RTL8676 11N ADSL2+ Wireless Router

User Manual

Contents

1 Introduction

The device supports multiple line modes. With four 10/100 base-T Ethernet interfaces at the user end, the device provides high-speed ADSL broadband connection to the Internet or Intranet for high-end users like net bars and office users. It provides high performance access to the Internet with a downstream rate of 24 Mbps and an upstream rate of 1 Mbps. It supports 3G WAN, 3G backup, and Samba for USB storage.

The device supports WLAN access, such as WLAN AP or WLAN device, to the Internet. It complies with specifications of IEEE 802.11, 802.11b/g/n, WEP, WPA, and WPA2 security. The WLAN of the device supports 2T2R.

1.1 Packing List

- 1 x device
- 1 x external splitter
- 1 x power adapter
- 2 x telephone cables
- 1 x Ethernet cable

1.2 Safety Precautions

Take the following instructions to prevent the device from risks and damage caused by fire or electric power:

- Use the type of power marked in the volume label.
- Use the power adapter in the product package.
- Pay attention to the power load of the outlet or prolonged lines. An overburden power outlet or damaged lines or plugs may cause electric shock or fire accidents. Check the power cords regularly. If you find any damage, replace it at once.
- Proper space left for heat dissipation is necessary to avoid damage caused by overheating to the device. The long and thin holes on the device are designed for heat dissipation to ensure that the device works normally. Do not cover these heat dissipation holes.

- Do not put this device close to a heat source or under a high temperature occurs. Keep the device away from direct sunshine.
- Do not put this device close to an overdamp or watery place. Do not spill fluid on this device.
- Do not connect this device to a PC or electronic product unless instructed by our customer engineer or your broadband provider. Wrong connection may cause power or fire risk.
- Do not place this device on an unstable surface or support.

1.3 LEDs and Interfaces

Front Panel

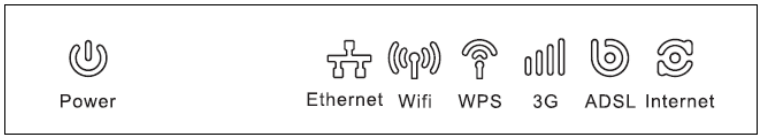


Figure 1 Front panel

The following table describes the LEDs of the device.

LED	Color	Status	Description
Power	Red/Green	Off	Router powered off
		Blinking 2Hz Red	Failure on power-on self-test
		Solid Green	Router powered on correctly.
Ethernet	Green	On	Ethernet connection is available.
		Off	Ethernet connection is unavailable.
Wifi	Green	On	Wi-Fi connection is available.
		Off	Wi-Fi connection is unavailable.
		Blinking Green	Negotiation or traffic on line.
WPS	Red/Green	Solid Green	WPS active
		Blinking 2Hz Green	WPS negotiation open
		Solid Red (20	Problems on WPS registration

LED	Color	Status	Description
		seconds)	
3G	Red/Green	Blinking Green	Negotiation
		Solid Green	Up
		Quick Blinking Green	Tx/Rx traffic on line
		Solid Red	Authentication failed
		Off	Traffic through broadband interface
ADSL	Green	Off	Router powered off
		Blinking 2Hz	No line detected
		Blinking 4Hz	Line training
		Solid	Line up
Internet	Red/Green	Blinking Green	PPP/DHCP negotiation
		Solid Green	PPP/DHCP up
		Quick Blinking Green	Tx/Rx traffice on line
		Solid Red	Authentication failed

Rear Panel

Figure 2 Rear panel

The following table describes the interface of the device.

Interface/Button	Description
ADSL	RJ-11 interface connecting to a telephone set through a telephone cable

Eth1/2/3/4	Ethernet RJ-45 interfaces connecting to the Ethernet interfaces of computers or Ethernet devices
USB	Connecting to a 3G data card or other USB storage device
WLAN/WPS	● Press the button for less than 1 second to enable WLAN function. ● Press the button for more than 10 seconds to enable WPS function.
Reset	Reset to the factory defaults. To restore factory defaults, keep the device powered on and push a paper clip into the hole. Press down the button for more than 5 seconds and then release.
Power On/Off	Push to power on/off the device.
12V⎓1A	Interface connecting to the power adapter. The power adapter output is: 12V DC, 800mA

1.4 System Requirements

- A 10 baseT/100BaseT Ethernet card is installed on your PC.
- A hub or switch (attached to several PCs through one of Ethernet interfaces on the device)
- Operating system: Windows Vista, Windows 7, Windows 98SE, Windows 2000, Windows ME or Windows XP
- Internet Explorer V5.0 or higher, Netscape V4.0 or higher, or Firefox 1.5 or higher

1.5 Features

- Various line modes
- External PPPoE dial-up access
- Internal PPPoE and PPPoA dial-up access
- Leased line mode
- 1483B, 1483R, and MER access
- Multiple PVCs (eight at most) and these PVCs can be isolated from each other

- A single PVC with multiple sessions
- Multiple PVCs with multiple sessions
- Binding of ports with PVCs
- 802.1Q and 802.1P protocol
- DHCP server
- NAT and NAPT
- Static route
- Firmware upgrade: Web, TFTP, FTP
- Reset to the factory defaults
- DNS relay
- Virtual server
- DMZ
- Two-level passwords and user names
- Web user interface
- Telnet CLI
- System status display
- PPP session PAP and CHAP
- IP filter
- IP QoS
- Samba
- Remote access control
- Line connection status test
- Remote management (telnet and HTTP, TR069)
- Backup and restoration of configuration file
- Ethernet interface supports crossover detection, auto-correction and polarity correction
- UPnP
- 3G WAN and 3G Backup
- Samba for USB storage

2 Hardware Installation

Step 1 Connect the **ADSL** port of the device and the **Modem** port of the splitter with a telephone cable. Connect the phone to the **Phone** port of the splitter through a telephone cable. Connect the incoming line to the **Line** port of the splitter.

The splitter has three ports:

- Line: Connect to a wall phone port (RJ-11 jack).
- Modem: Connect to the DSL port of the device.
- Phone: Connect to a telephone set.

Step 2 Connect an **Eth** port of the device to the network card of the PC through an Ethernet cable (MDI/MDIX).

Note:
Use twisted-pair cables to connect the device to a Hub or switch.

Step 3 Plug one end of the power adapter to the wall outlet and the other end to the **Power** port of the device.

Connection 1: Figure 3 displays the application diagram for the connection of the device, PC, splitter and telephone sets, when no telephone set is placed before the splitter.

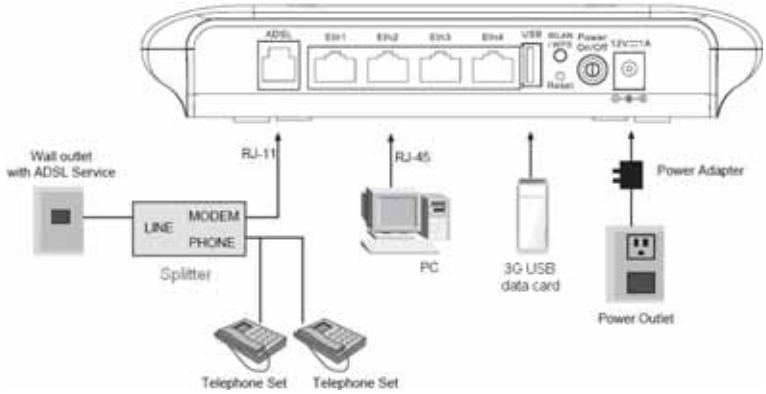


Figure 3 Connection diagram (without telephone sets before the splitter)

Connection 2: Figure 4 displays the application diagram for the connection of the device, PC, splitter and telephone sets when a telephone set is placed before the splitter.

As illustrated in the following figure, the splitter is installed close to the device.

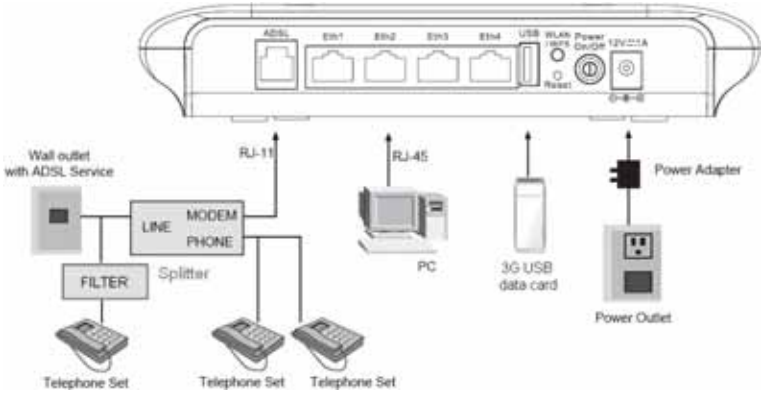


Figure 4 Connection diagram (with a telephone set before the splitter)

Note:

When connection 2 is used, the filter must be installed close to the telephone cable. See Figure 4. Do not use the splitter to replace the filter.

Installing a telephone directly before the splitter may lead to failure of connection between the device and the central office, or failure of Internet access, or slow connection speed. If you really need to add a telephone set before the splitter, you must add a microfilter before a telephone set. Do not connect several telephones before the splitter or connect several telephones with the microfilter.

3 Web Configuration

This chapter describes how to configure the device by using the Web-based configuration utility.

3.1 Accessing the Device

The following is the detailed description of accesing the device for the first time.

Step 1 Open the Internet Explorer (IE) browser and enter **http://192.168.1.1**.

Step 2 The **Welcome** page shown in the following figure appears.

Step 3 Click **Next** to configure your user's account and Wi-Fi network as shown in the following **Connectivity** page, or click **Advanced Configuration** for more options.

By default, the user's name is MAC@acs and password is the MAC. The MAC is the equipment's MAC Address leaving out the 2 points.

Step 4 Selecte **Advanced Configuration** to login into the equipment with the user **admin** and password **1234**, or selected **Cancel** to return to the **Welcome** page without saving changes, or select **Next** to save selected changes. When the checkbox **Additional Services** is selected, it will go to the following figure.

When **Solo Speedy (LAN1, LAN2, LAN3 y WIFI)+ VOIP(LAN4)** is selected, the LAN4 port is used as VOIP port for voice service.

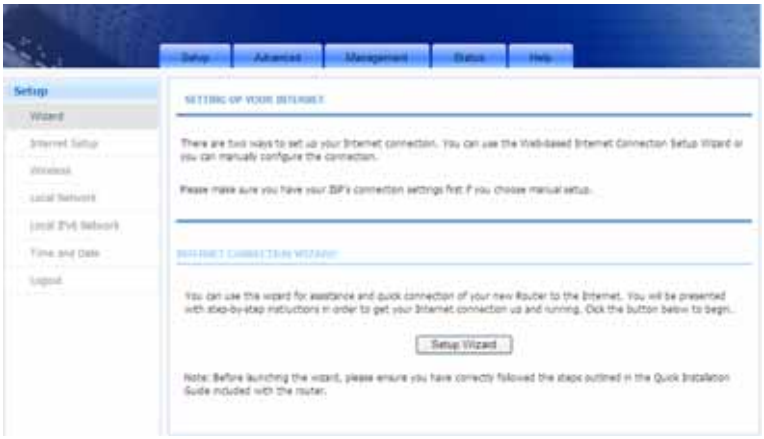
Step 5 Select **Advanced Configuration** to login into the equipment, or select **Cancel** to return to the **Connectivity** page without saving the changes, or selected **Next** to save changes and go to the following **WiFi-Configuration** page.

Next, you are going to config you wireless network. You can enable wireless network, hide the SSID, select a channel and security mode, and input a key as instructed by the screen.

Step 6 Select **Next** to save changes and go to the following figure, or select **Cancel** to return to the **Additional Services** page without saving the changes, or select **Advanced Configuration** to login into the equipment.

The **Login page** is shown as below. Choose the username **admin**, input the password **1234** and click **login**.

If you log in successfully, the page shown in the following figure appears.



If the login information is incorrect, click **Try Again** in the page that pops up to log in again.

3.2 Setup

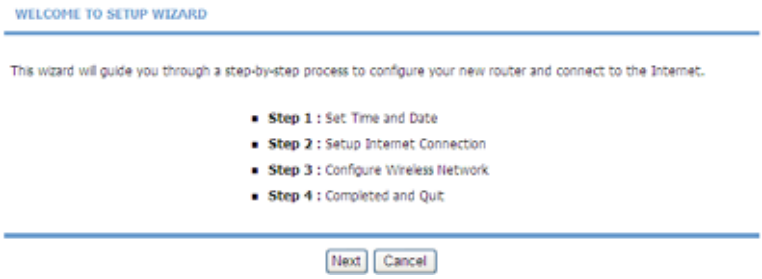
In the main interface, click **Setup** tab to enter the **Setup** menu as shown in the following figure. The submenus are **Wizard**, **Internet Setup**, **Wireless**, **Local Network**, **Time and Date** and **Logout**.

3.2.1 Wizard

Wizard enables fast and accurate configuration of Internet connection and other important parameters. The following sections describe configuration parameters. When subscribing to a broadband service, you should be aware of the method, by which you are connected to the Internet. Your physical WAN device can be Ethernet, DSL, or both. Technical information about the properties of your Internet connection is provided by your Internet service provider (ISP). For example, your ISP should inform you whether you are connected to the Internet using a static or dynamic IP address, or the protocol, such as PPPoA or PPPoE, that you use to communicate over the Internet.

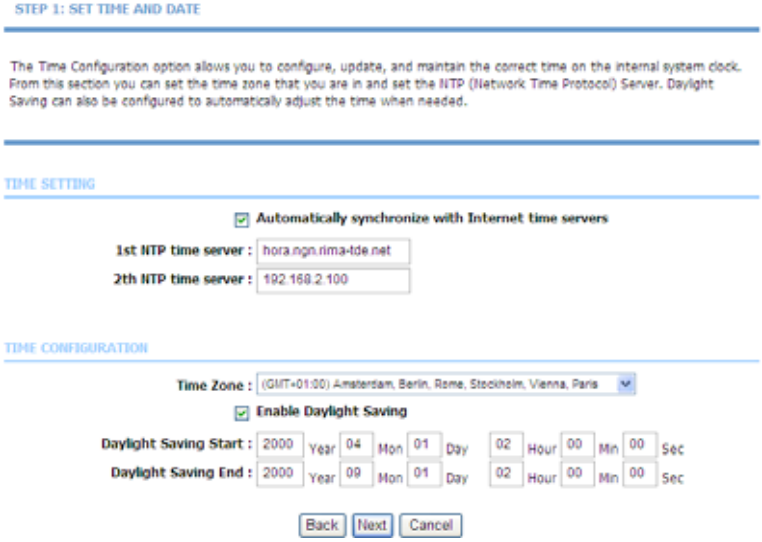
Step 1 Choose **Setup** > **Wizard**. The page shown in the following figure appears.

Step 2 Click **Setup Wizard**. The page shown in the following figure appears.



