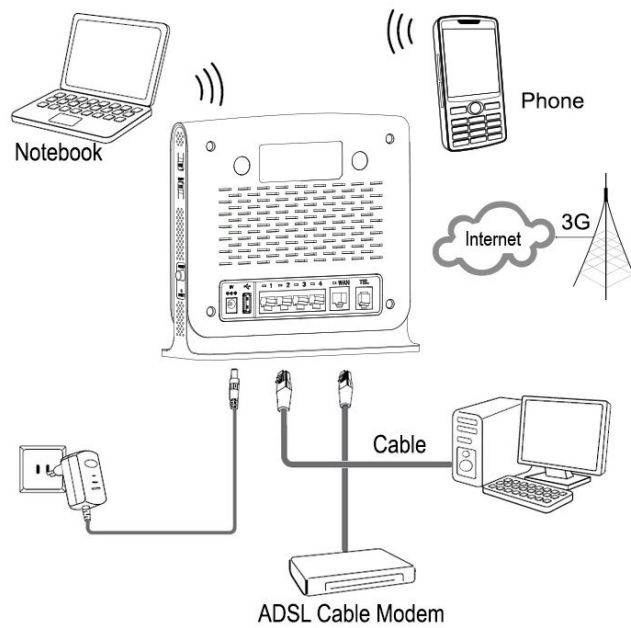
1) Connect Ethernet cable between your PC/Notebook and one of the four available LAN ports on RT880.
2) Connect Ethernet cable between WAN ports of your ADSL/CABLE modem and WAN port of RT880. Please make sure your ADSL/CABLE modem is working properly. Contact your ISP if you have any question.
3) Power up RT880.

2.2.2.2 3G/4G Setting
When using SIM card to access network, you could also make phone calls or send text messages.
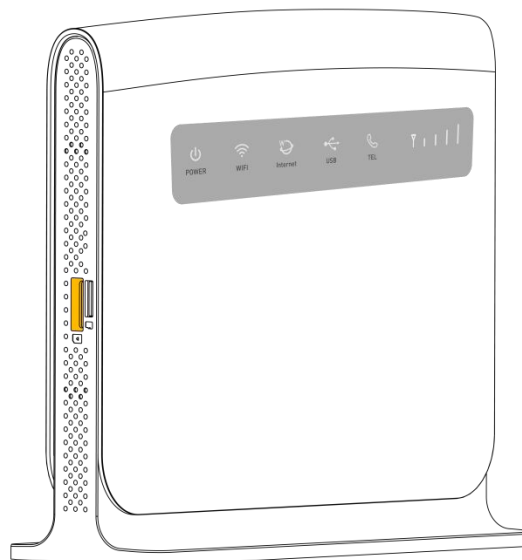
1) Insert SIM card into the port.
2) Power up RT880. Press Power button, then front panel will light up and remain stable.
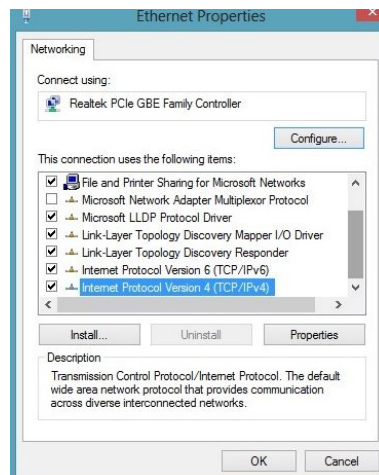
Chapter 3: Product Setting

3.1 Configuration wizard
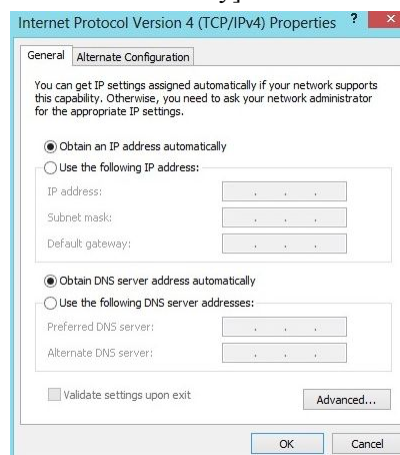
3.1.1 TCP/IP Setting

Enter [Start Menu]—Select [Control panel]—Select [Network]—Select [Local Area Connection]—Select [Properties]
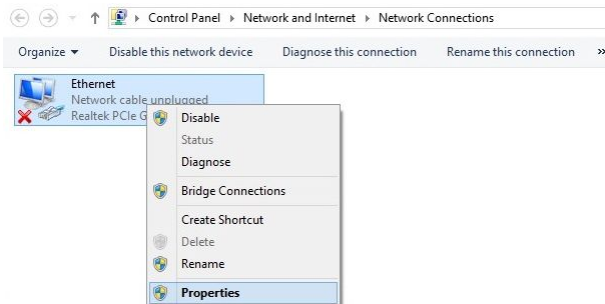
Select [Internet Protocol (TCP/IP)]—Click [Properties]

RT880 supports [DHCP] function, please select both [Obtain an IP address automatically] and [Obtain DNS server address automatically].


3.1.2 Log In

Whenever you want to configure your network or the RT880, you can access the Configuration Menu by opening the web-browser and typing in the IP Address of the RT880.

For example, http://192.168.1.1 Note: If you changed the default IP Address assigned to the RT880, make sure to enter the correct IP Address.
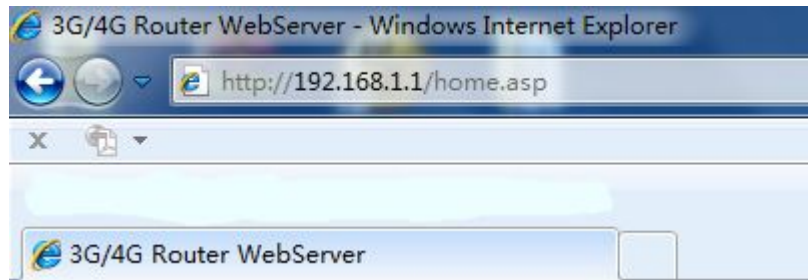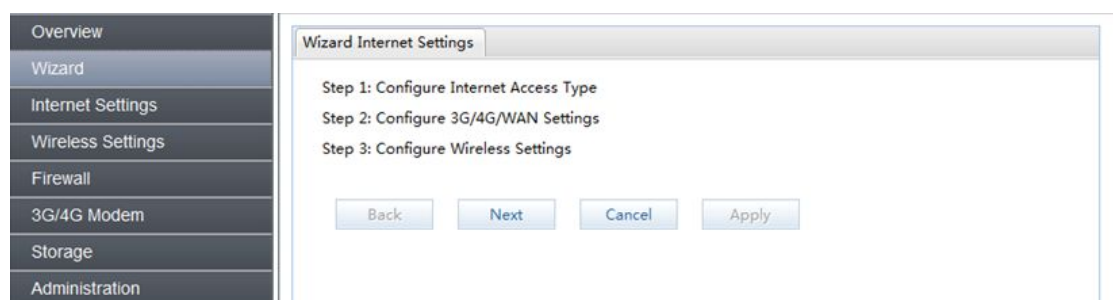

You will go to the overview and log in page. The Factory default user name and password are **admin.** It is recommended to change the admin password for security purpose. Please refer to Administrator Settings to change the admin password.
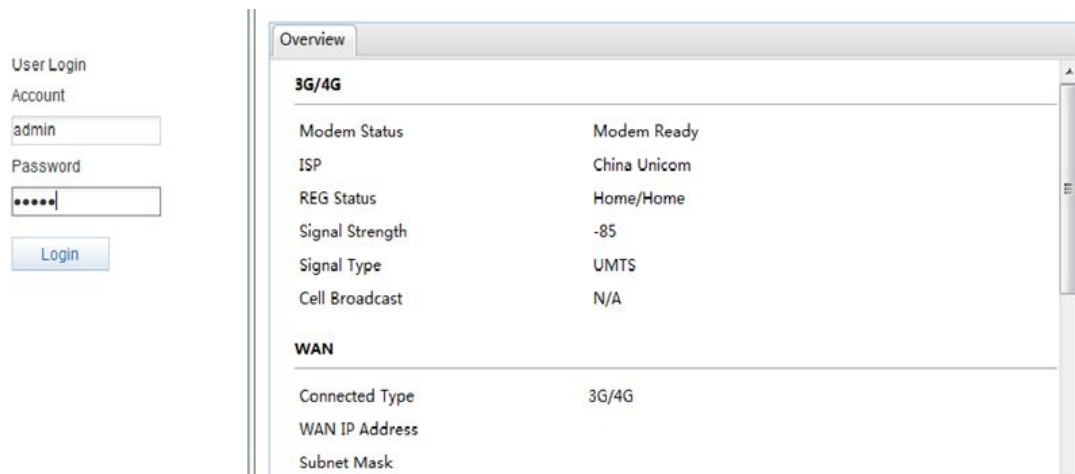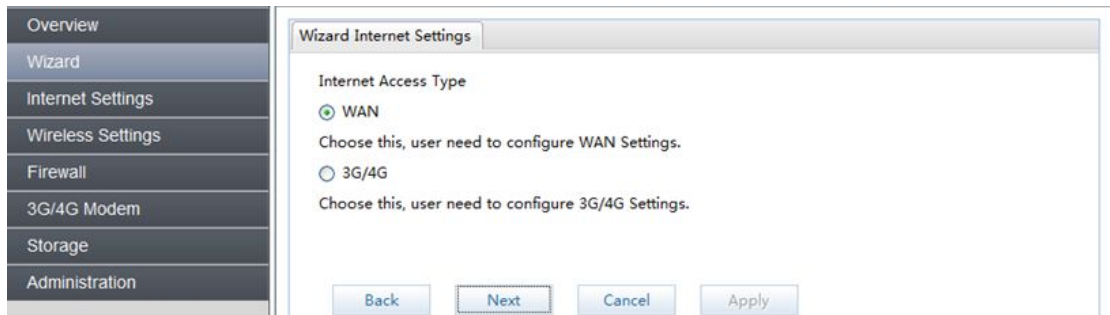