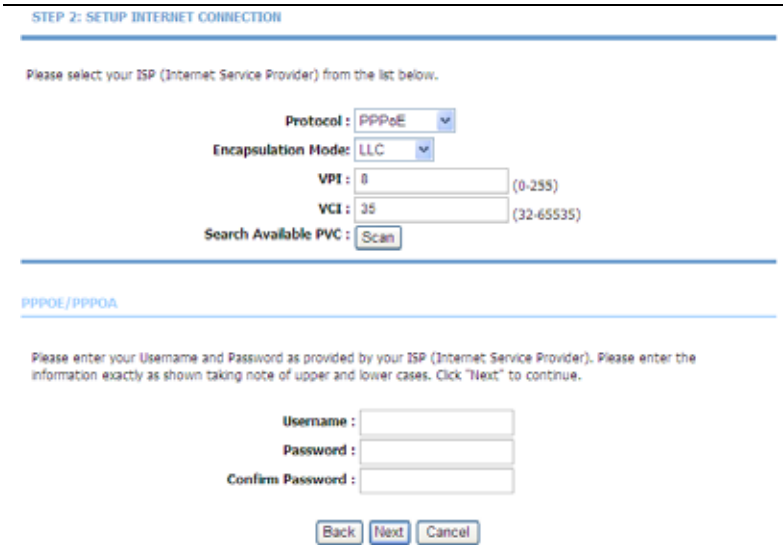
Step 3 There are four steps to configure the device. Click **Next** to continue.

Step 4 Set the time and date.

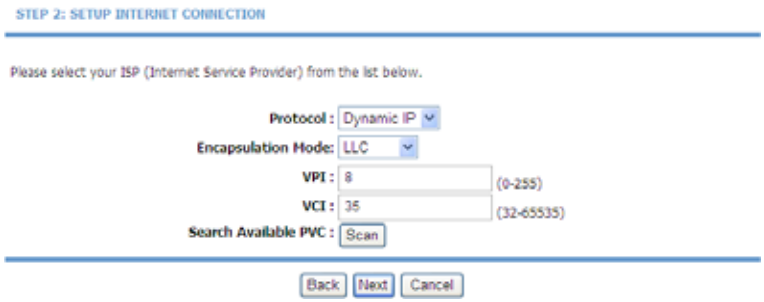


Step 5 Configure the Internet connection.

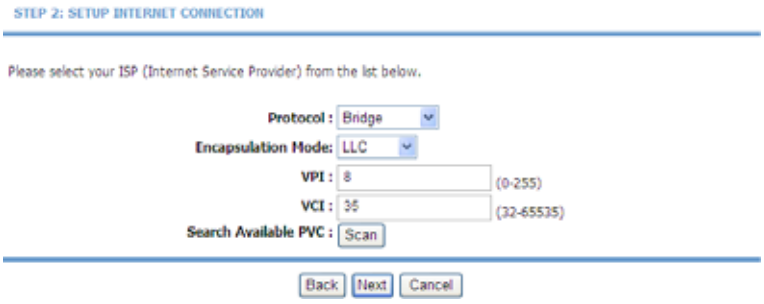
Set the VPI and VCI. If the **Protocol** is **PPPoE** or **PPPoA,** the page shown in the two following figure appears.



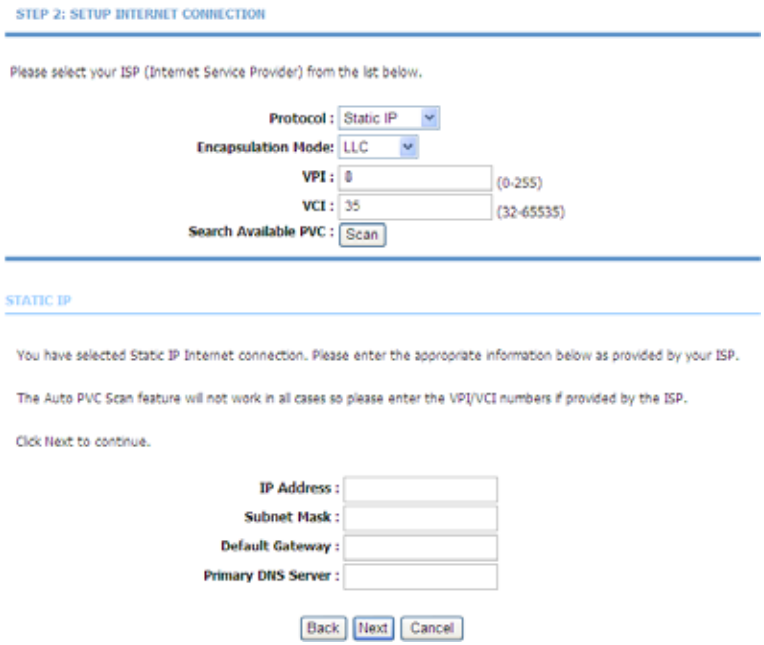
In this page, enter the user name and password as provided by your ISP.
If the Protocol is **Dynamic IP**, the page shown in the following figure appears.



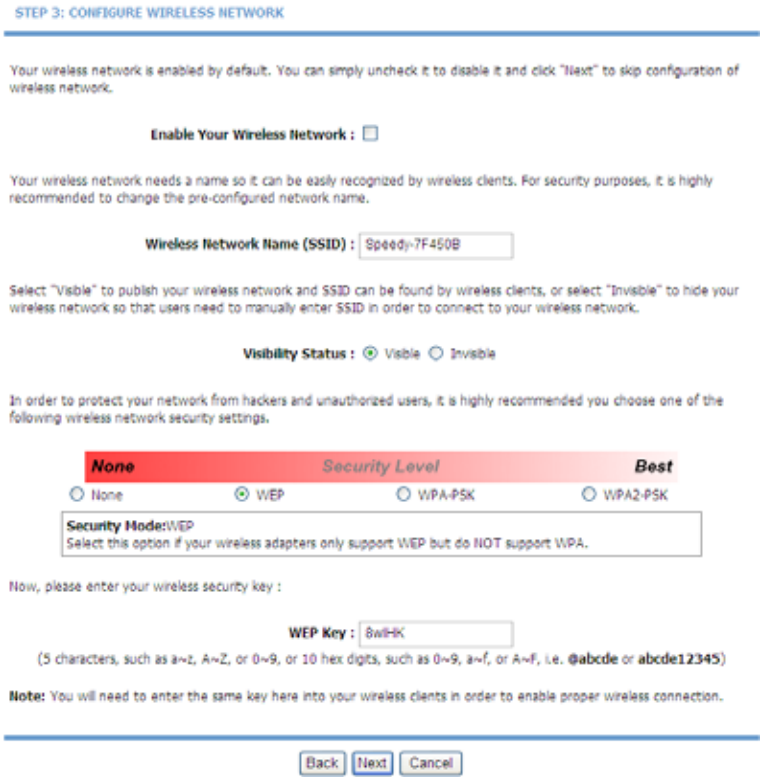
If the Protocol is **Bridge**, the page shown in the following figure appears.



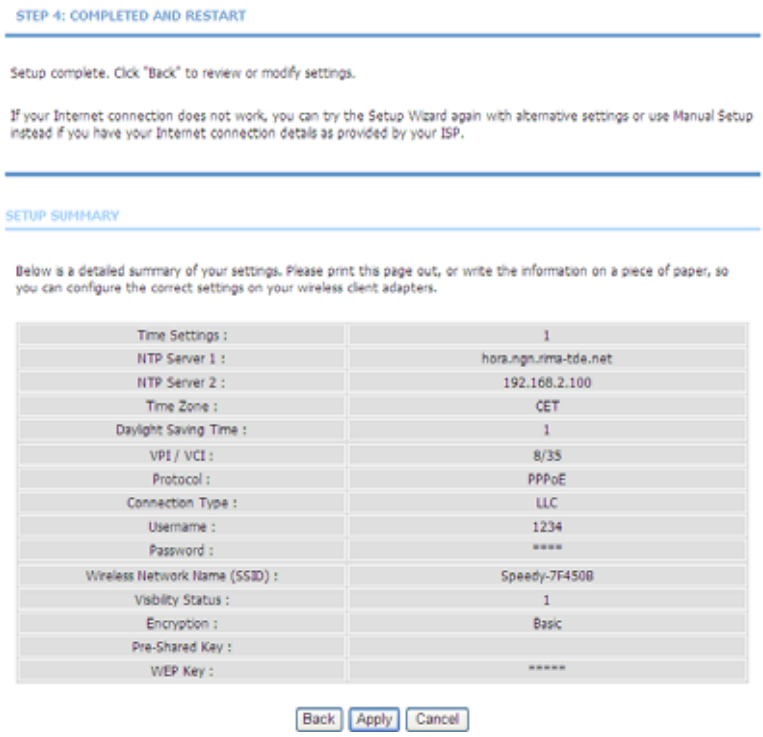
If the Protocol is **Static IP**, the page shown in the following figure appears.



Enter the **IP Address**, **Subnet Mask**, **Default Gateway** and **Primary DNS Server**. Click **Next**. The page shown in the following figure appears.



Step 6 Configure the wireless network. Enter the information and click **Next**.



Step 7 Click **Apply** to save the settings.

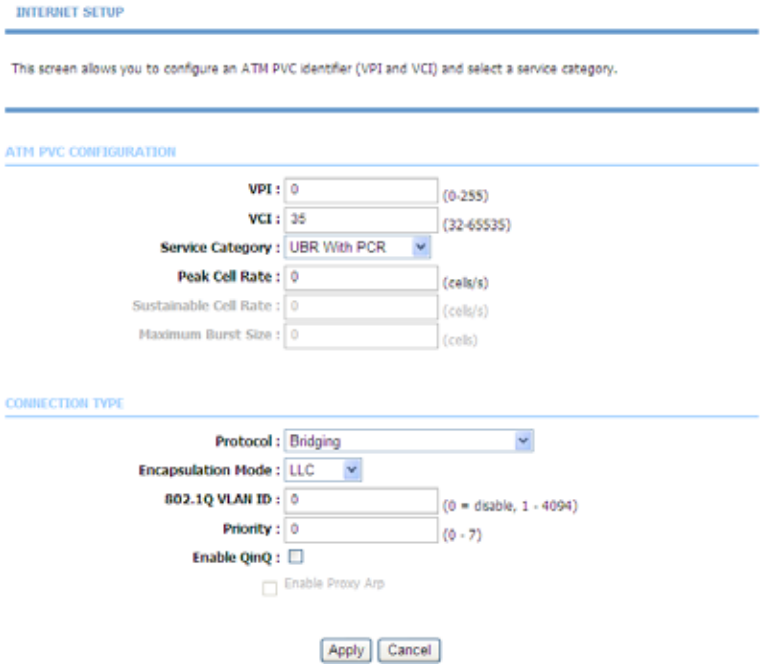
Note:

In each step of the Wizard page, you can click **Back** to review or modify the previous settings. Click **Cancel** to exit the wizard page.

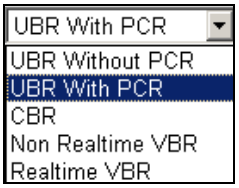
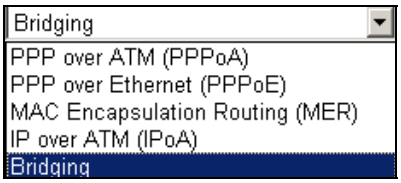
3.2.2 Internet Setup

Choose **Setup** > **Internet Setup**. The page shown in the following figure appears. In this page, you can configure the WAN interface of the device.

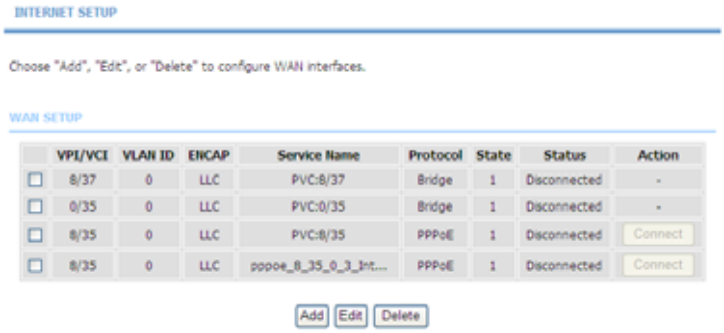
Click **Add** in **"INTERNET SETUP"**. The page shown in the following figure appears.



The following table describes the parameters in this page.

Field	Description
PVC Settings	**VPI**: The virtual path between two points in an ATM network, and its valid value is from **0** to **255**. **VCI**: The virtual channel between two points in an ATM network, ranging from **32** to **65535** (0 to 31 is reserved for local management of ATM traffic).
Service Category	You can select from the drop-down list. 
Protocol	You can select from the drop-down list. 
Encapsulation Mode	Select the method of encapsulation provided by your ISP. You can select **LLC** or **VCMUX**.

Click **Apply**, the page shown in the following figure appears.



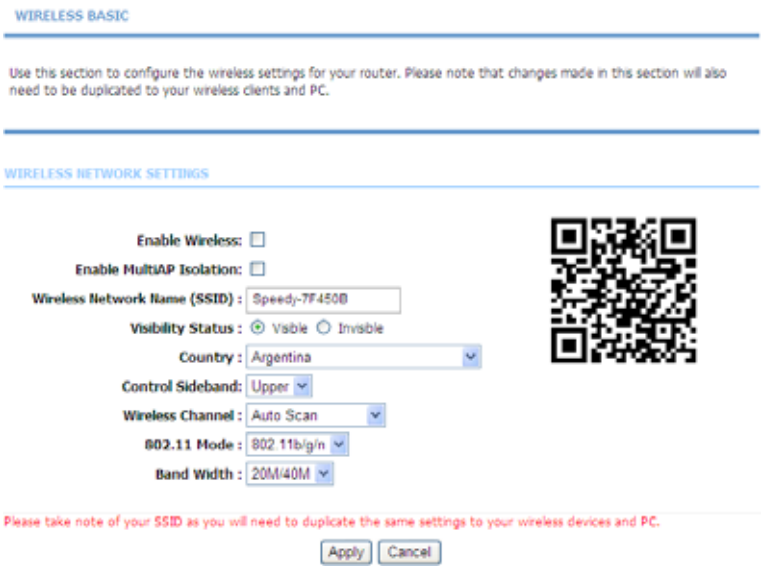
3.2.3 Wireless

This section describes the wireless LAN and basic configuration. A wireless LAN can be as simple as two computers with wireless LAN cards communicating in a pear-to-pear network or as complex as a number of computers with wireless LAN cards communicating through access points which bridge network traffic to wired LAN.

Choose **Setup** > **Wireless**. The **Wireless** page shown in the following figure appears.

3.2.3.1 Wireless Basic

In the **Wireless** page, click **Wireless Basic**. The page shown in the following figure appears. In this page, you can configure the parameters of wireless LAN clients that may connect to the device.



The following table describes the parameters in this page.

Field	Description
Enable Wireless	Select this to turn Wi-Fi on or off.
Enable MultiAP Isolation	Select this to turn MultiAP isolation on and off.
Wireless Network Name (SSID)	The Wireless Network Name is a unique name that identifies a network. All devices on a network must share the same wireless network name in order to communicate on the network. If you decide to change the wireless network name from the default setting, enter your new wireless network name in this field.
Visibility Status	You can select **Visible** or **Invisible**.
Country	Select the country from the drop-down list.
Control Sideband	Choose the channel selection mode as **Upper** or **Lower**.

Field	Description
Wireless Channel	Select the wireless channel from the pull-down menu. It is different for different country.
802.11 Mode	Select the appropriate 802.11 mode based on the wireless clients in your network. The drop-down menu options are **802.11b**, **802.11g**, **802.11n**, **802.11b/g**, **802.11n/g** and **802.11b/g/n**.
Band Width	Select the appropriate band of **20M**, **40M** or **20M/40M** from the pull-down menu.

Click **Apply** to save the settings.

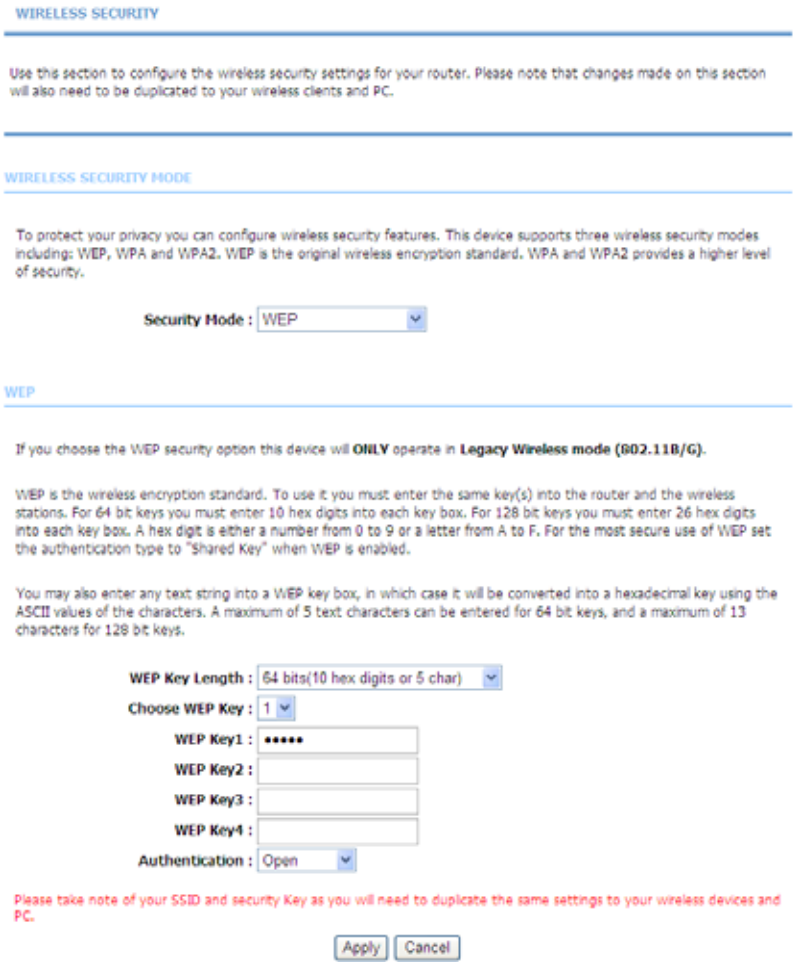
3.2.3.2 Wireless Security

In the **Wireless** page, click **Wireless Security**. The page shown in the following figure appears. Wireless security is vital to your network to protect the wireless communication among wireless stations, access points and wired network.

Note:

Enable Wireless before configuring the wireless security settings in this page. Refer to 3.2.3.1 Wireless Basic.

When the Security Mode is set as **WEP**, the following figure appears.

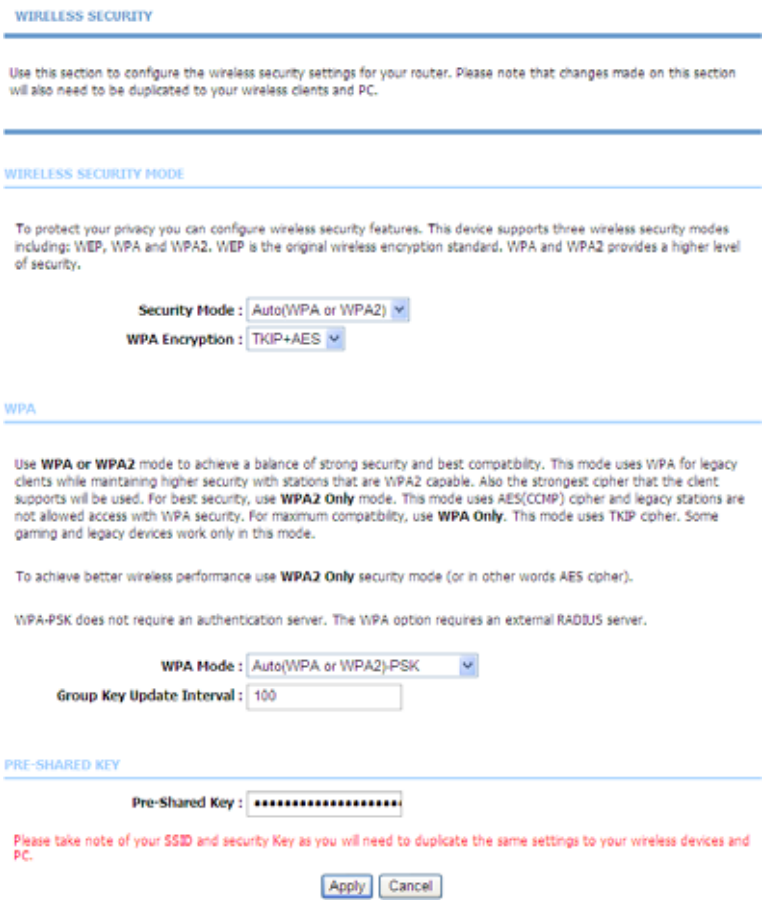

WIRELESS SECURITY
Use this section to configure the wireless security settings for your router. Please note that changes made on this section will also need to be duplicated to your wireless clients and PC.
WIRELESS SECURITY MODE
To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA and WPA2. WEP is the original wireless encryption standard. WPA and WPA2 provides a higher level of security.
Security Mode : WEP
WEP
If you choose the WEP security option this device will ONLY operate in Legacy Wireless mode (802.11B/G).
WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.
You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.
WEP Key Length : 64 bits(10 hex digits or 5 char)
Choose WEP Key : 1
WEP Key1 : •••••
WEP Key2 :
WEP Key3 :
WEP Key4 :
Authentication : Open
Please take note of your SSID and security Key as you will need to duplicate the same settings to your wireless devices and PC.
Apply
Cancel

The following table describes the parameters of this page.

Field	Description
WEP Key Length	Choose the WEP key length. You can Choose **64-bit** or **128-bit**.
Choose WEP Key	Choose the index of WEP Key. You can choose **Key 1**, **2**, **3** or **4**.
WEP Key 1/2/3/4	The Encryption keys are used to encrypt the data. Both the modem and wireless stations must use the same encryption key for data transmission. The default key 1 is **8wlHK**.

Click **Apply** to save the settings.

When the Security Mode is set as **Auto (WPA or WPA2)**, **WPA2 only** or **WPA only**, the following figure appears.



The following table describes the parameters in this page.

Field	Description
Security Mode	Configure the wireless encryption mode. You can choose **None**, **WEP**, **Auto(WPA or WPA2)**, **WPA 2 Only** or **WPA Only**. ● Wired equivalent privacy (WEP) encrypts data

Field	Description
	frames before transmitting over the wireless network. ● Wi-Fi protected access (WPA) is a subset of the IEEE802.11i security specification draft. ● WPA2 Mixed is the collection of WPA and WPA2 encryption modes. The wireless client establishes the connection between the modem through WPA or WPA2. Key differences between WPA and WEP are user authentication and improved data encryption.
WPA Encryption	When WPA or WPA2 is selected, you can select WPA encryption as **AES** or **TKIP+AES**.
WPA Mode	● Select **PSK (Pre-Shared Key)**, enter the pre-shared key in the **Pre-Shared Key** field. ● Select **Enterprise (RADIUS)**, enter the port, IP address, and password of the Radius server. You need to enter the username and password provided by the Radius server when the wireless client connects the modem. If the encrypton is set to **WEP**, the modem uses 802.1 X authentication, which is Radius authentication.
Group Key Update Interval	When WPA encryption is applied, messages sent are encrypted with a password. For higher security, WPA password is updated periodically. This value is the update interval of the WPA password.

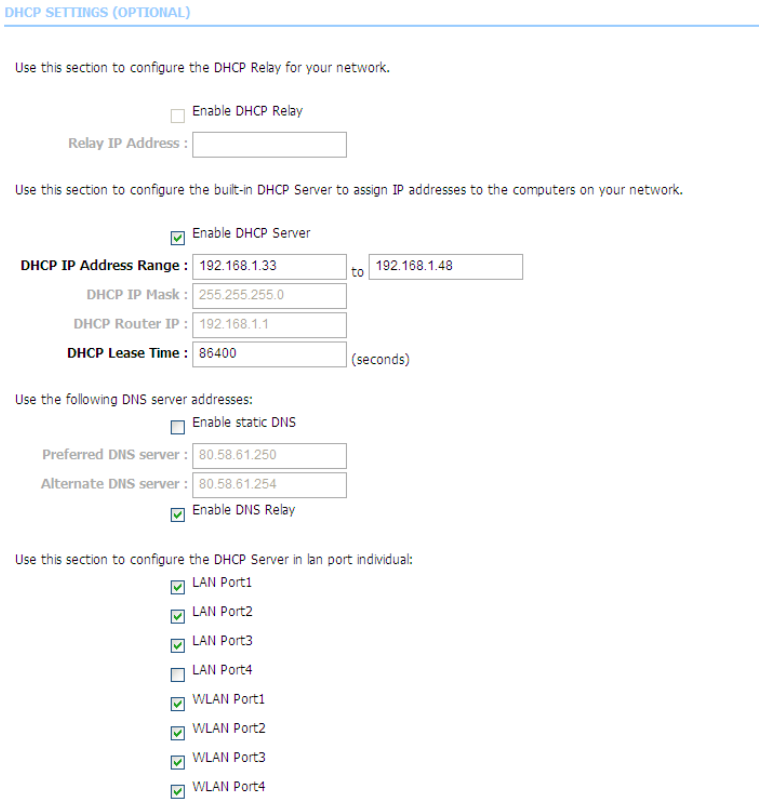
3.2.4 Local Network

You can configure the LAN IP address according to the actual application. The preset IP address is 192.168.1.1. You can use the default settings and DHCP service to manage the IP settings for the private network. The IP address of the device is the base address used for DHCP. To use the device for DHCP on your LAN, the IP address pool used for DHCP must be compatible with the IP address of the device. The IP address available in the DHCP IP address pool changes automatically if you change the IP address of the device.

You can also enable the secondary LAN IP address. The two LAN IP addresses must be in different networks.

Choose **Setup** > **Local Network**. The **Local Network** page shown in the following figure appears.

By default, **Enable DHCP Server** is selected for the Ethernet LAN interface of the device. DHCP service supplys IP settings to workstations configured to automatically obtain IP settings that are connected to the device through the Ethernet port. When the device is used for DHCP, it becomes the default gateway for DHCP client connected to it. If you change the IP address of the device, you must also change the range of IP addresses in the pool used for DHCP on the LAN. The IP address pool can contain up to 253 IP addresses.



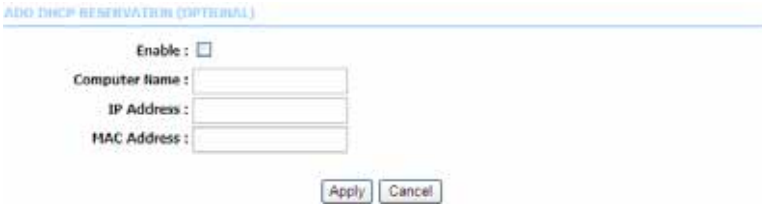
Click **Apply** to save the settings.

The **DHCP Client Class List** section shown in the following figure appears.

Click **Add**, the page shown in the following figure appears.

In the **Local Network** page, you can assign IP addresses on the LAN to specific individual computers based on their MAC addresses.

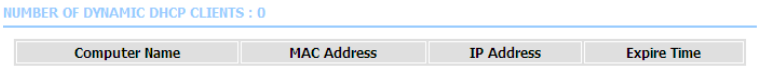
Click **Add** to add static DHCP (optional). The page shown in the following figure appears.



Select **Enable** to reserve the IP address for the designated PC with the configured MAC address. The **Computer Name** helps you to recognize the PC with the MAC address, for example, Father's Laptop. Click **Apply** to save the settings.

After the DHCP reservation is saved, the DHCP reservations list displays the configuration.

The **NUMBER OF DYNAMIC DHCP CLIENTS** page shows the current DHCP clients (PC or Laptop) connected to the device and the detailed information of the connected computer(s).



3.2.5 Time and Date

Choose **Setup** > **Time and Date**. The page shown in the following figure appears.

In the **Time and Date** page, you can configure, update, and maintain the correct time on the internal system clock. You can set the time zone that you are in and the network time protocol (NTP) server. You can also configure daylight saving to automatically adjust the time when needed.

Select **Automatically synchronize with Internet time servers**.

Select the specific time server and the time zone from the corresponding drop-down lists.

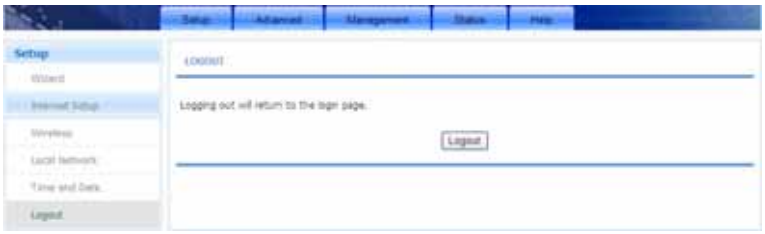
Select **Automatically adjust clock for daylight saving changes** if necessary.

Set the daylight as you want.

Click **Apply** to save the settings.

3.2.6 Logout

Choose **Setup** > **Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.



3.3 Advanced

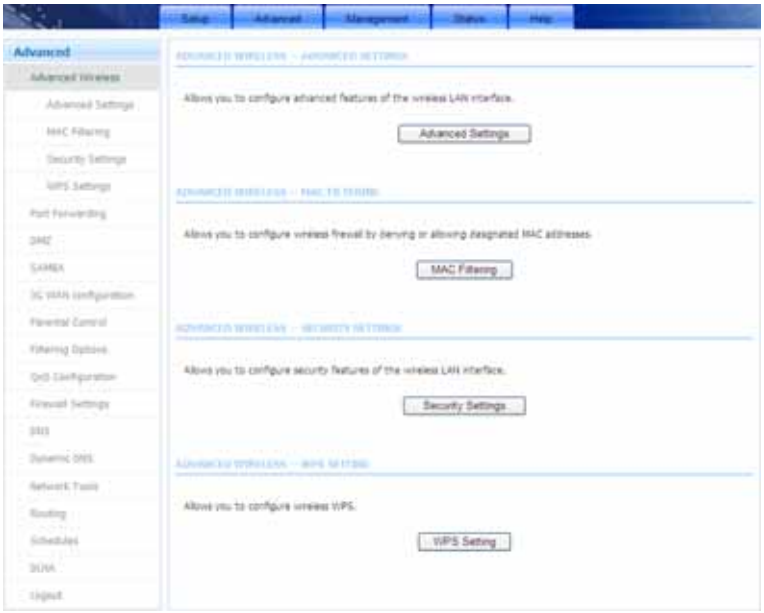
This section includes advanced features for network management, security and administrative tools to manage the device. You can view status and other information used to examine performance and troubleshoot.

In the main interface, click **Advanced** tab to enter the **Advanced** menu as shown in the following figure. The submenus are **Advanced Wireless**, **Port Fowarding**, **DMZ**, **SAMBA**, **3G Configuration**, **Parental Control**, **Filtering Options**, **QoS Configuration**, **Firewall Settings**, **DNS, Dynamic DNS**, **Network Tools**, **Routing**, **Schedules**, **DLNA** and **Logout**.

3.3.1 Advanced Wireless

This function is used to modify the standard 802.11g wireless radio settings. It is suggested not to change the defaults, as incorrect settings may reduce the performance of your wireless radio. The default settings provide the best wireless radio performance in most environments.

Choose **Advanced** > **Advanced Wireless**. The page shown in the following figure appears.



3.3.1.1 Advanced Settings

Select **Advance Settings.** The page shown in the following figure appears.