3.2 Internet Setting

3.2.1 WAN Mode Setting
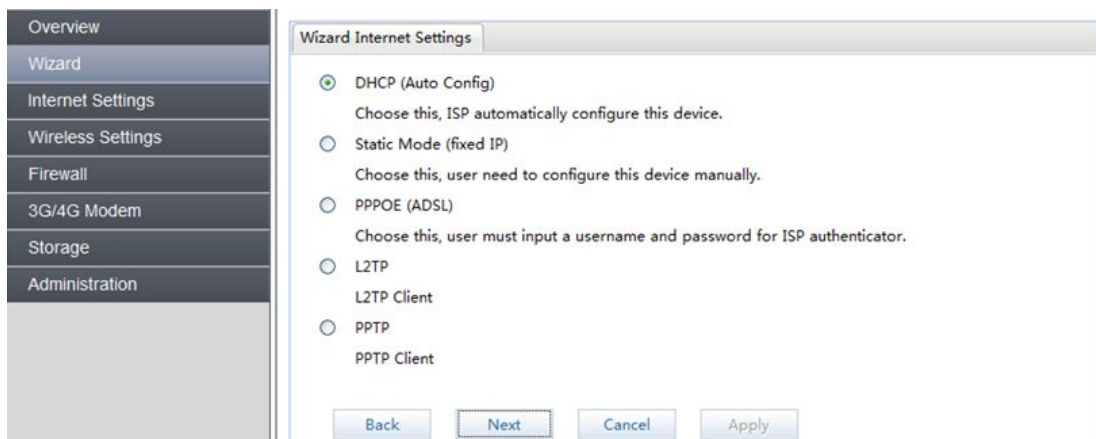
1) Select "Wizard. Click "Next".

2) Choose you Internet Access Type and click "Next."

3)   If you choose WAN internet type, please select the type of internet connection for your router. Choose the appropriate selection and click "Next."

● DHCP：A dynamic IP address connection that configures the router to automatically obtain IP address from a DHCP server on the ISP's network. Enter the name for your wireless network (SSID) and security key. For safety, we suggest you choose WEP, WPA-PSK/WPA2-PSK for encryption.
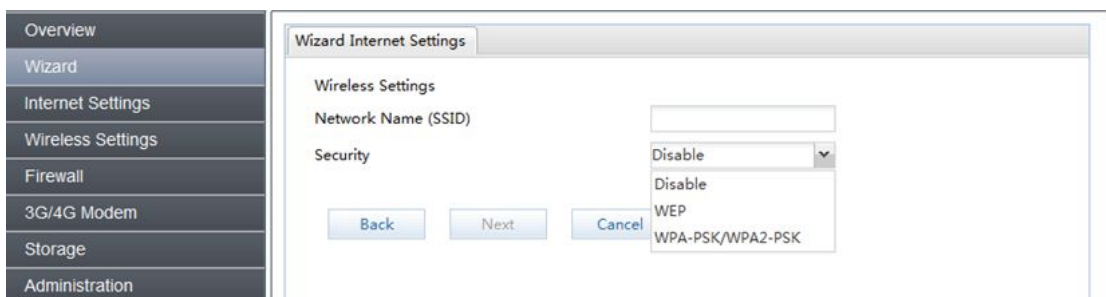
● Static Mode: Please enter the IP address information provided to you by your ISP. The Subnet Mask for RT880 is preconfigured to 255.255.255.0. Other configurations can be made, but not recommended. This feature is for advanced users. Your ISP should also provide the Default Gateway, Primary DNS and Secondary DNS (optional).

● PPPoE: Please enter the PPPoE username and password assigned by your ISP. Choose the Operation Mode; enable the Keep Alive option to automatically re-establish the connection when an application attempts to access the Internet again. The On Demand Mode Idle Time is a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is in activate longer than the Maximum Idle Time, it will be dropped.

● L2TP：If your ISP using L2TP to provide your Internet connection, the ISP will give you the necessary information to configure the router. Please enter Server IP Address, User Name, Password, you IP Address, Subnet Mask, Default Gateway. Choose Address Mode and Operation Mode. Enter a Redial Period which Internet connection is maintained during inactivity. Then click "Apply."

● PPTP: PPTP allows the secure connection over the Internet by simply dialing in a local point provided by your ISP. Enter Server IP Address, User Name, Password, you IP Address,

Subnet Mask, Default Gateway. Choose Address Mode and Operation Mode. Enter a Redial Period in which Internet connection is maintained during inactivity.


3.2.2 SIM Card Setting

If you choose 3G/4G SIM card to access the network, please enter "APN,""Dial Number" "Auth," user name and password, which are provided by your mobile network operator. Click "Default" and "Next."

3.2.3 WAN

You will be prompted to select the type of internet connection for your router. If you are an entry-level user, please do not change any of these settings.


3.2.4 LAN

The LAN Tabs reveals LAN settings that can be altered at will. If you are an entry-level user, try accessing a website from your browser. If you can access website successfully, please do not change any of these settings.
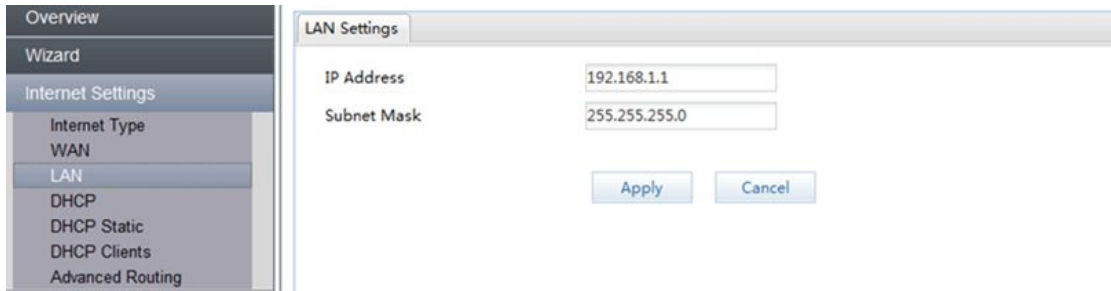
3.2.5 DHCP

The DHCP will automatically assign an IP address to the computers on the LAN private network. Be sure to set your computer to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn you computer on, they will automatically load the proper TCP/IP settings provided by the RT880. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.
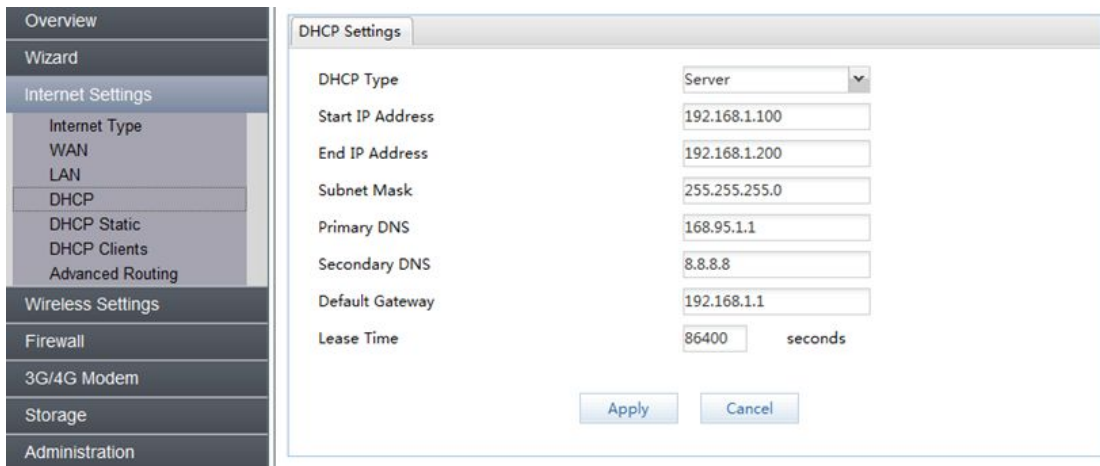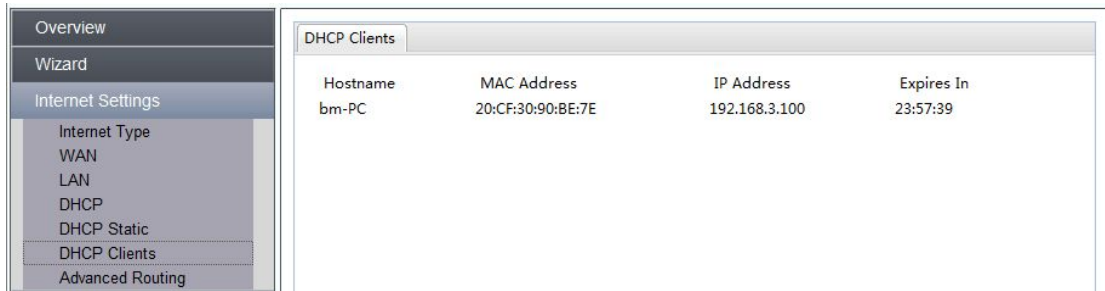

3.2.6 DHCP Static

RT880 supports static IP address assignment.
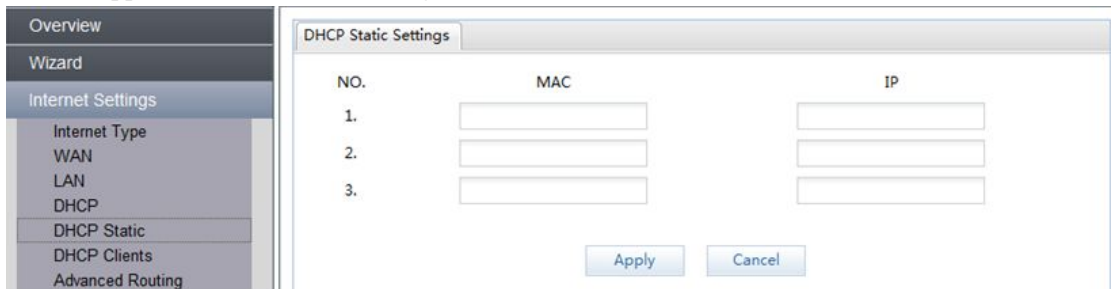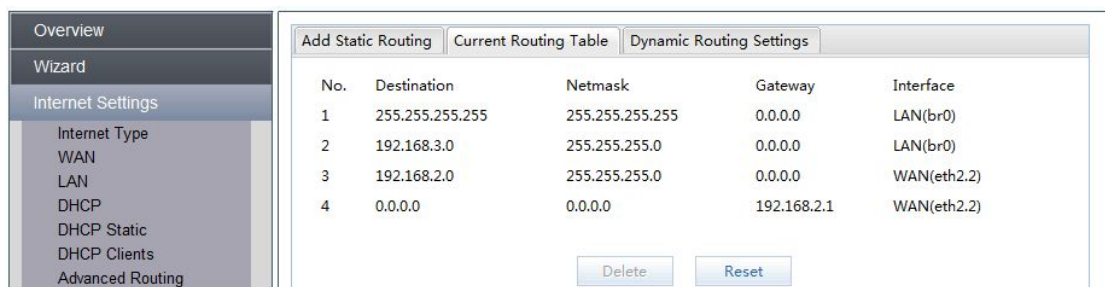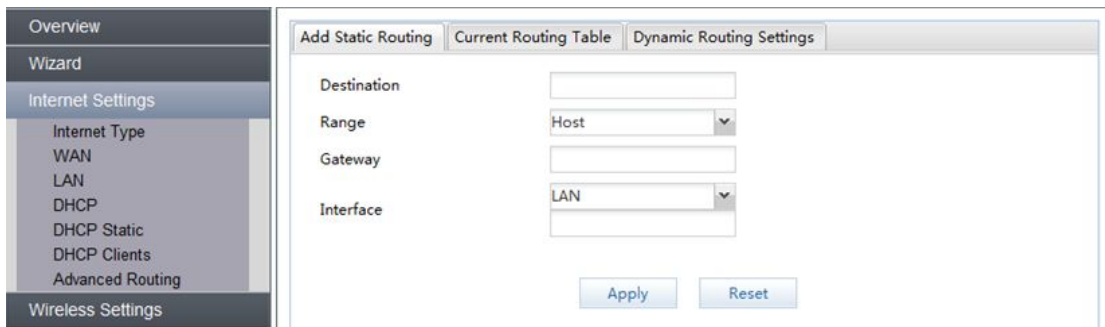

3.2.7 DHCP Clients

This page shows all DHCP clients (LAN PCs) currently connected to your network.

3.2.8 Advanced Routing

You can set enable Static Routing to let the router forward packets by your routing policy. Enter the destination LAN IP address, Default Gateway and Interface of static routing rule

RIP (Routing Information Protocol) is a distance-vector protocol that uses hop count as its metric. RIP is widely used for routing traffic in the global Internet and is an interior gateway protocol (IGP), which means that routing is done within a single autonomous system.
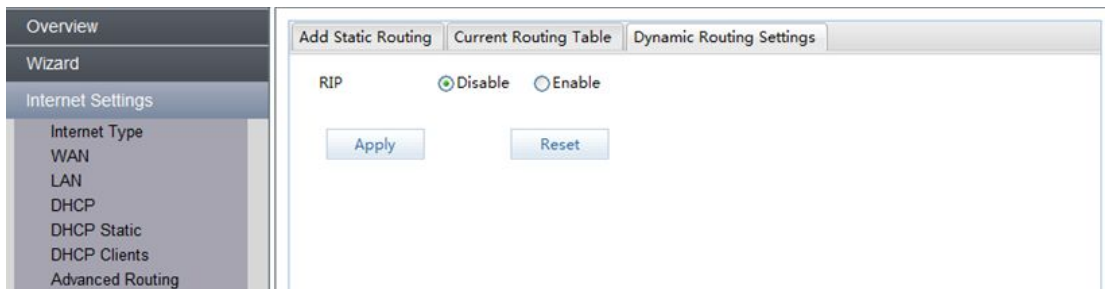
3.3 Wireless Setting
3.3.1 Basic Setting

You can set parameters that are used for the wireless stations to connect to this router. The parameters include Network Mode, SSID, AP Isolation and Frequency. Enables the wireless network name to be broadcast publicly to any wireless users within wireless range of your network. Disabling the SSID broadcast makes the network name private and provides enhanced security by requiring wireless users to enter the network name manually when

creating a wireless network profile on their computer. If you enable AP Isolation every client on your guest Wi-Fi network will be totally isolated from each other.

3.3.2 Wireless Security Setting

Choose your wireless network (SSID) and security key. For safety, we suggest you choose WPA-PSK/WPA2-PSK for encryption.

RT880 router supports wireless access policy setup. Enter the wireless clients' MAC address which you would like to disable or enable access to the router.

3.3.3 WDS

- Repeater Mode: When you choose repeater mode, each router is on its own subnet with its client devices. Allows different SSID on repeated network.

- Bridge Mode: the device in bridge mode can act as a bridge and also filter/inspect packets. It has all the interfaces belonging to the same LAN segment and you do not have to change other network setting when you add a transparent device to the network. It is usually used for connecting a private network behind an existing firewall or a router.

- Lazy Mode: the router will automatically search the nearby routers that have the same SSID, Port, security mode and PHY mode.

  Note：To obtain good compatibility, please use the same type of products.

3.3.4 WPS

WPS is the simplest way to establish a connection between the wireless clients and the wireless router. You do not have to select the encryption mode and fill in a long encryption passphrase every time when you try to setup a wireless connection. You only need to select enable on WPS configuration and press a button on wireless.
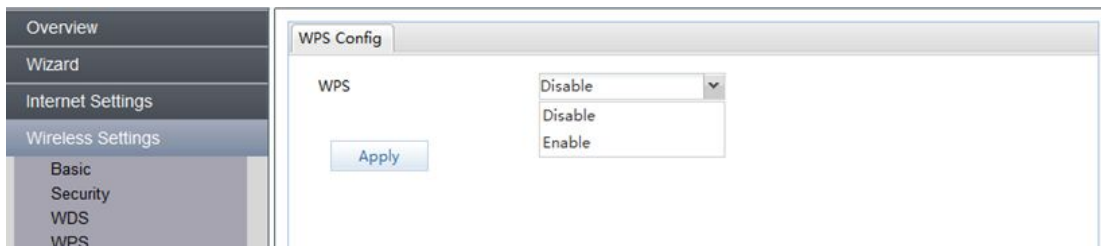
WPS menu displays the current state of WPS, WPS current recognition information, SSID's name, WPS authorization mode, WPS encryption type, WPS encryption key, AP random password, etc.." Generate "Generate Reset" of box "configure out," OOB ", the 8 bit password that is currently generated randomly, and the new password can be retrieved.
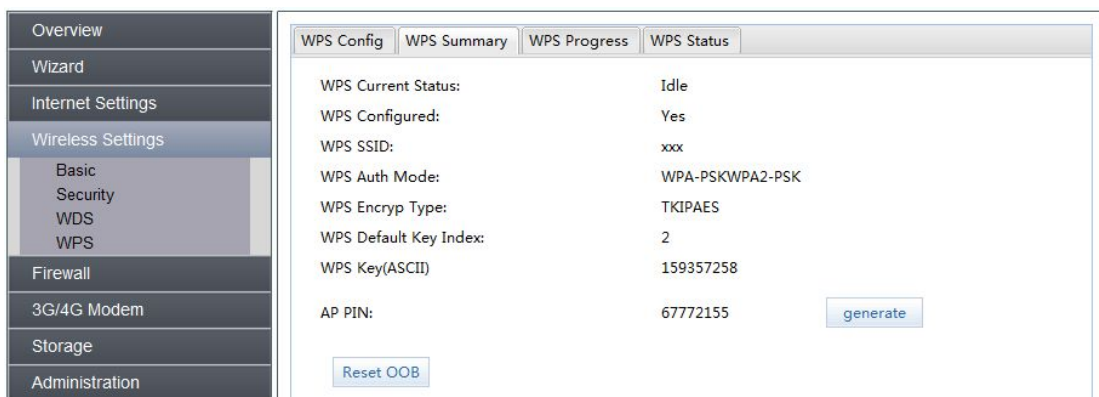
3.4 Firewall
3.4.1 MAC/IP/Port Filtering
a) Click enable if you want to open the filters.
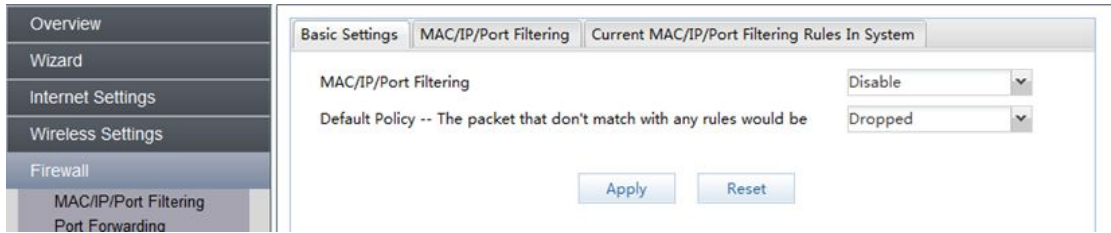
- MAC Filters are used to deny or allow LAN computers from accessing the Internet and network by their MAC address.
- IP filters can allow or deny computers access to the Internet based on their IP address.
- Port filters can allow or deny computers access to the Internet based on their ports.