ADVANCED SETTINGS
These options are for users that wish to change the behaviour of their 802.11g wireless radio from the standard setting. We does not recommend changing these settings from the factory default. Incorrect settings may impair the performance of your wireless radio. The default settings should provide the best wireless radio performance in most environments.
Transmission Rate : Auto
Multicast Rate : Lower
Transmit Power : 100%
Beacon Period : 100 [20 ~ 1000]
RTS Threshold : 2346 [256 ~ 2346]
Fragmentation Threshold : 2345 [256 ~ 2346]
DTIM Interval : 1 [1 ~ 255]
Preamble Type : long
Enable Wireless :
Wireless Network Name (SSID) : Speedy-7F4558
Visibility Status : Visible Invisible
User Isolation : Off
WMM Advertise : On
Max Clients : 16 [0 ~ 32]
Enable Wireless Guest Network :
Guest SSID : WLAN_Bhdd
Visibility Status : Visible Invisible
User Isolation : Off
WMM Advertise : On
Max Clients : 16 [0 ~ 32]
Enable Wireless Guest Network :
Guest SSID : WLAN_Bhdd
Visibility Status : Visible Invisible
User Isolation : Off
WMM Advertise : On
Max Clients : 16 [0 ~ 32]
Enable Wireless Guest Network :
Guest SSID : WLAN_Bhdd
Visibility Status : Visible Invisible
User Isolation : Off
WMM Advertise : On
Max Clients : 16 [0 ~ 32]
Apply
Cancel

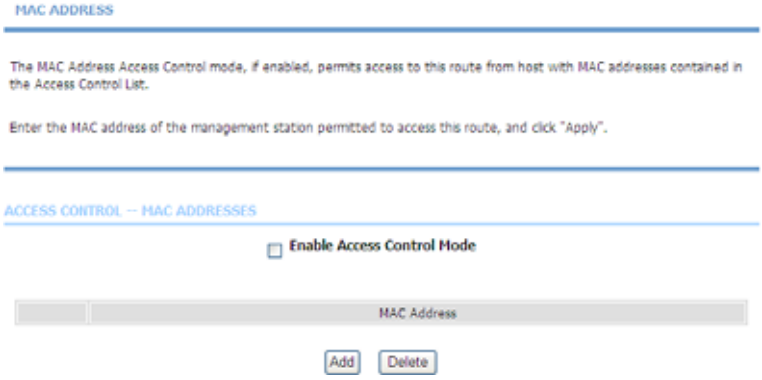
Wireless Network Name (SSID): The Wireless Network Name is a unique name that identifies a network. All devices on a network must share the same wireless network name in order to communicate on the network. If you decide to change the wireless network name from the default setting, enter your new wireless network name in this field.

These settings are only for more technically advanced users who have sufficient knowledge about wireless LAN. Do not change these settings unless you know the effect of changes on the device.

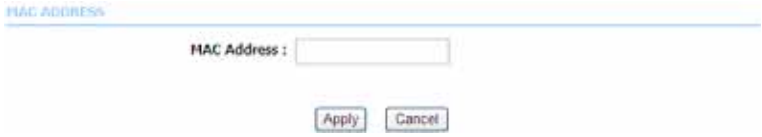
Click **Apply** to save the settings.

3.3.1.2 MAC Filtering

Select **MAC Filtering**. The page shown in the following figure appears.



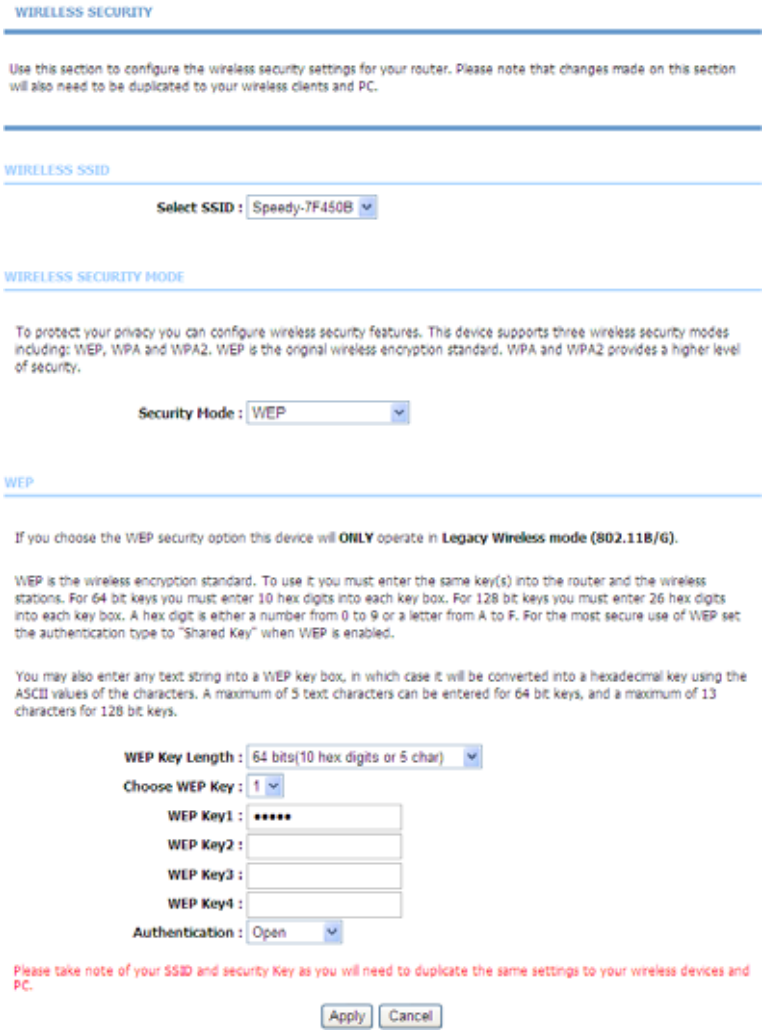
Choose **Enable Access Control Mode**, and then click **Add** to add a MAC Address as shown in the following figure.



Click Apply to finish.

3.3.1.3 Security Settings

Select **Security Settings**. The page shown in the following figure appears.



Select the SSID that you want to configure from the drop-down list. Select the encryption type from the **Security Mode** drop-down list.You can select **None**, **WEP**, **AUTO (WPA or WPA2)**, **WPA Only** or **WPA2 Only**.

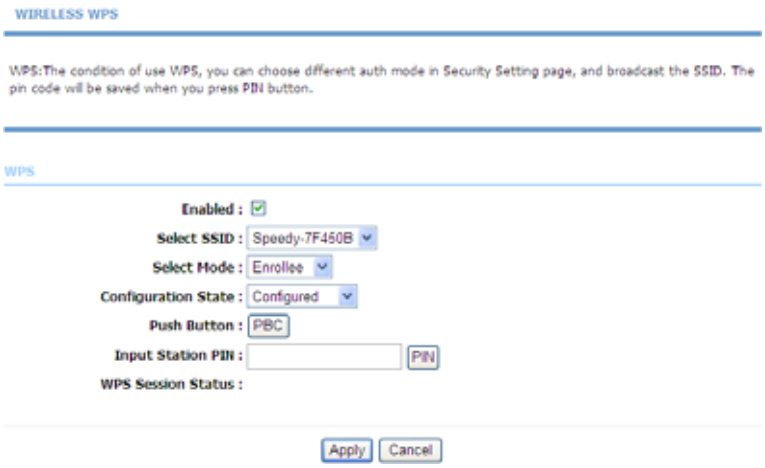
If you select **WEP**, the page shown in the following figure appears.

If you select **AUTO (WPA or WPA2)**, **WPA Only** or **WPA2 Only**, the page shown in the following figure appears.

Click **Apply** to save the settings. For detailed configuration, you may refer to 3.2.3.2 Wireless Security.

3.3.1.4 WPS Settings

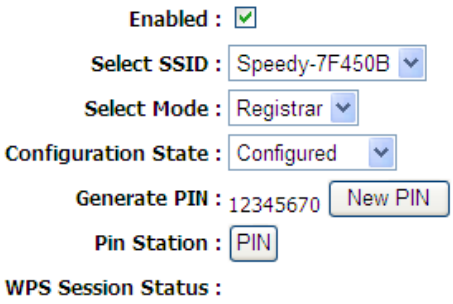
Select **WPS Settings**.This page is used to config WPS settings.



The following table describes the parameters of this page.

Field	Description
Enabled	Choose to enable WPS function to set the following parameters.
Select SSID	Select one SSID of the CPE.
Select Mode	Select the mode either **Registar** or **Enrollee**. When an AP or a station used Registar mode, the other should use Enrollee mode.
Configuration State	When **Configured** state is selected, wireless parameters (for example, the encryption password) are provided by the CPE in WPS negotiation. When **Unconfigured** state is selected, wireless parameters are provided by the connecting user end (for example, PC).
Push Button	Press the button, the CPE will connect the station automaticlly.
Input Station PIN	You need to enter a pin the station which mode is Enrollee Generate. Press the button to connect the other with the pin.

When **Registrar** mode is chosen, the following figure appears. In this condition, only PIN button can be used.



The following table describes the parameters of this page.

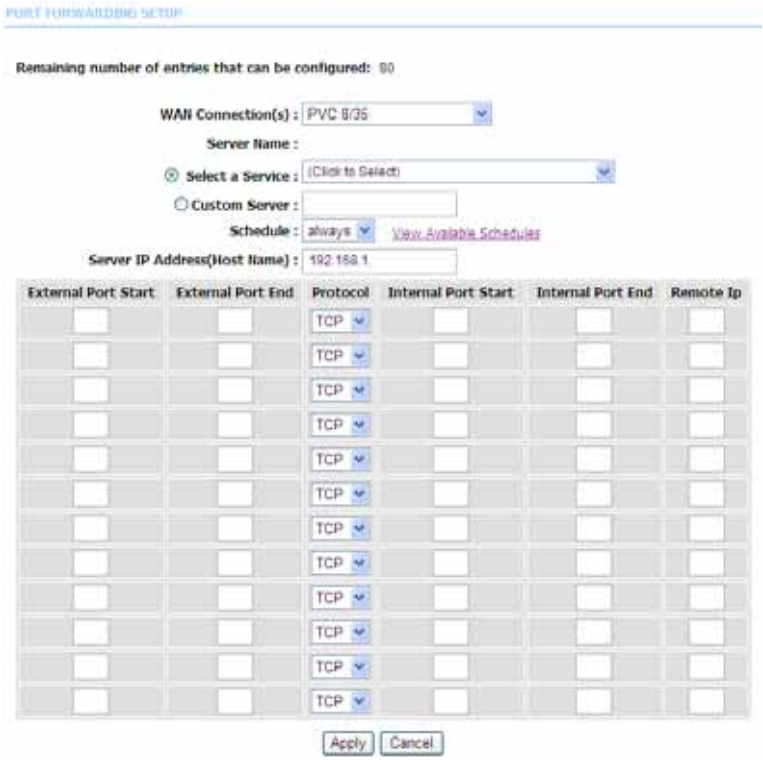
Field	Description
Generate PIN	Press the button to generate a pin used by the AP and the station.
PIN Station	Press the button to connect the station with the pin.
WPS Session Status	Display the session status.

3.3.2 Port Forwarding

This function is used to open ports in your device and re-direct data through those ports to a single PC on your network (WAN-to-LAN traffic). It allows remote users to access services on your LAN, such as FTP for file transfers or SMTP and POP3 for e-mail. The device accepts remote requests for these services at your global IP address. It uses the specified TCP or UDP protocol and port number, and redirects these requests to the server on your LAN with the LAN IP address you specify. Note that the specified private IP address must be within the available range of the subnet where the device is in.

Choose **Advanced** > **Port Forwarding**. The page shown in the following figure appears.

Click **Add** to add a virtual server.

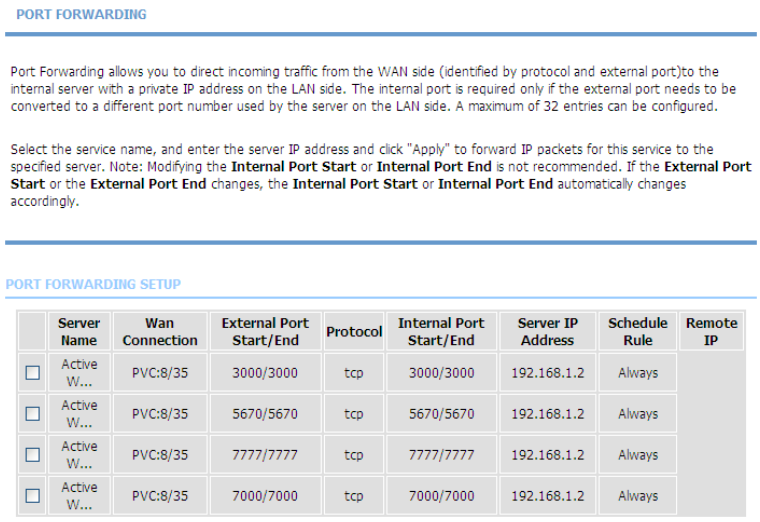


Select a service for a preset application, or enter a name in the **Custom Server** field.

Enter an IP address in the **Server IP Address** field to appoint the corresponding PC to receive forwarded packets.

The **Ports** show the ports that you want to open on the device. The **TCP/UDP** means the protocol type of the opened ports.

Click **Apply** to save the settings. The page shown in the following figure appears. A virtual server is added.



PORT FORWARDING

Port Forwarding allows you to direct incoming traffic from the WAN side (identified by protocol and external port)to the internal server with a private IP address on the LAN side. The internal port is required only if the external port needs to be converted to a different port number used by the server on the LAN side. A maximum of 32 entries can be configured.

Select the service name, and enter the server IP address and click "Apply" to forward IP packets for this service to the specified server. Note: Modifying the **Internal Port Start** or **Internal Port End** is not recommended. If the **External Port Start** or the **External Port End** changes, the **Internal Port Start** or **Internal Port End** automatically changes accordingly.

PORT FORWARDING SETUP

	Server Name	Wan Connection	External Port Start/End	Protocol	Internal Port Start/End	Server IP Address	Schedule Rule	Remote IP
☐	Active W...	PVC:8/35	3000/3000	tcp	3000/3000	192.168.1.2	Always	
☐	Active W...	PVC:8/35	5670/5670	tcp	5670/5670	192.168.1.2	Always	
☐	Active W...	PVC:8/35	7777/7777	tcp	7777/7777	192.168.1.2	Always	
☐	Active W...	PVC:8/35	7000/7000	tcp	7000/7000	192.168.1.2	Always	

3.3.3 DMZ

Since some applications are not compatible with NAT, the device supports the use of a DMZ IP address for a single host on the LAN. This IP address is not protected by NAT and it is visible to agents on the Internet with the correct type of software. Note that any client PC in the DMZ is exposed to various types of security risks. If you use the DMZ, take measures (such as client-based virus protection) to protect the remaining client PCs on your LAN from possible contamination through DMZ.

Choose **Advanced** > **DMZ**. The page shown in the following figure appears.

Click **Apply** to save the settings.

3.3.4 SAMBA

Select **Advanced** > **SAMBA**.The page shown in the following figure appears.

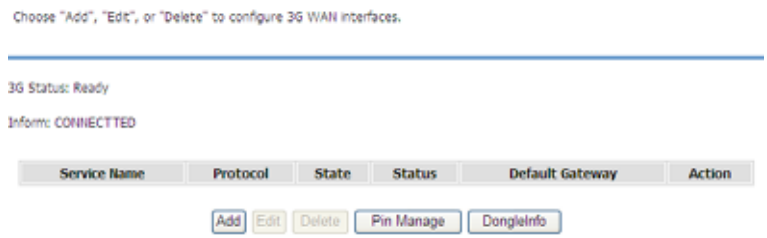
The following table describes the parameters of this page.

Field	Description
Enable SAMBA	Select the check box to enable the samba service
Workgroup	Enter the name of your local area network (LAN).
Netbios Name	Enter your netbios name which is an identifier used by netbios services running on a computer.
New SMB password	Enter your samba password for user root.
Retype new SMB password	Reconfirm your samba password here.
Enable USB Storage	Select the check box to support USB storage.
Enable Anonymous Access	Select the check box to allow anonymous users access.

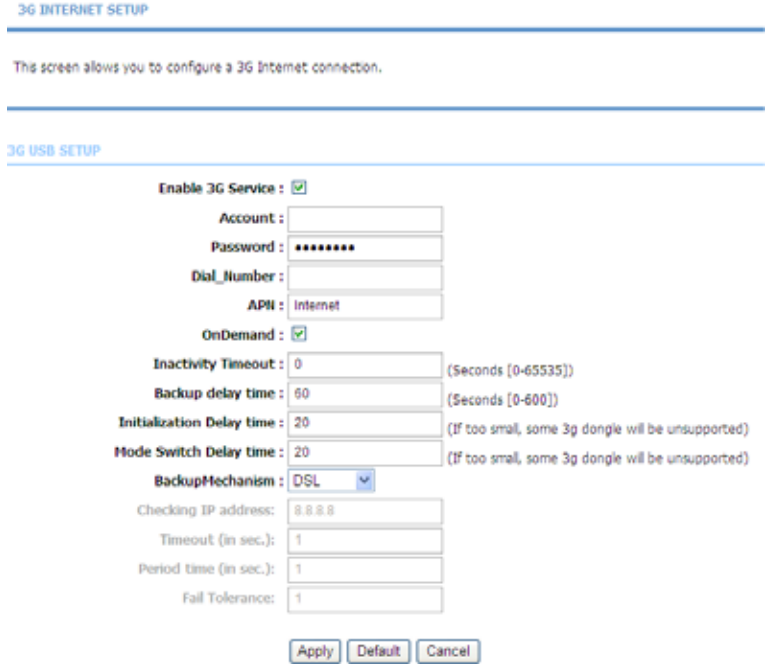
3.3.5 3G WAN Configuration

Choose **Advanced** > **3G WAN Configuration**. The page shown in the following figure appears.

If you want to access the Internet through 3G connection, a 3G USB data card is required. Connect the 3G data card to the USB interface of the Router and the following will appear.



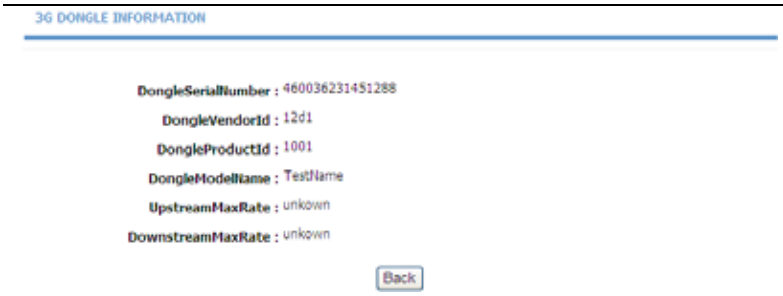
Click **Add** to display the following figure. In this page, you can configure 3G Internet connection.



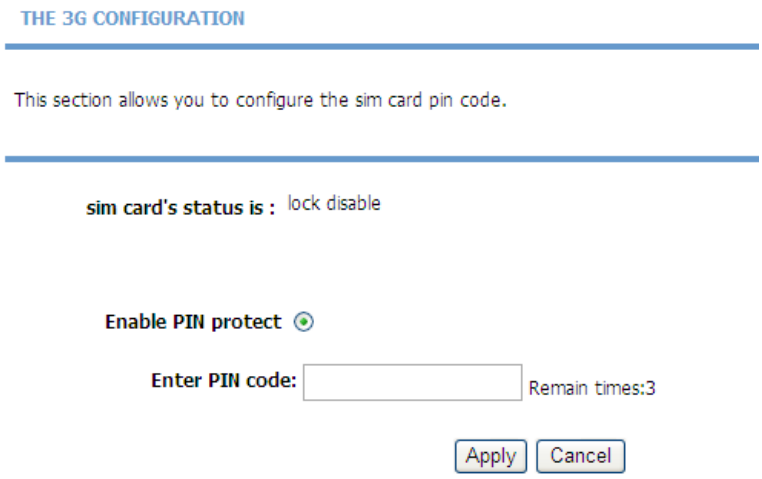
The following table describes the parameters of this page.

Field	Description
Enable 3G Service	You may choose to enable or disable 3G service.
Account	Enter the account.
Password	Enter the password.
Dial_Number	Enter the dial number.
APN	Enter the access point.
OnDemand	You may choose to dial on demand.
Inactivity Timeout	Set the period without flow before disconnecting 3G connection. When 0 is set, 3G connection will always be connected regardless of flow.
Backup delay time	Set the period before starting 3G dial after ADSL disconnection.
Initialization Delay time	Set the initialization time of 3G USB data card.
Mode Switch Delay time	Set the time for the 3G USB data card to switch from a storage device to a communication device.
Backup Mechanism	When DSL is selected, 3G dial starts after DSL disconnection. Usually DSL is selected. When IPCHECK is selected, 3G dial starts when DSL connection is established and the address set in Checking IP address can not be pinged.
Checking IP address	It is an address for 3G detection. After DSL dialup, if this address cannot be pinged, 3G dial will be started.
Timeout (in sec.)	Set the ping timeout.
Period time (in sec.)	Set the interval between two times of ping.
Fail Tolerance	Set the allowed times of ping failure.

You may click **DongleInfo** to view 3G network card information as shown in the following figure.



Click **Pin Manage** to enable the 3G PIN code as shown in the following figure.

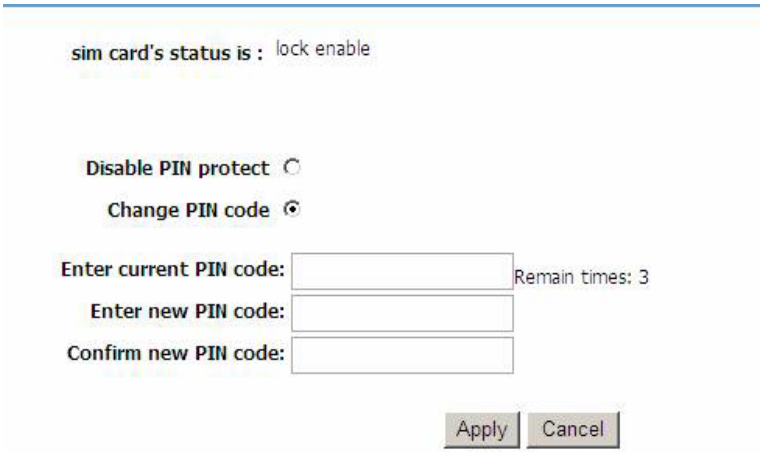


Enter the applied PIN code in the **Enter PIN code** field, and then click **Apply** to finish.

You can disable the 3G PIN code as shown in the following figure.

Select **Disable PIN protect**, and then click **Apply** to finish.

You can Change the PIN code as shown in the following figure.



Enter current PIN code and a new one for twice, and then click **Apply** to finish.

Note:

If a wrong PIN code is input continuously for three times, the PUK code will be required to unlock the PIN code.

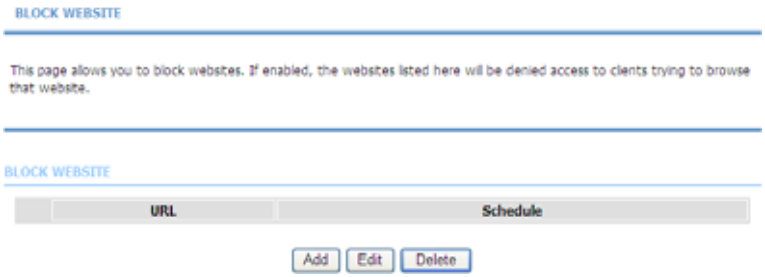
3.3.6 Parental Control

Choose **Advanced** > **Parental Control**. The **Parent Control** page shown in the following figure appears.

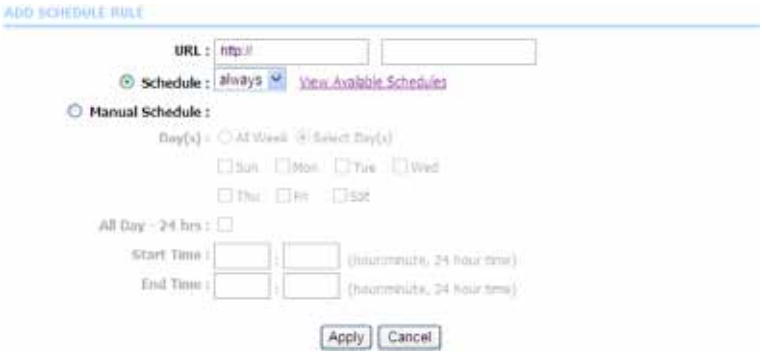
This page provides two useful tools for restricting the Internet access. **Block Websites** allows you to quickly create a list of all websites that you wish to stop users from accessing. **Block MAC Address** allows you to control when clients or PCs connected to the device are allowed to access the Internet.

3.3.6.1 Block Website

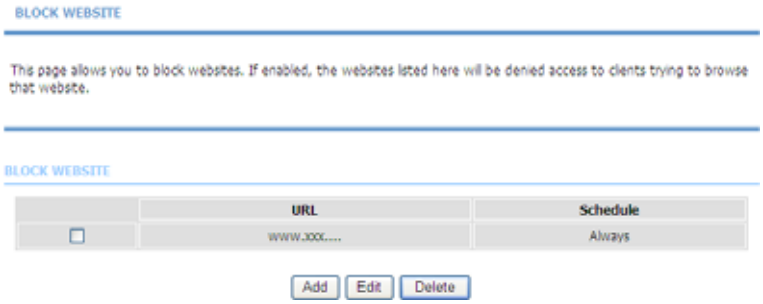
In the **Parent Control** page, click **Block Website**. The page shown in the following figure appears.



Click **Add**. The page shown in the following figure appears.

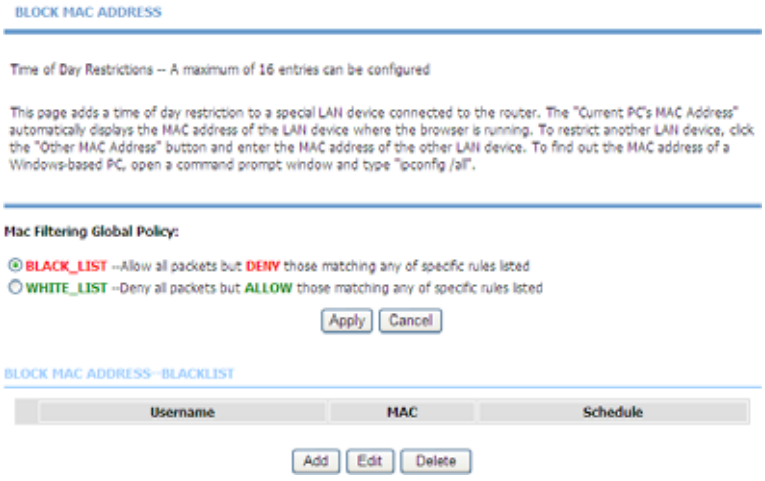


Enter the website in the **URL** field. Select the **Schedule** from the drop-down list, or select **Manual Schedule** and select the corresponding time and days.
Click **Apply** to add the website to the **BLOCK WEBSITE** table. The page shown in the following figure appears.

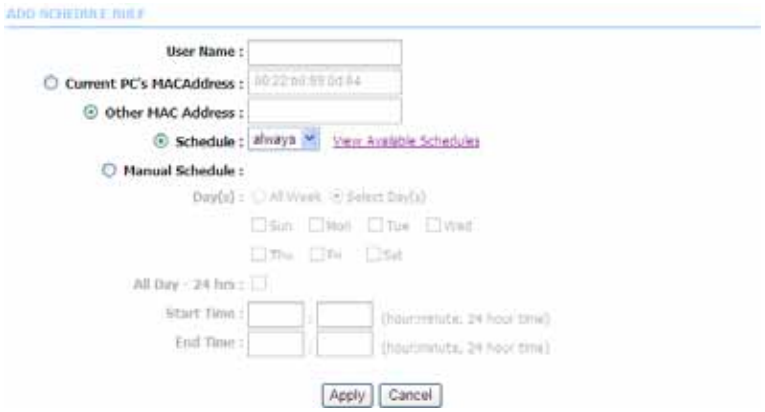


3.3.6.2 Block MAC Filter

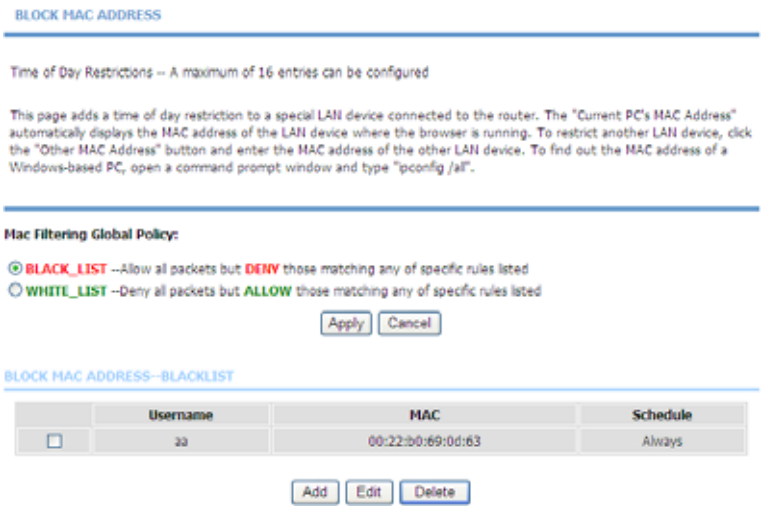
In the **Parent Control** page, click **Block MAC Address**. The page shown in the following figure appears.



Choose **BLACK_LIST** or **WHITE_LIST**, and then click **Add**. The page shown in the following figure appears.



Enter the use name and MAC address and select the corresponding time and days. Click **Apply** to add the MAC address to the **BLOCK MAC ADDRESS Table**. The page shown in the following figure appears.

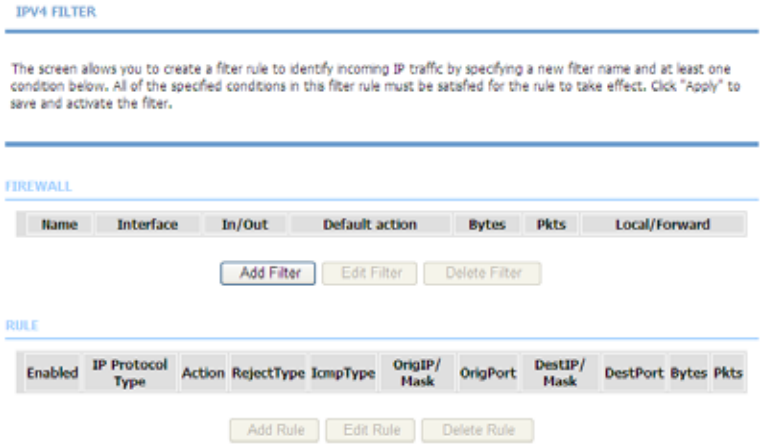


3.3.7 Filtering Options

Choose **Advanced** > **Filtering Options**. The **Filtering Options** page shown in the following figure appears.