b) Enter at least one option below, to allow or deny computer access to Internet.
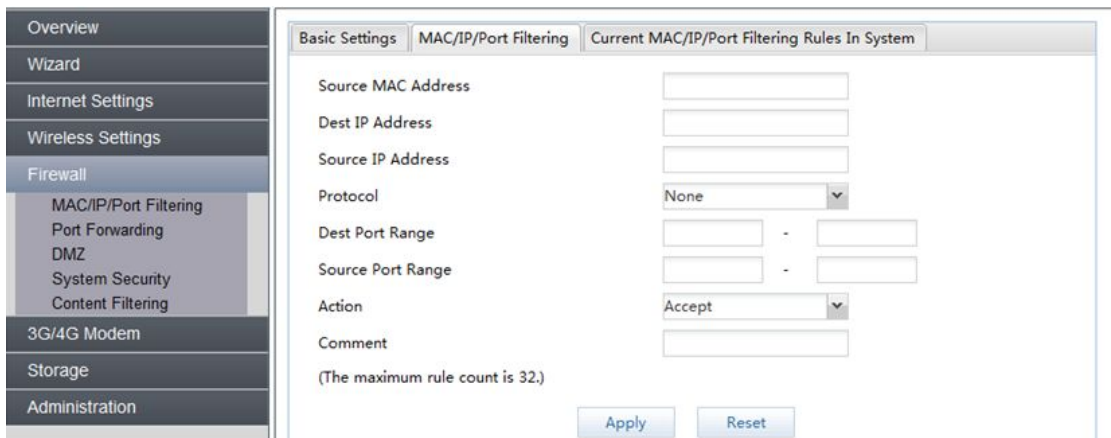
c) List of current MAC/IP/Port filtering rules in system.
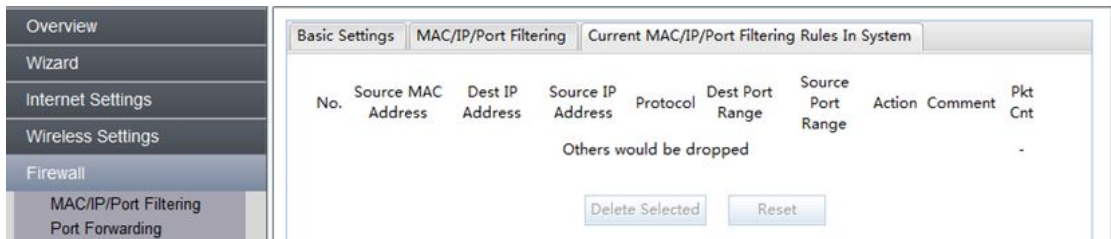
3.4.2 Port Forwarding

Port Forwarding: use the Port Forwarding (Virtual Server) function when you want different servers/client in your LAN to handle different service/Internet application type (e.g. Email, FTP, Web Server etc) from the Internet.
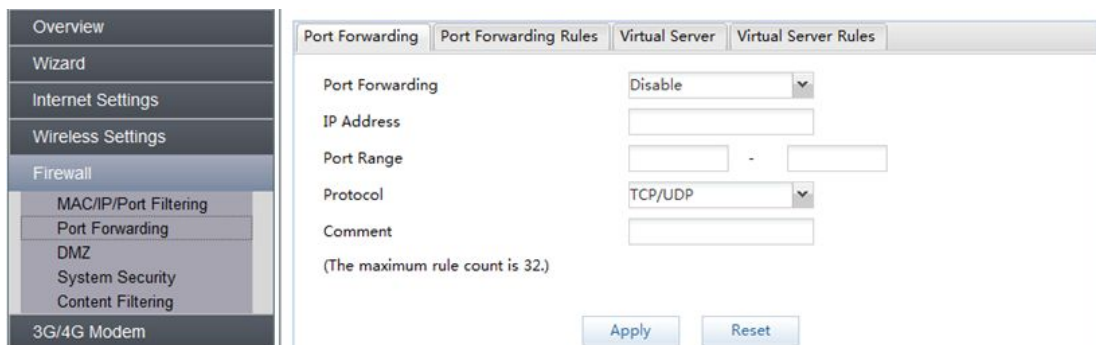
List of port forwarding

rules.
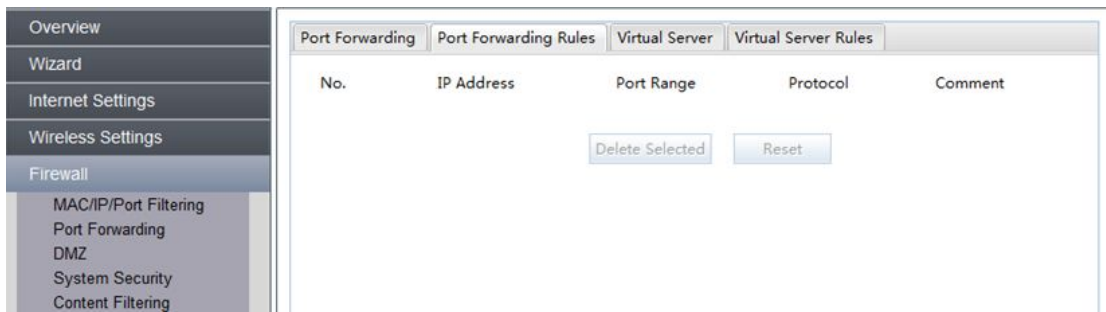
Virtual server

The Virtual Server allows you to re-direct a particular service port number (from the Internet/WAN Port) to a particular LAN private IP address and its service port number.
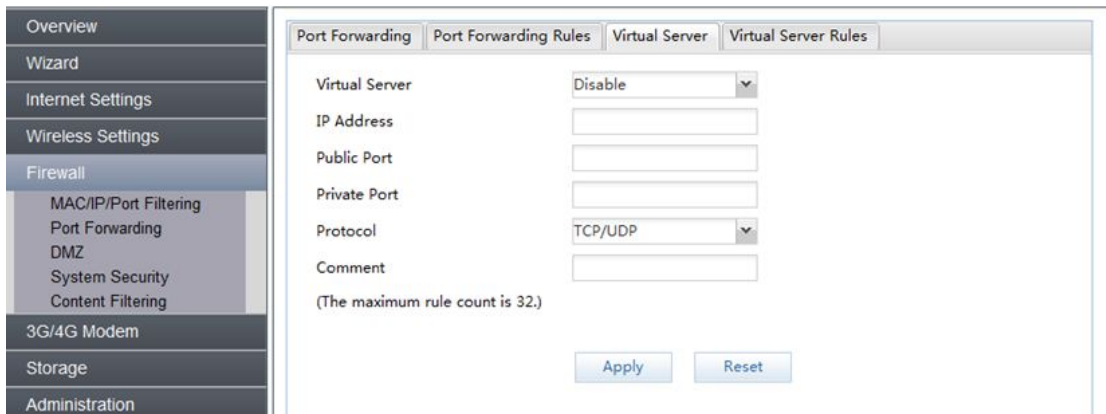
List of virtual server rules.
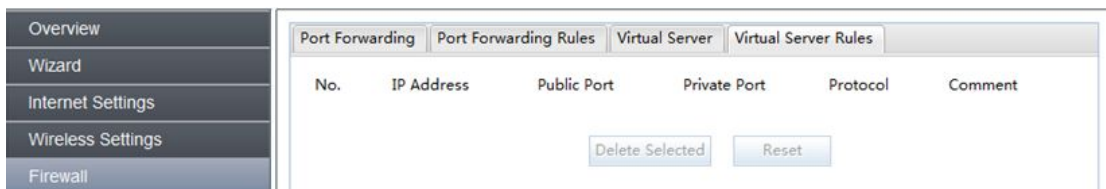
3.4.3 DMZ

If you have a client PC that cannot run an Internet application (e.g. Games) properly due to the NAT firewall, then you can release the firewall restrictions to unrestricted two-way Internet access by defining a DMZ Host. The DMZ function allows you to re-direct all packets going to your WAN port IP address to a particular IP address in your LAN.
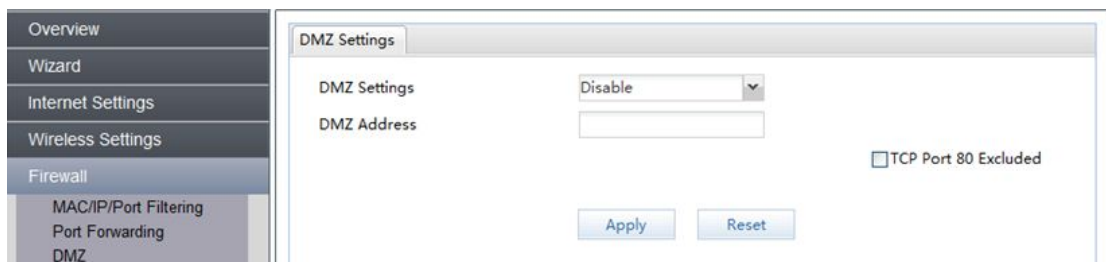
3.4.4 System Security