3.3.7.1 IPv4 Filtering

In the **Filtering Options** page, click **IPv4 Filtering**. The page shown in the following figure appears. In this page, you may configure IPv4 firewall function.



Click **Add Filter**. The page shown in the following figure appears.

Enter the **Filter Name** and specify at least one of the following criteria: Interface, In/Out, Default action and Local/Forward.
Click **Apply** to save the settings.

Note:
The settings are applicable only when the firewall is enabled.

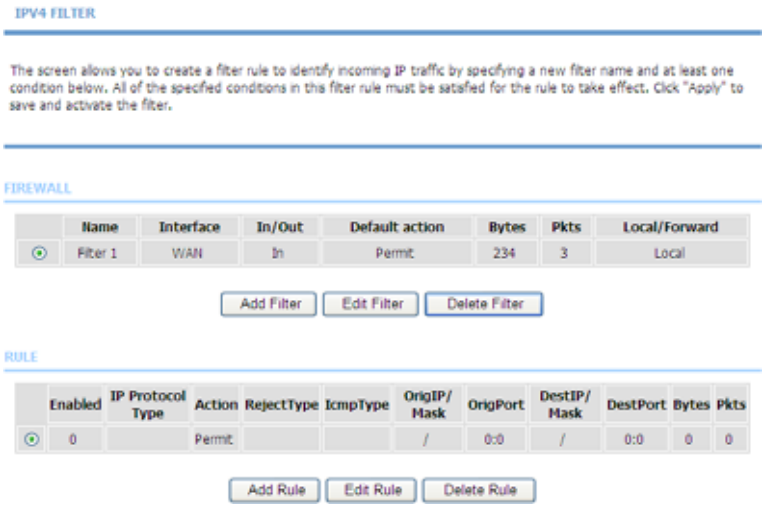
Click **Add Rule**. The page shown in the following figure appears.

The following table describes the parameters of this page.

Field	Description
Enable	Tick in the box to enable a firewall rule.
Protocol	Choose a protocol corresponding to the rule. You may choose **TCP**, **UDP** or **ICMP**.
Action	The action when the rule is matched. **Permit** means allowing the message to pass, **Drop** means discarding messages without a reply, and **Reject** means discarding messages with a reply.
Reject Type	The type of message sent in a Reject action.
Icmp Type	Type of ICMP messages
origIPAddress	Original IP address
origMask	Original address mask
origStart/End Port	Original start/ end port, which is the original port range
destIPAddress	Destination address

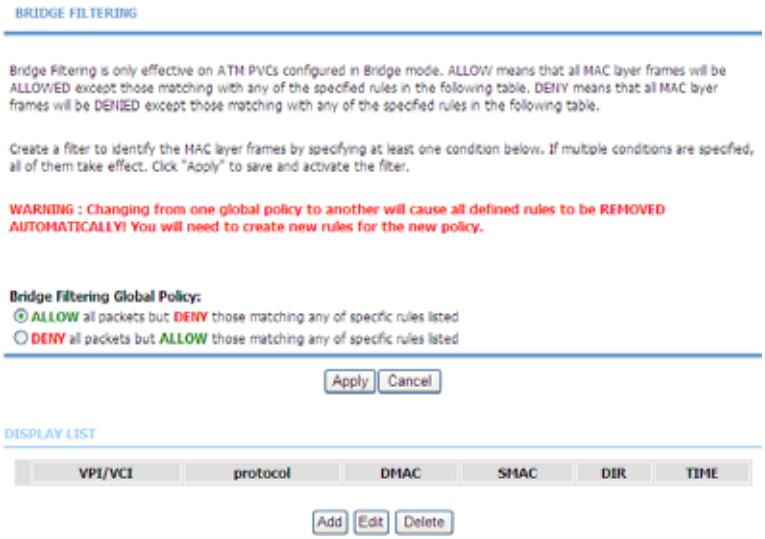
Field	Description
destMask	Destination address mask
dest Start/End Port	Destination start/ end port, which is the original port range

After setting the parameters, click **Apply**. The page shown in the following figure appears.



3.3.7.2 Bridge Filtering

In the **Filtering Options** page, click **Bridge Filtering**. The page shown in the following figure appears.This page is used to configure bridge parameters. In this page, you can change the settings or view some information of the bridge and its attached ports.



Click **Add** to add a bridge filter. The page shown in the following figure appears.

The following table describes the parameters of this page.

Field	Description
Protocol Type	Choose a third-layer protocol type for bridge filtering from the drop-down list. You may choose **PPPoE**, **IPv4**, **IPv6**, **AppleTalk**, **IPX, NetBEUI** or **IGMP**.
Destination MAC Address	The MAC address of sendee of the message
Source MAC	The MAC address of sender of the message

Field	Description
Address	
Frame Direction	Choose the sending direction as **WAN to LAN** or **LAN to WAN**.
Time schedule	Choose the filtering strategy as **always** or **never**.
Wan interface	Set an effective interface for the bridge filtering rule.

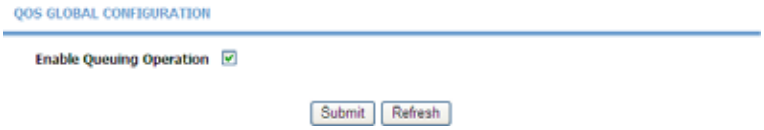
Click **Apply** to save the settings.

3.3.8 QoS Configuration

Choose **Advanced** > **QoS Configuration**. The **QoS Configuration** page shown in the following figure appears.

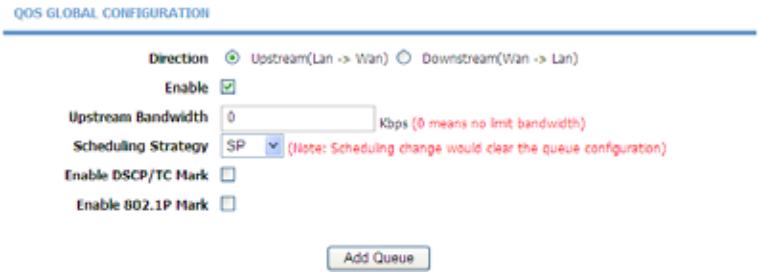
3.3.8.1 QoS Global Options

In the **QoS Configuration** page, click **QoS Global Options**. The page shown in the following figure appears.You can tick in the checkbox and then click **Submit** to enable queuing operation.



3.3.8.2 QoS Queue Config

In the **QoS Configuration** page, click **QoS Queue Config**. The page shown in the following figure appears. In this page, you can set QoS flow control.



The following table describes the parameters of this page.

Field	Description
Direction	Choose **Upstream** queue or **Downstream** queue.
Enable	Tick in the box to enable queue.
Upstream Bandwidth	Total bandwith for upstream flow
Scheduling Strategy	Scheduling algorithm of QoS queue
Enable DSCP/TC Mark	You may tick in the box to permit DSCP/TC Mark.
Enable 802.1P Mark	You may tick in the box to permit 802.1P Mark.

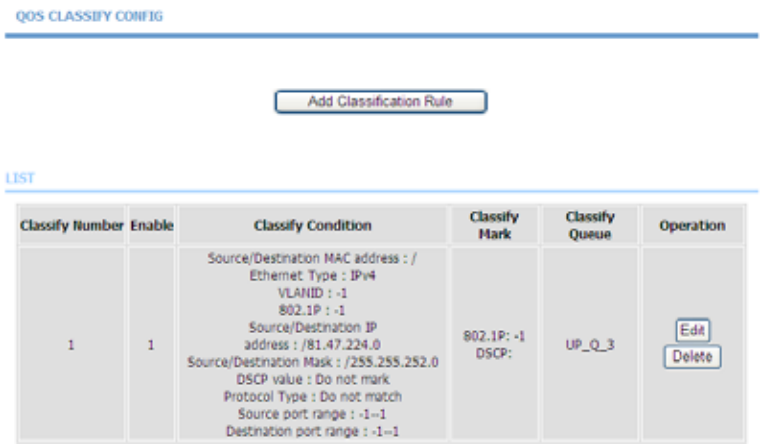
After setting the parameters, click **Add Queue** to add a queue.
In the above page, when **Upstream (Lan -> Wan)** direction is chosen, you need to configure the parameters in the following figure.

When **Downstream (Lan -> Wan)** direction is chosen, you need to configure the parameters in the following figure.

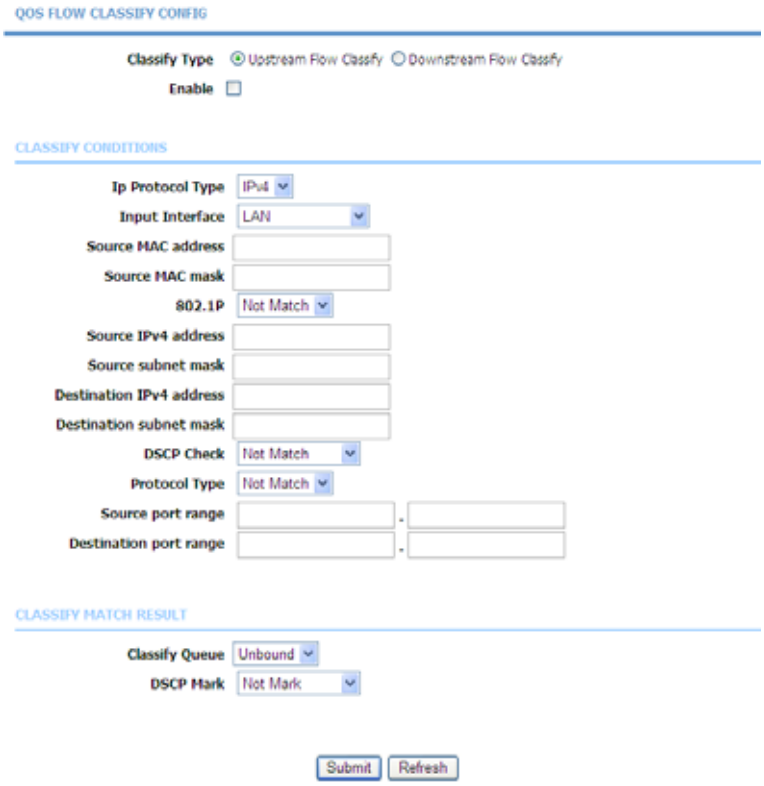
After modifying a queue, click **Submit** to enable the modification. Click **Refresh** to refresh the queue.

3.3.8.3 QoS Classification

In the **QoS Configuration** page, click **QoS Classification**. The page shown in the following figure appears.You can configure QoS queue rule.



Click **Add Classification Rule**. The page shown in the following figure appears.



The following table describes the parameters of this page.

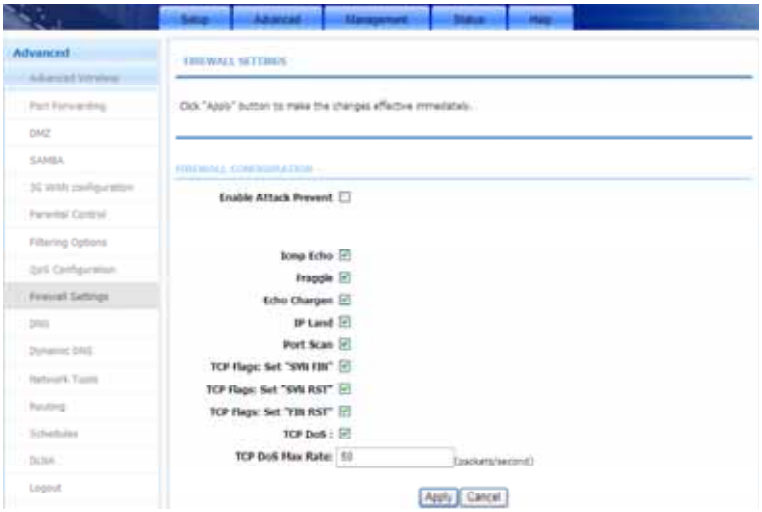
Field	Description
Classify Type	Set the QoS rule type as **Upstream** or **Downstream**.
Enable	Tick in the box to enable this QoS rule.
Ip Protocol Type	Select the protocol type **IPv4**.
Input Interface	Based on the Classify Type, choose a WAN/LAN interface.
802.1P	Choose a matched 802.1P VLAN priority.
DSCP Check	Choose a matched DSCP type.

Field	Description
Protocol Type	Choose a protocol type matching with the QoS rule.
Classify Queue	Choose a QoS queue for the rule.
DSCP Mark	Set a DSCP Mark for this QoS rule.

You may click **Edit** to modify the existing classification rule.

3.3.9 Firewall Settings

A denial-of-service (DoS) attack is characterized by an explicit attempt by attackers to prevent legitimate users of a service from using that service.
Port scan protection is designed to block attempts to discover vulnerable ports or services that might be exploited in an attack from the WAN.
Choose **Advanced** > **Firewall Settings**. The page shown in the following figure appears.



Click **Apply** to save the settings.

3.3.10 DNS

Domain name system (DNS) is an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, they are easier to remember. The Internet, however, is actually based on IP addresses. Each time you use a domain name, a DNS service must translate the name into the corresponding IP address. For example, the domain name www.example.com might be translated to 198.105.232.4.

The DNS system is, in fact, its own network. If one DNS server does not know how to translate a particular domain name, it asks another one, and so on, until the correct IP address is returned.

Choose **Advanced** > **DNS**. The page shown in the folllowin g figure appears.

If you are using the device for DHCP service on the LAN or using DNS servers on the ISP network, select **Obtain DNS server address automatically**.

If you have DNS IP addresses provided by your ISP, enter these IP addresses in the available entry fields for the preferred DNS server and the alternate DNS server.

Click **Apply** to save the settings.

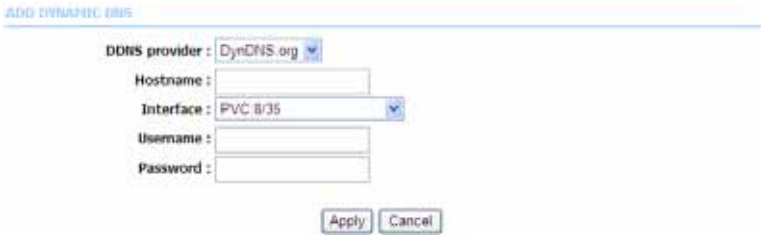
3.3.11 Dynamic DNS

The device supports dynamic domain name service (DDNS). The dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, and allows access to a specified host from various locations on the Internet. Click a hyperlinked URL in the form of

hostname.dyndns.org and allow remote access to a host. Many ISPs assign public IP addresses using DHCP, so locating a specific host on the LAN using the standard DNS is difficult. For example, if you are running a public web server or VPN server on your LAN, DDNS ensures that the host can be located from the Internet even if the public IP address changes. DDNS requires that an account be set up with one of the supported DDNS service providers (DyndDNS.org or dlinkddns.com).

Choose **Advanced** > **Dynamic DNS**. The page shown in the following figure appears.

Click **Add** to add dynamic DNS. The page shown in the following figure appears.



The following table describes the parameters of this page.

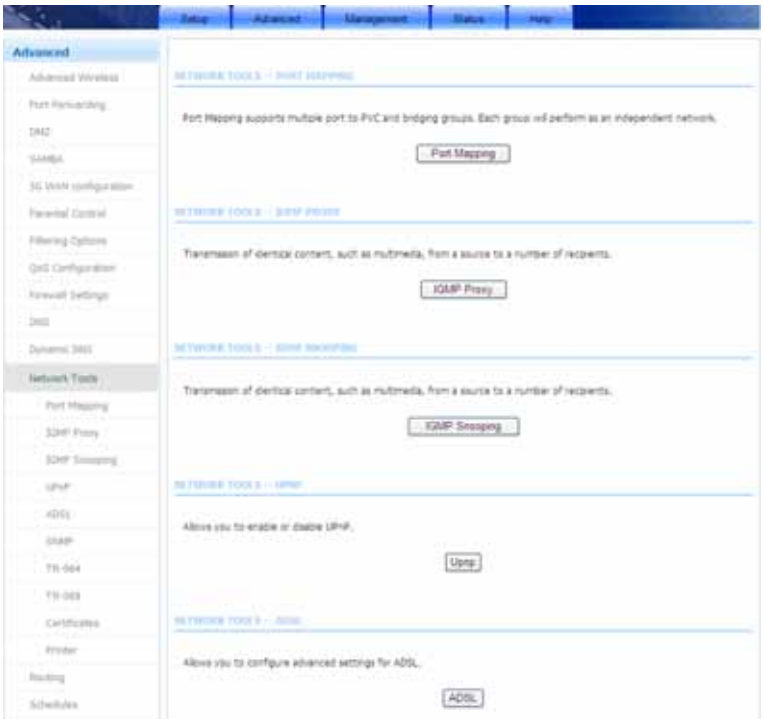
Field	Description
DDNS provider	Select one of the DDNS registration organizations from the down-list drop. Available servers include

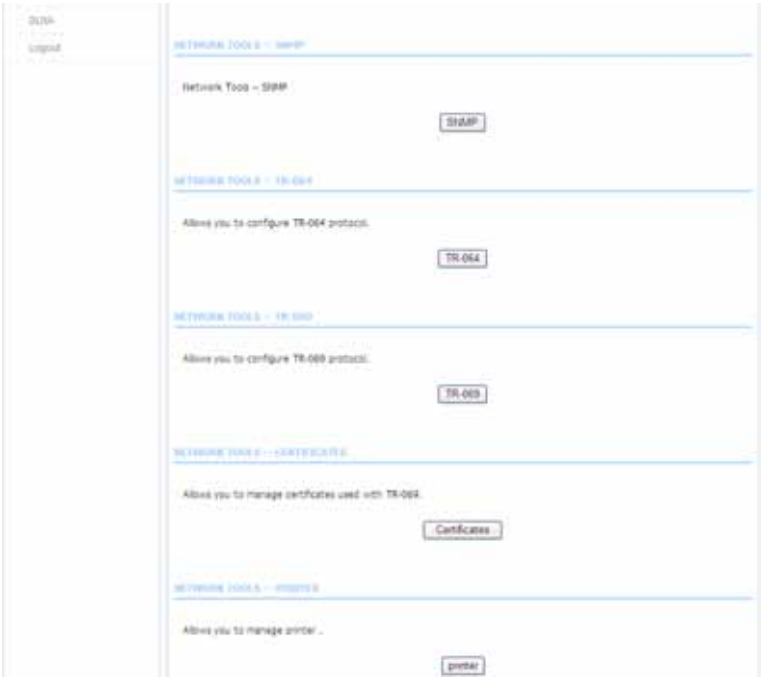
Field	Description
	DynDns.org and dlinkddns.com.
Host Name	Enter the host name that you registered with your DDNS service provider.
Username	Enter the user name for your DDNS account.
Password	Enter the password for your DDNS account.

Click **Apply** to save the settings.

3.3.12 Network Tools

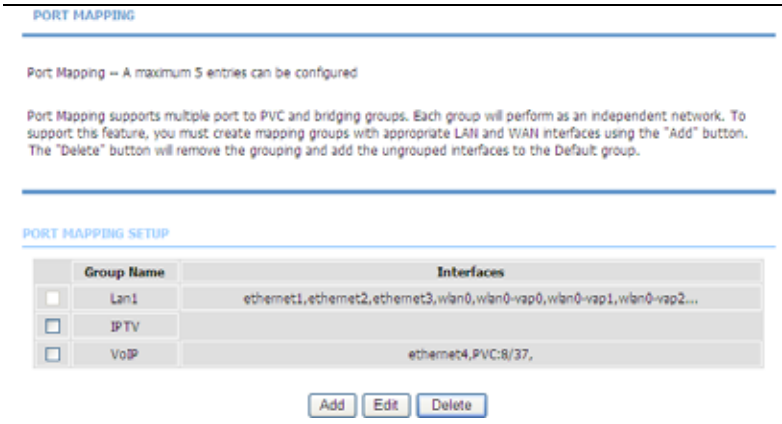
Choose **Advanced** > **Network Tools**. The page shown in the following figure appears.



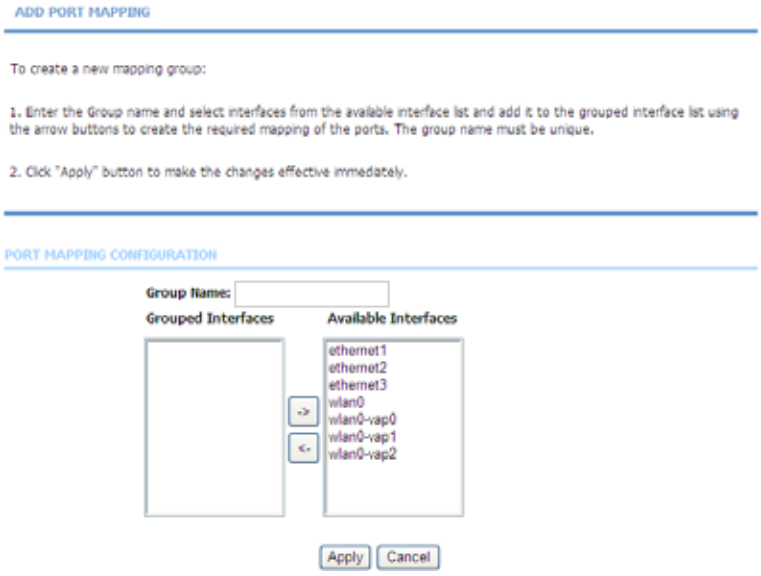


3.3.12.1 Port Mapping

Choose **Advanced** > **Network Tools** and click **Port Mapping**. The page shown in the following figure appears. In this page, you can bind the WAN interface and the LAN interface to the same group.



Click **Add** to add port mapping. The page shown in the following figure appears.



The procedure for creating a mapping group is as follows:

Step 1 Enter the group name.

Step 2 Select interfaces from the **Available Interface** list and click the **<-** arrow button to add them to the grouped interface list, in order to create the required mapping of the ports. The group name must be unique.

Step 3 Click **Apply** to save the settings.

3.3.12.2 IGMP Proxy

Choose **Advanced** > **Network Tools** and click **IGMP Proxy**. The page shown in the following figure appears.

IGMP proxy enables the system to issue IGMP host messages on behalf of hosts that the system discovered through standard IGMP interfaces. The system acts as a proxy for its hosts after you enable it.

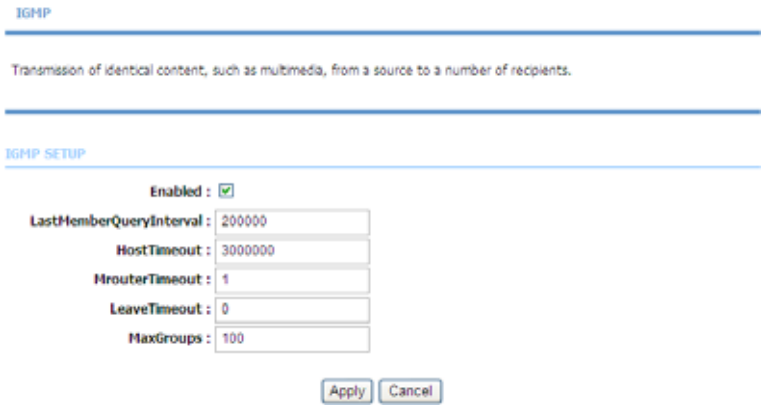
The following table describes the parameters of this page.

Field	Description
Enable PassThrough	The device preserve IP address field of the IGMP packets when sent in upstream direction to the DSLAM
Enable FastLeaving	Enable the IGMP user disconnected from particular multicast group immediately without performing the verification procedure with IGMP GSQ messages.
General Query Interval	The device will send query messages to check IGMP user periodically. The unit is second.
General Query Response Interval	The device waits for the IGMP user's replying. The unit is 100 * millisecond.
Group Query Interval	The device will send multicast group query message to check if the IGMP user is still alive. The unit is second.
Group Query Response Interval	The device waits for the IGMP user's replying. The unit is 100 * millisecond.
Group Query Count	This parameter specifies how many times that the device sends the multicast group query message.
Last Member Query Interval	When the last member left, the device sent the query messages periodically. The unit is second.
Last Member Query Count	This parameter specifies how many times that the device sends the query message.

Click **Apply** to save the settings.

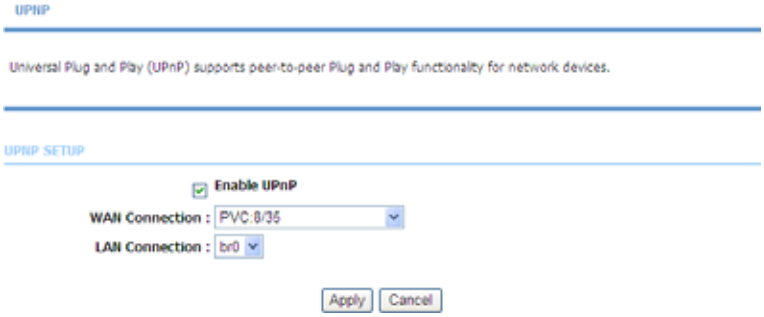
3.3.12.3 IGMP Snooping

Choose **Advanced** > **Network Tools** and click **IGMP Snooping**. The page shown in the following figure appears. When IGMP Snooping is enabled, the multicast data transmits through the specific LAN port which has received the request report.



3.3.12.4 UPnP

Choose **Advanced** > **Network Tools** and click **UPnP**. The page shown in the following figure appears.



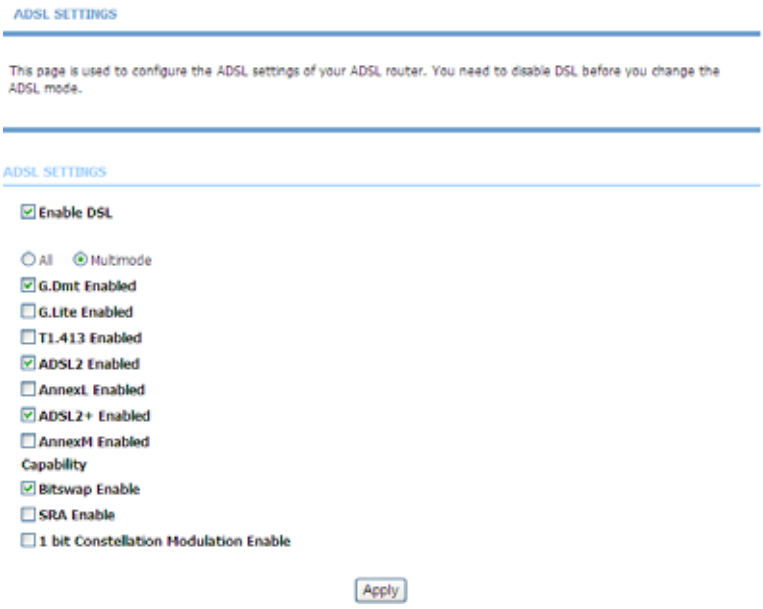
In this page, you can configure universal plug and play (UPnP). The system acts as a daemon after you enable UPnP.

UPnP is used for popular audio visual software. It allows automatic discovery of your device in the network. If you are concerned about UPnP security, you can disable it. Block ICMP ping should be enabled so that the device does not respond to malicious Internet requests.

Click **Apply** to save the settings.

3.3.12.5 ADSL

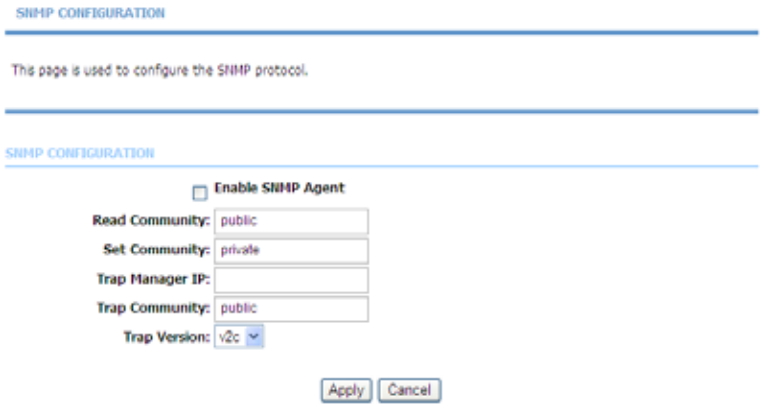
Choose **Advanced** > **Network Tools** and click **ADSL**. The page shown in the following figure appears.



In this page, you can select the DSL modulation. Normally, you can remain this factory default setting. The device negotiates the modulation mode with DSLAM. Click **Apply** to save the settings.

3.3.12.6 SNMP

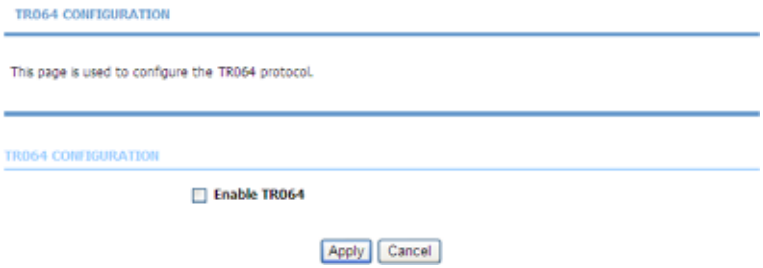
Choose **Advanced** > **Network Tools** and click **SNMP**. The page shown in the following figure appears. In this page, you can set SNMP parameters.



Click **Apply** to save the settings.

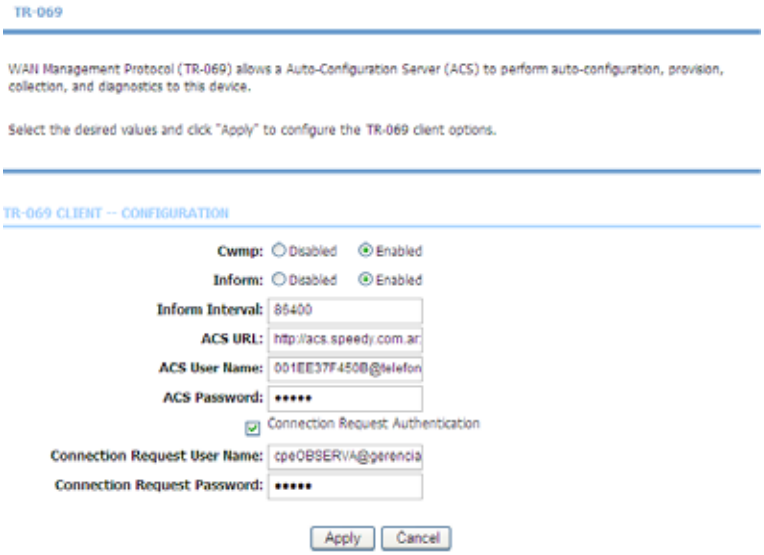
3.3.12.7 TR-064

Choose **Advanced > Network Tools** and click **TR-064.** The page shown in the following figure appears. In this page, you can enable the **TR064** service.



3.3.12.8 TR-069

Choose **Advanced** > **Network Tools** and click **TR069**. The page shown in the following figure appears. In this page, you can configure the TR069 CPE.