The RT880 router's firewall can block common hacker attacks, including:
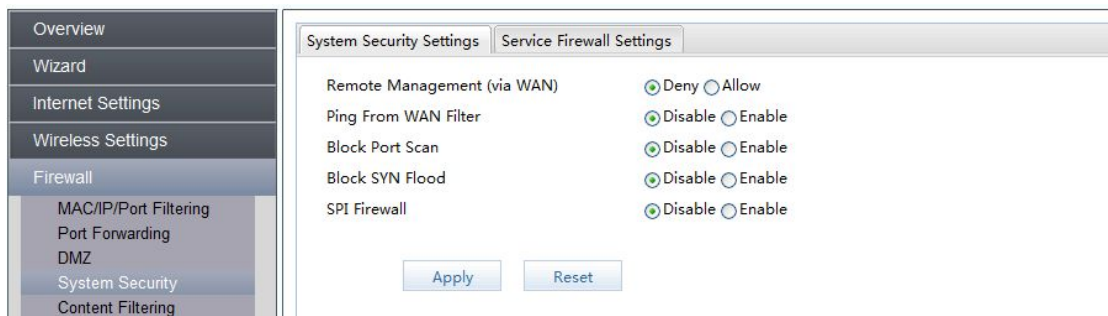
- Remote Management: Remote management allows you to manage the router from a remote location.
- Ping From WAN Filter: The router's WAN port will not respond to any ping requests.
- Block Port Scan: Protects the router from port scans.
- Block SYN Flood: Protects the router from SYN flood attack.
- SPI Firewall: Allows for robust protection from malicious attacks over the internet.
  There is Service Firewall Settings ,it can way to config security for specific services, like HTTP, FTP and Telnet.
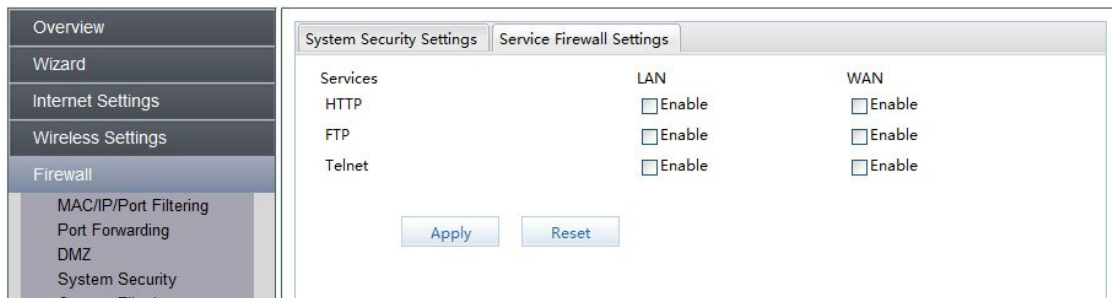
3.4.5 Web Content Filter

These security options in RT880 can block websites from installing add-ons.
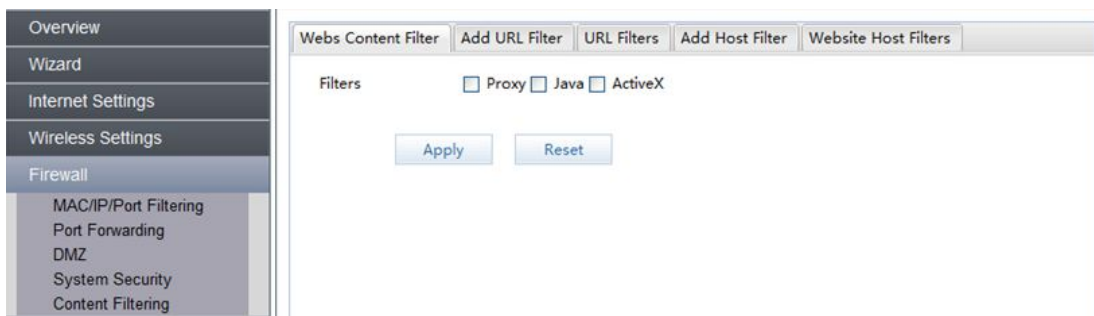
You can block access to some websites from particular PCs by entering a full URL address of the
website.
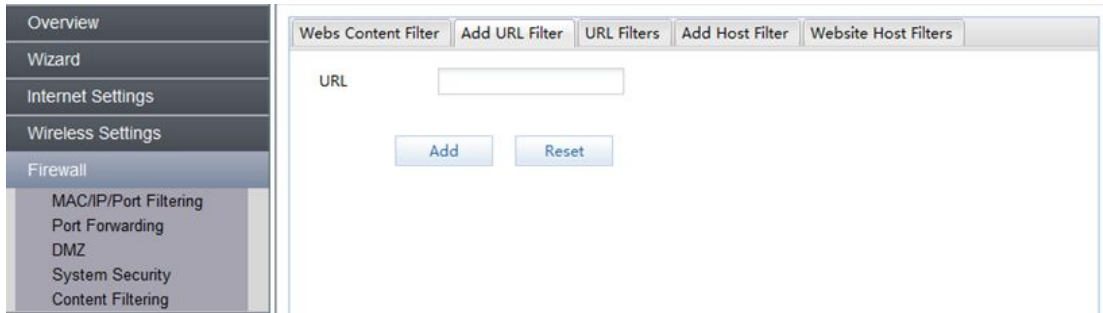
List of URL
filters.
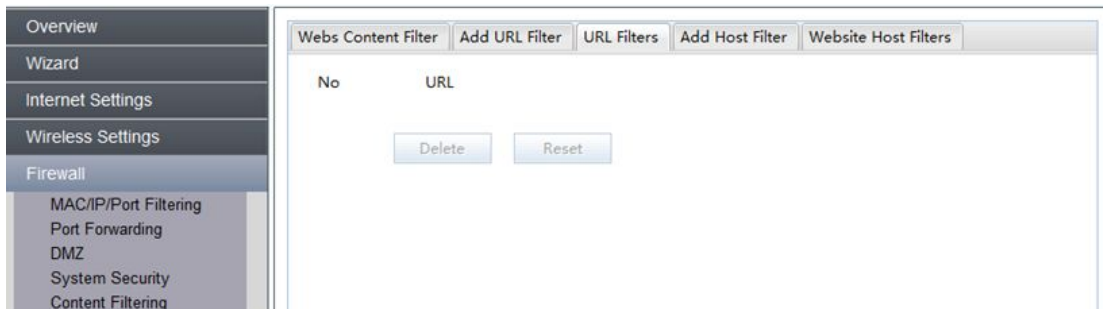
You can block access to some websites from particular PCs by entering keywords of the
website
hosts.
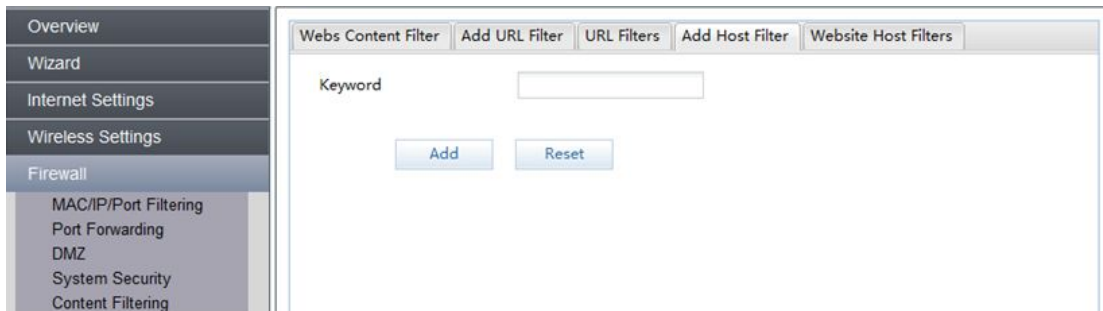
List of website host
filters.
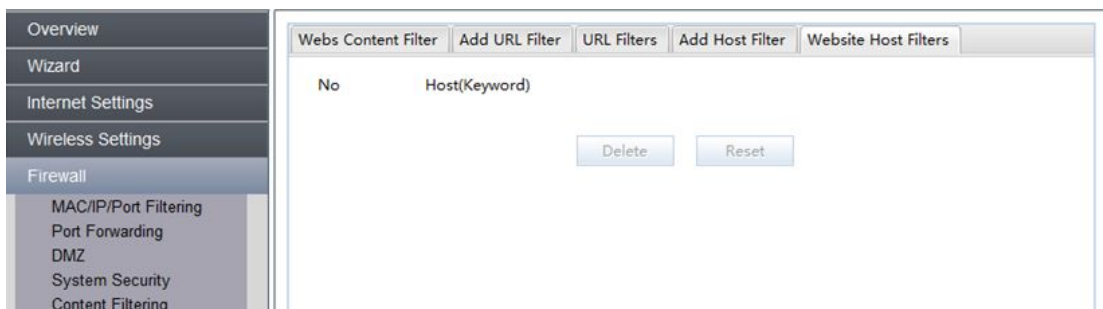
3.5 3G/4G
3.5.1.1 3G/4G Setting

If you choose 3G/4G SIM card to access network, please set "APN,""Dial Number," "Auth," User Name and Password which are provided by your mobile network operator, and click "Apply."

3.5.1.2 Operation Mode Setting

There is way to config operation mode to auto or manual.

3.5.1.3 Antenna Setting

Antenna: choose External/Internal Antenna. RT880 is equipped with internal Antenna, but you can connect External Antennal if needed.

3.5.2 3G/4G Status

3G/4G status allows you to monitor the current wireless connection status, such as Modem Status, SIM Card Status, Net Info; you can also choose you network mode.

3.5.2.1 Modem Status

3.5.2.2 SIM Card Status

This page shows the status of the SIM card status, IMSI and cell broadcast:
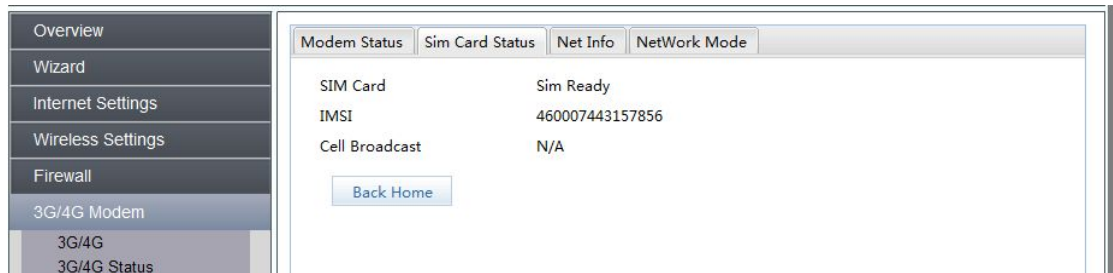
3.5.2.3 Net Info

This page shows the registration information of the network, including the operator information, the registered domain, the signal strength and the network type:
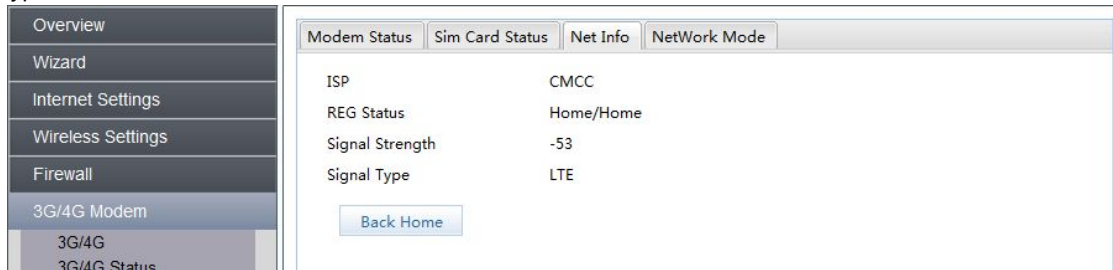
3.5.2.4 Network Mode

There is way to set the network mode. And the option can work only when the SIM card is inserted and the 3G/4G is not connected to the network.
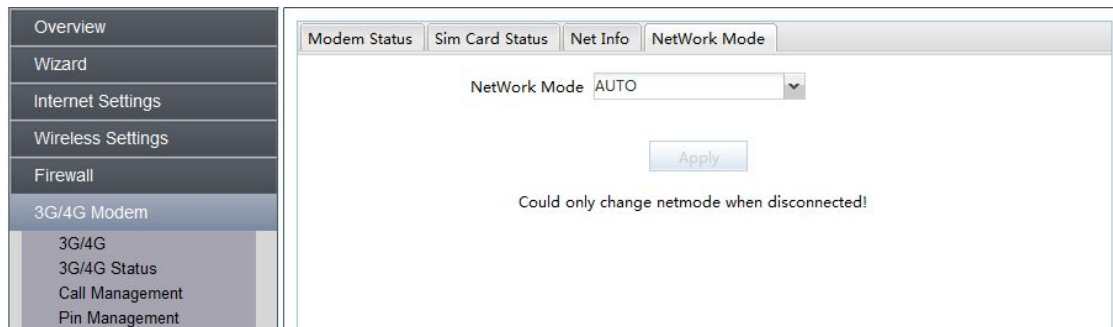
3.5.3 Call Management

Call forwarding ： Here you can set the call forwarding number (forward unconditionally, forward on "no answer", forward on "out of reach", forward on "busy").

This feature requires operators to support, when the call is transferred, the call will be automatically transferred to the pre-set phone number.
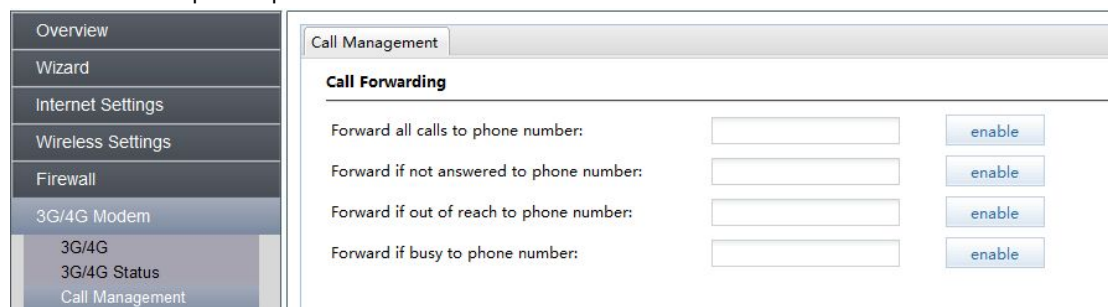
Call barring：This feature requires operators to support.
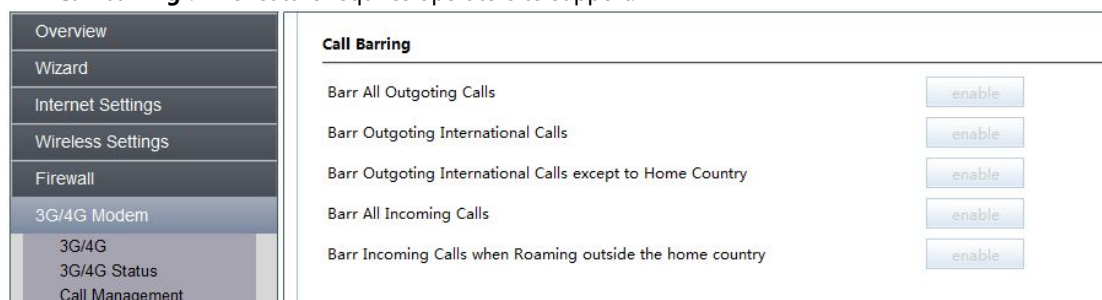
Other function: Call conference：This feature requires operators to support. And you should enable call waiting first.

Call waiting：This feature requires operators to support.

Do not send my phone number：This feature requires operators to support.

Warm line：It is the same as automatic call, it is done a call to the configured number in the configured timer. If user hang up the phone and waits the warm line timer, it will be done an automatic call to the configured number.

Anonymous call blocking：It is related to the network is sending a call without Calling ID and then, router block the call.

Do not disturb：The phone will not ringing when incoming call, but the phone lights still flashing.

3.5.4 PIN Management

Here you can enable/disable PIN.
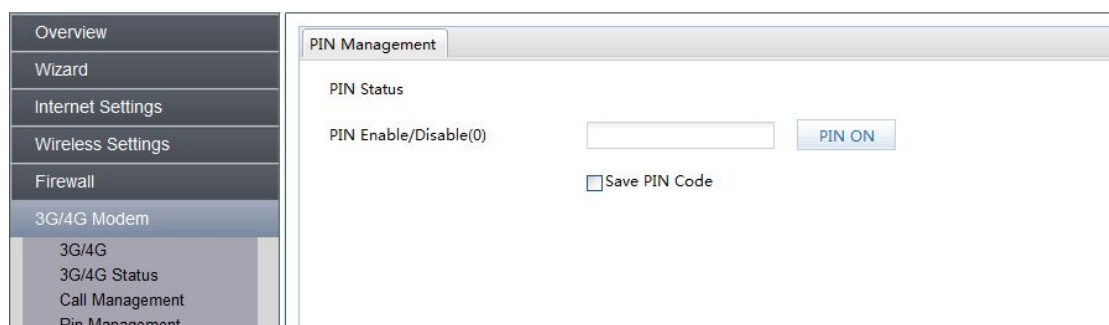
3.6 Storage
3.6.1 FTP Server

FTP is a file transfer protocol for exchanging files over any TCP-based computer network. A

FTP client may connect to a FTP server to control files on that server. As there are many FTP client and server programs available for different operating systems, FTP is a popular choice for exchanging files independent of the operating systems involved. RT880 provides USB and T-Flash port that you can insert U-Disk or T-Flash. Enter your FTP Server Name, Port and Session. Then "Apply."
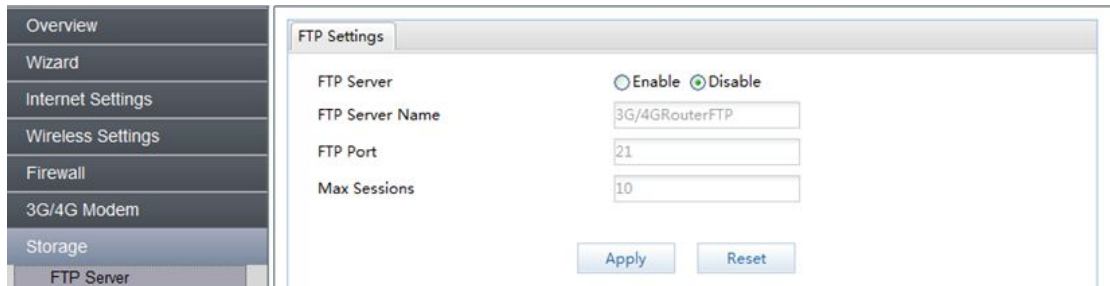
3.7 Administration

3.7.1 Management

Language Setting: select your language (default language is English)
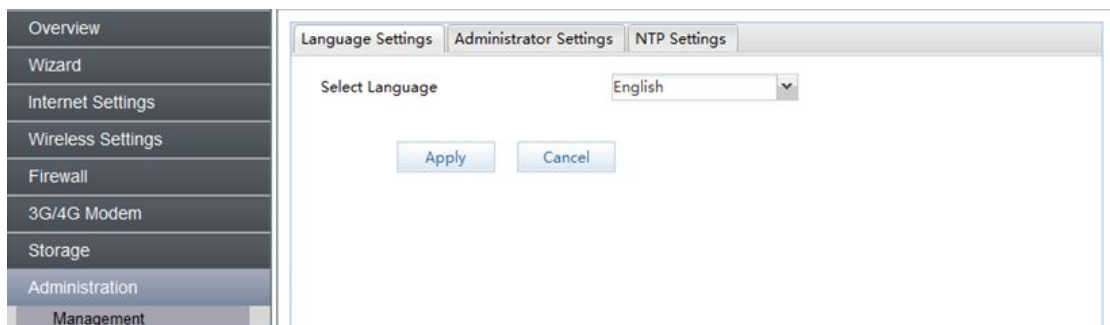
Administrator Settings: You can change the Account and Password required to log into the router's web-based management system.
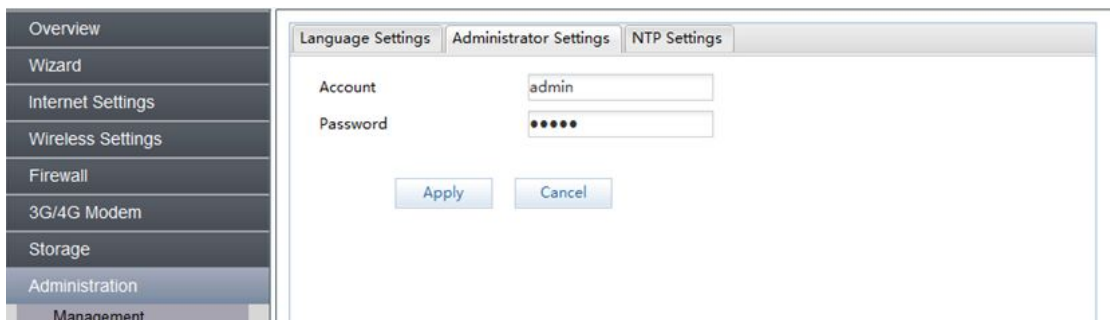
NTP Setting: Select the time zone of the country you are currently in and set the IP Address of the Local NTP Server. Press "Sync with host" to synchronize with the NTP Server.
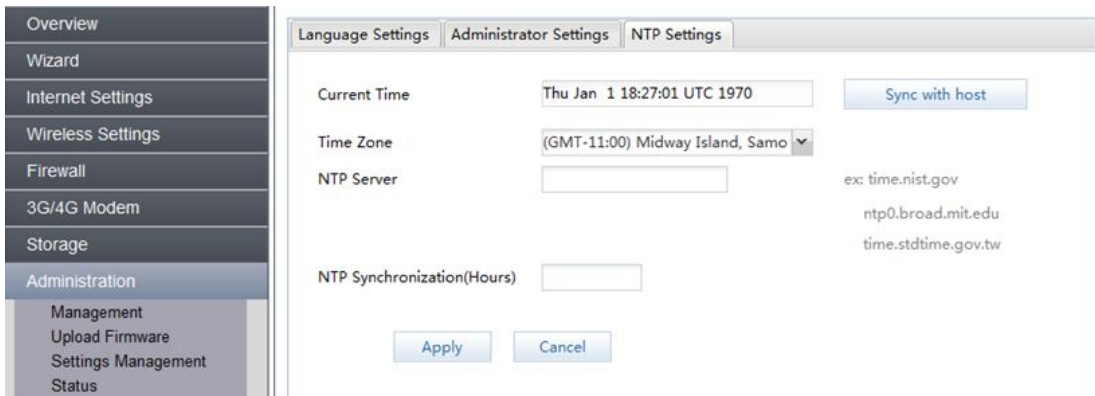
3.7.2 Upload Firmware

The page allows you to upgrade the router's firmware. To upgrade the firmware of your router, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also use the Browse button to find the firmware file on your computer.
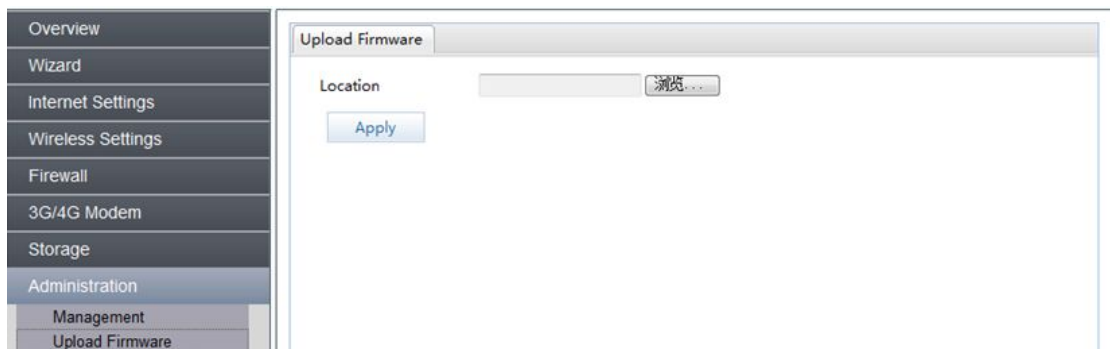
3.7.3 Settings Management

This page allows you to save the current router configurations by using Export Setting. When you save the configurations, you also can re-load the saved configurations into the router through the Import Setting.

3.7.3.1 Export Settings

The page you can set your personality to export, before you have to restore the factory settings
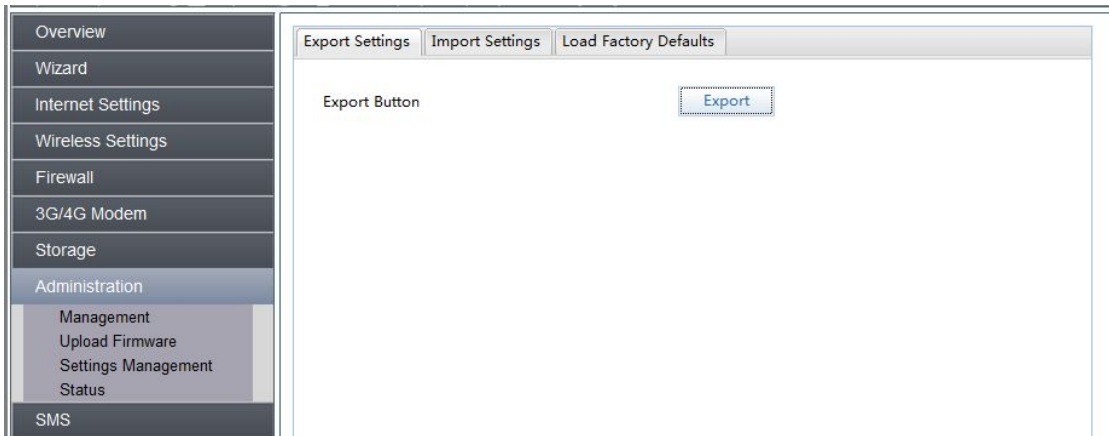
3.7.3.2 Import Settings
The page you can set up your personality to import, restore before setting
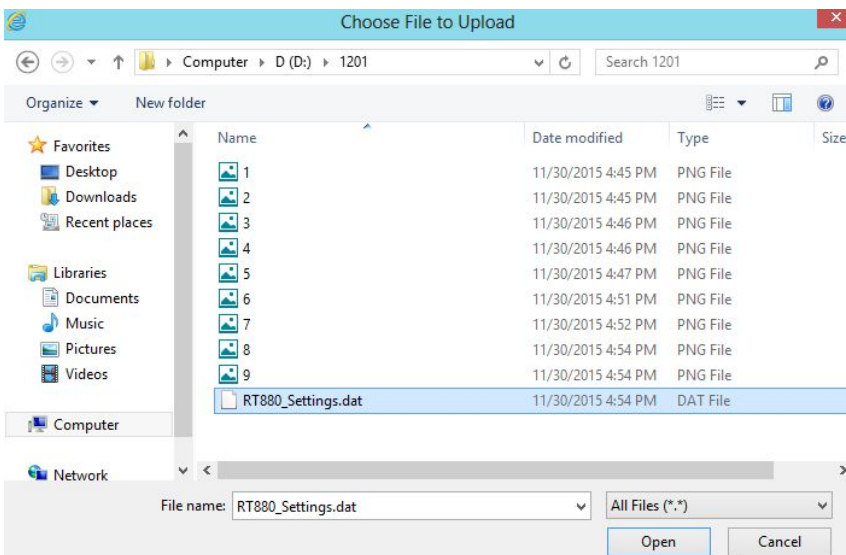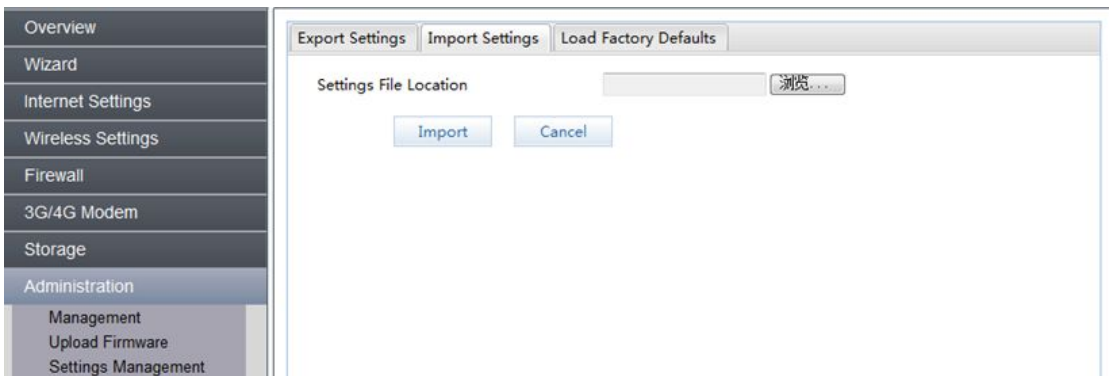
3.7.3.3 Load Factory Defaults
Load Factory Defaults: You can reset the broadband router when system stops responding correctly or stop functions.
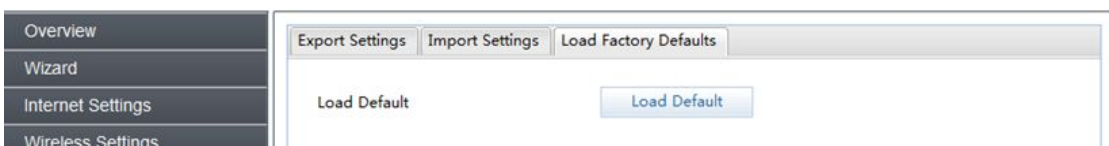
3.7.4 Status

System status session allows you to monitor the current status of your router.
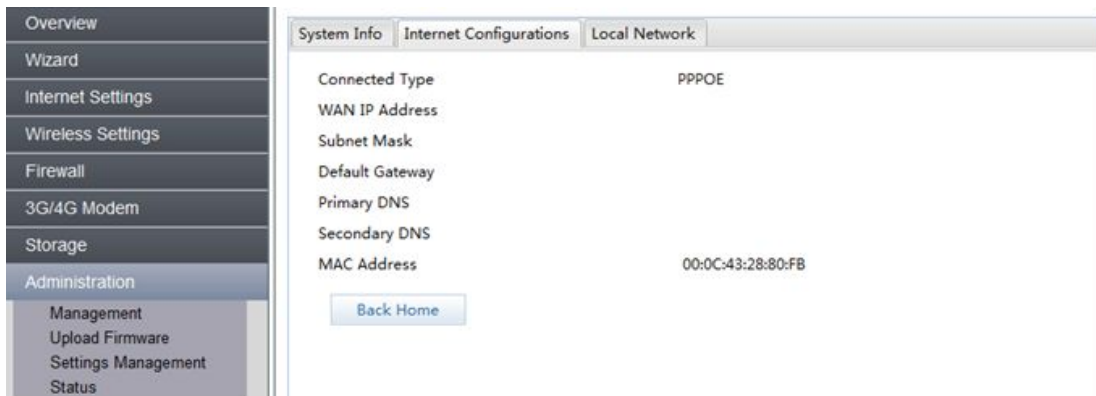
3.8 SMS

When using SIM card to access network, you could not only make phone calls, but also send text messages at the time.

Note: The SMS storage is limited, please refresh and delete unwanted SMS periodically.

3.8.1   SMS Inbox

All received messages will be saved in inbox.
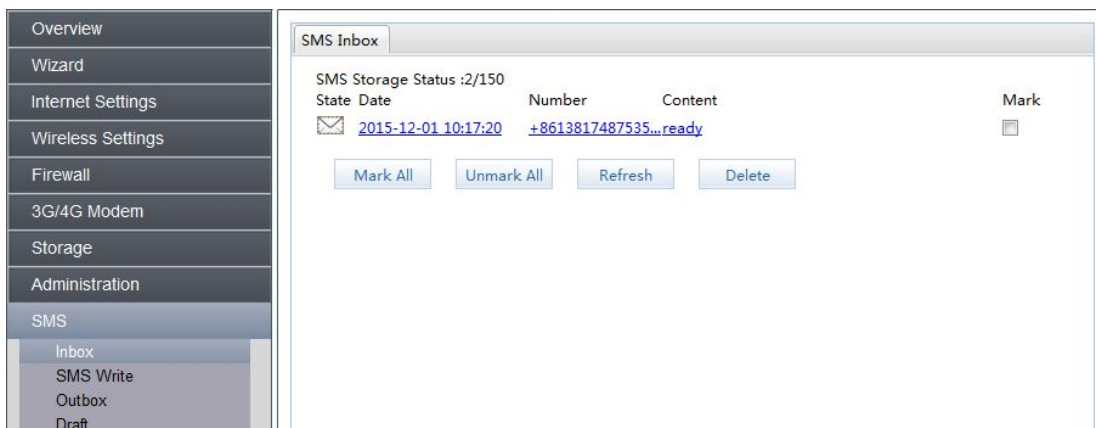
3.8.2   SMS Write

Here you can edit SMS content and phone number, then send or save.
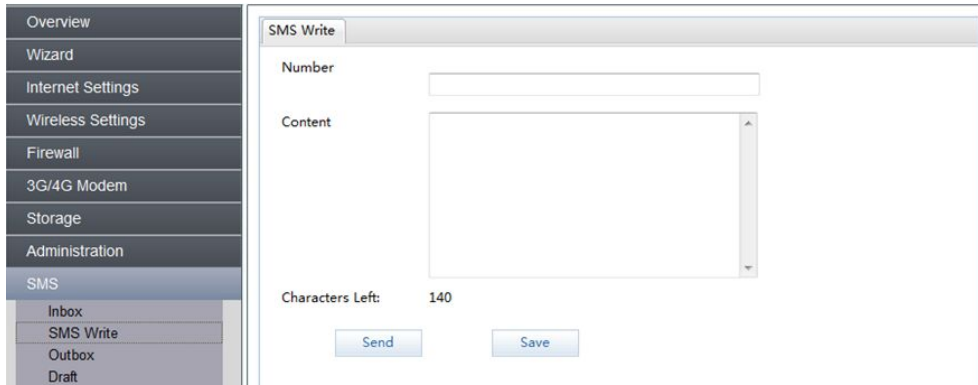
3.8.3 Outbox

All sent messages will be saved in outbox.

3.8.4 Draft

Appendix Ⅰ:

Call function:

This device provides call and text message functions. When you browse internet, you can keep connection with your family and friends.

The steps are as follows:

1) Insert 3G SIM card, and open the device

2) Connect the telephone through the RJ11 port of the device

3) When phone function is booted up, your telephone's signal LED will turn on. Then you can start to use the call functions.
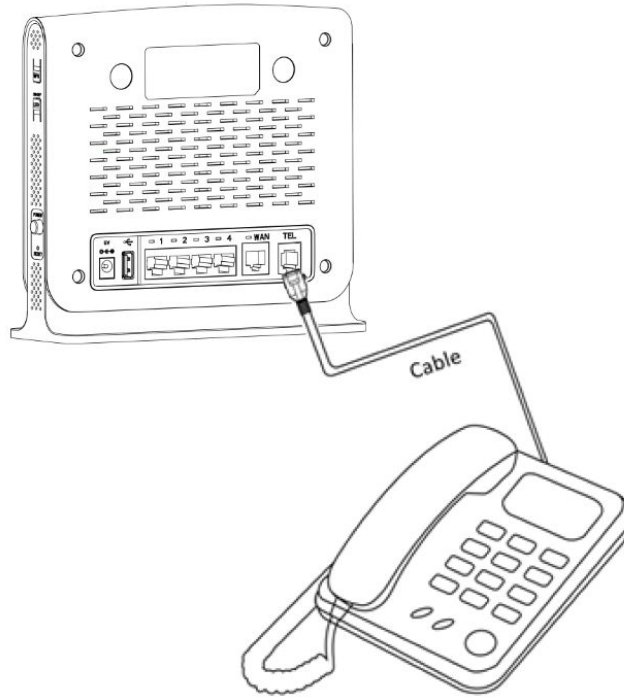
Caution:

1.   Please make sure that your SIM card supports voice call service

2.   Please start to use the call functions; after call function is fully booted up (all text messages are received)

Appendix II:

FAQ:

This Appendix provides solutions to some problems that could be seen when install and use the device. Please read the following instruction, it will help you to solve these problems. If you fail to solve your issues from this FAQ, please contact us.

Problem	Solution
Wireless device cannot connect to SSID.	■ Please make sure the wireless function of your PC is turned on. If it is already on, please refresh the network list. ■ Please make sure your PC is in the wireless signal coverage of the device. ■ Please make sure your device is away from the electromagnetic interference. ■ Please make sure your device's wireless function is turned on.

	If the problem is still not solved, please try to reset your device to default settings.
Cannot Access internet:	■ Please make sure your PC is in the wireless signal coverage of the device. ■ Please make your device's DHCP function is turned on. ■ Please make sure your firewall is turned off. If the problem is still not solved, and your PC has got connected to the network, but the wireless icon shows an yellow exclamation mark. It means your wireless card could not be allocated an IP address. Please use the static IP settings, and fill DNS and gateway according to instructions of your operator.
Input IP, but fail to login to the administration page.	■ Please make sure the problem is not caused by the Cache of the internet browser, please clean up the Cache. ■ Please make sure the network connection is good, and the light of connected ports are on. ■ Please make sure the username and password are correct If the problem is still not solved, and your PC already gets the IP address. You can try to use wireless connection or static IP methods to try it again. If connected via wireless connection, please try to ping 192.168.1.1 to see if there is any response. If responses are received, please check if you set an agent server for connection. If no agent server is set, then please not to set an agent server, and reset the device.
IP conflict ion when turn on the device:	■ Please make sure if your LAN has other DHCP servers. ■ Please make sure that IP address is not occupied by other computers or devices. If occupied, please change the IP address of that device to avoid the IP conflicts.

Appendix III:
Safety warning:
Read the user guide:
Please read the user guide before using this device.

Stay away from interference:
All the wireless devices could be possibly interfered, and it will affect the performance of the device

Turn off the device in restricted area:
Please follow any instruction, turn off the device around airplanes, medical devices, gases, chemicals or explosive areas

Qualified services:
Please don't disassemble this device yourself. Please contact professionals to repair and install the device.

Accessories and batteries:
Please don't touch the device using wet hands, when it is in charge. Please only use the accessories and batteries that are recognized to be compatible to the device.

Operating temperature:

0°C~45°C , Storage temperature: -20°C~65°C and Please use the standard 5V/3A power supply accessories

Danger of explosion:
Turn off your device in any areas that explosion could possibly happen. Please follow all the notices in the areas where spark could cause fire or explosion.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 30 cm between the radiator and your body.

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

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

NOTE: 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

 - This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.