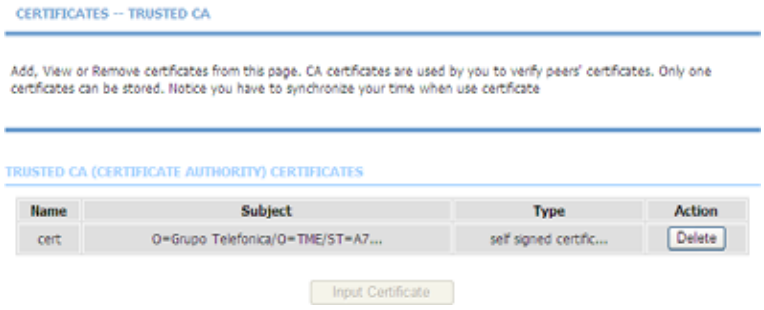


Click **Apply** to save settings.

3.3.12.9 Certificates

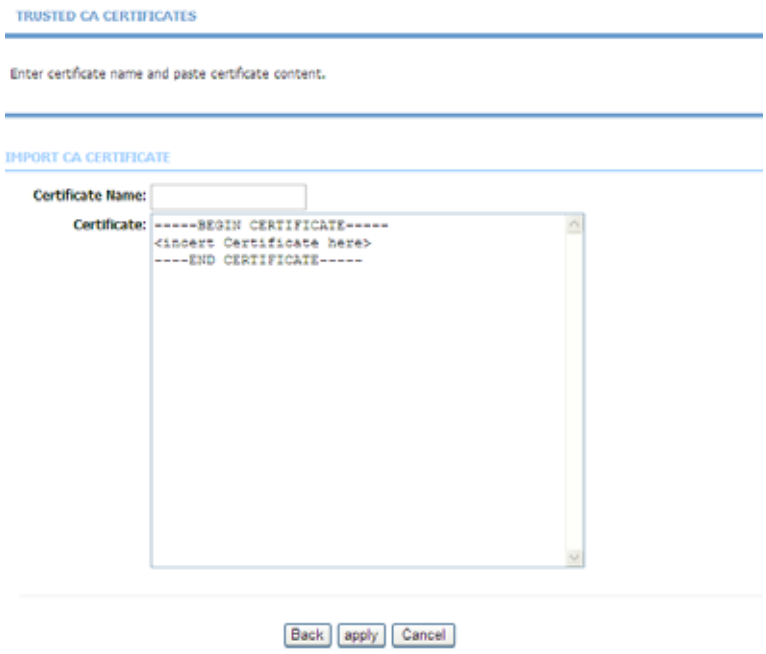
Choose **Advanced** > **Network Tools** and click **Certificates**. The **Certificates** page shown in the following figure appears.

Click **Trusted CA** button to import a certificate.



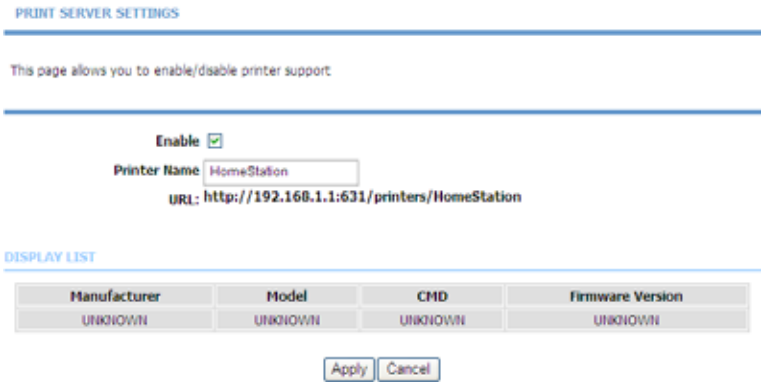
Click **Input Certificate** button to import a certification.

Note:
You can input a certificate after deleting the existing certificate.



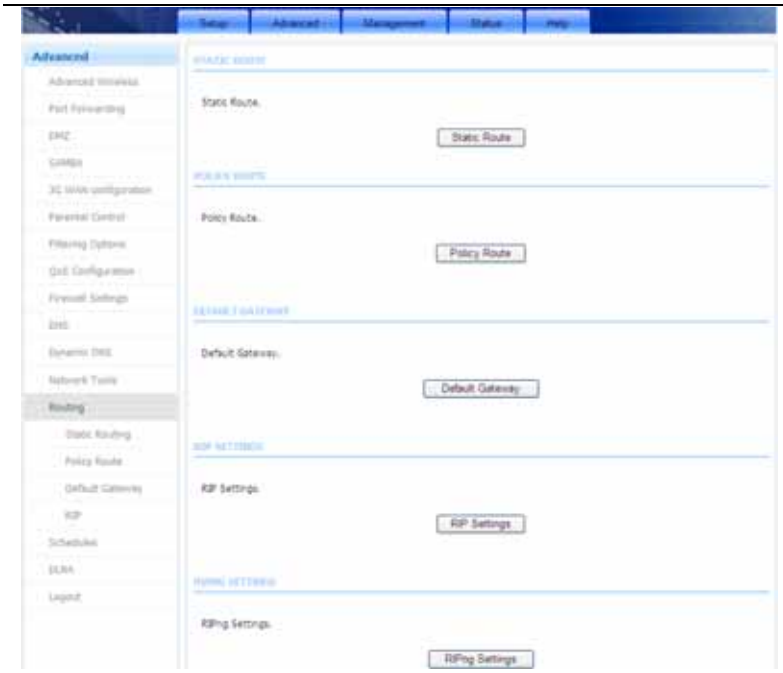
3.3.12.10 Printer

Choose **Advanced** > **Network Tools** and click **Printer**. The **Printer** page shown in the following figure appears. In this page, you can enable/disable printer support.



3.3.13 Routing

Choose **Advanced** > **Routing**. The page shown in the following figure appears.



3.3.13.1 Static Route

Choose **Advanced** > **Routing** and click **Static Route**. The page shown in the following figure appears. This page is used to configure the routing information. In this page, you can add or delete IP routes.

Click **Add** to add a static route. The page shown in the following figure appears.

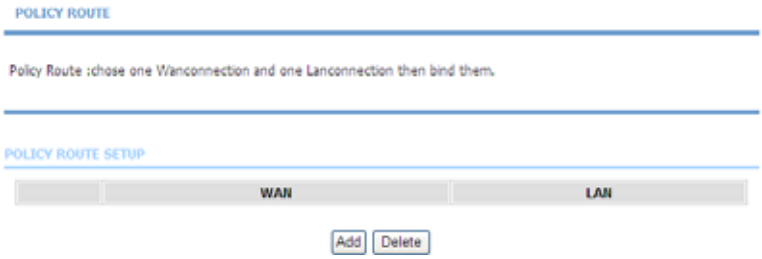
The following table describes the parameters of this page.

Field	Description
Destination Network Address	The destination IP address of the router.
Subnet Mask	The subnet mask of the destination IP
Use Interface	The interface name of the router output port.
Use Gateway IP Address	The gateway IP address of the router.

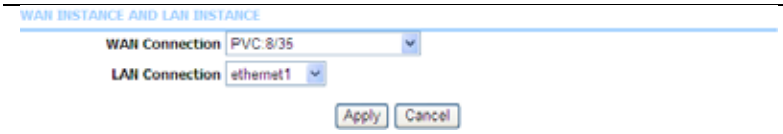
Click **Apply** to save the settings.

3.3.13.2 Policy Route

Choose **Advanced** > **Routing** and click **Policy Route**. The page shown in the following figure appears. The policy route binds one WAN connection and one LAN interface.

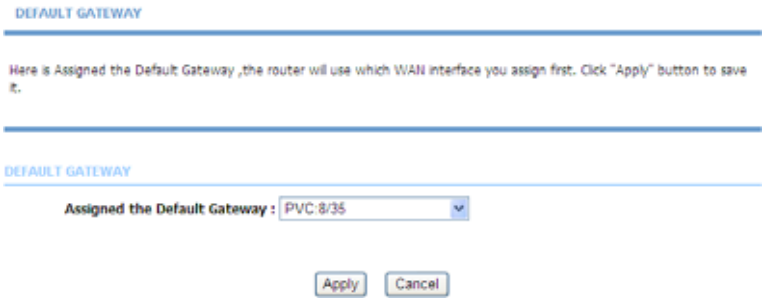


Click **add**, the page shown in the following figure appears.



3.3.13.3 Default Gateway

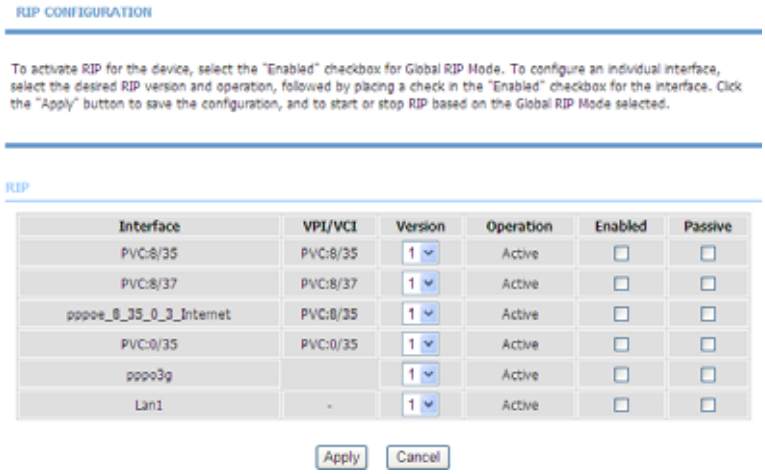
Choose **Advanced** > **Routing** and click **Default Gateway**. The page shown in the following figure appears. You may assign a default gateway for the router to use first.



Click **Apply** to save the settings.

3.3.13.4 RIP

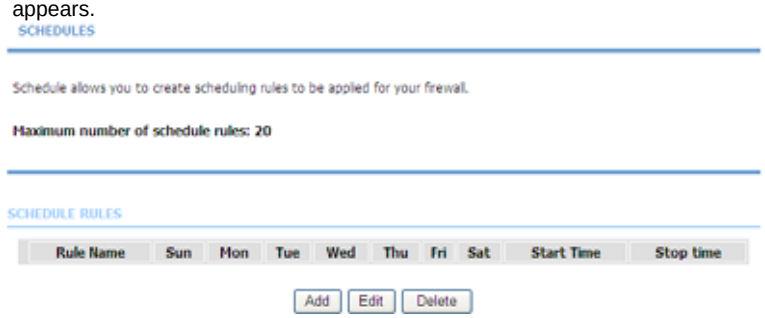
Choose **Advanced** > **Routing** and click **RIP Settings**. The page shown in the following figure appears. This page is used to select the interfaces on your device that use RIP and the version of the protocol used.



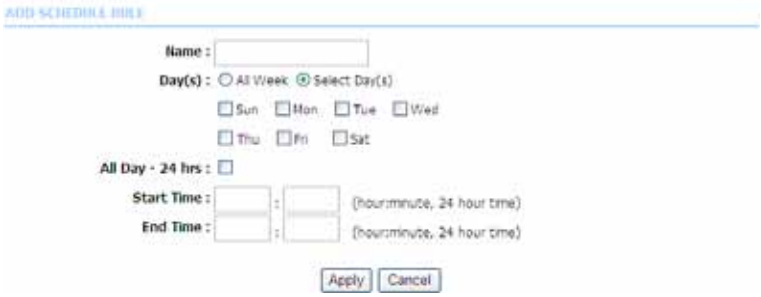
If you are using this device as a RIP-enabled device to communicate with others using the routing information protocol, enable RIP and click **Apply** to save the settings.

3.3.14 Schedules

Choose **Advanced** > **Schedules**. The page shown in the following figure appears.



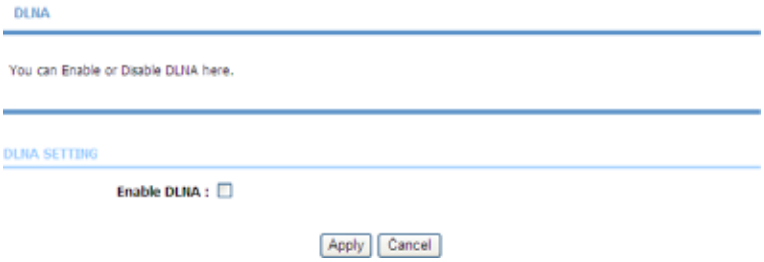
Click **Add** to add schedule rule. The page shown in the following figure appears.



Click **Apply** to save the settings.

3.3.15 DLNA

Choose **Advanced** > **DLNA**. The page shown in the following figure appears. In this page, you can choose to enable DLNA and click **Apply**.



3.3.16 Logout

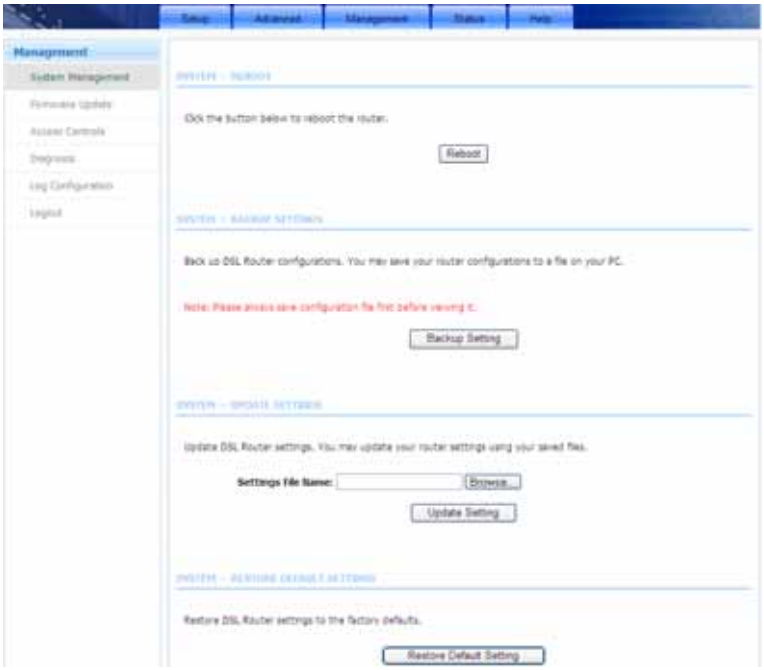
Choose **Advanced** > **Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.

3.4 Management

In the main interface, click **Management** tab to enter the **Management** menu as shown in the following figure. The submenus are **System Managemen**t, **Firmware Update**, **Access Controls**, **Diagnosis**, **Log Configuration** and **Logout**.

3.4.1 System Management

Choose **Management** > **System Management**. The page shown in the following figure appears.



In this page, you can reboot device, back up the current settings to a file, update settings from the file saved previously and restore the factory defaults.
The buttons in this page are described as follows.

Field	Description
Reboot	Click this button to reboot the device.
Backup Setting	Click this button to save the settings to the local hard drive. Select a location on your computer to back up the file. You can name the configuration file.
Update setting	Click **Browse** to select the configuration file of device and then click **Update Settings** to begin updating the device configuration.
Restore Default Setting	Click this button to reset the device to default settings.

Note:
Do not turn off your device or press the Reset button while an operation in this page is in progress.

3.4.2 Firmware Update

Choose **Management** > **Firmware Update**. The page shown in the following figure appears. In this page, you can upgrade the firmware of the device.

To update the firmware, take the following steps.

Step 1 Click **Browse…**to find the file.

Step 2 Select **Click Config**.

Step 3 Click **Update Firmware** to copy the file.

The device loads the file and reboots automatically.

Note:

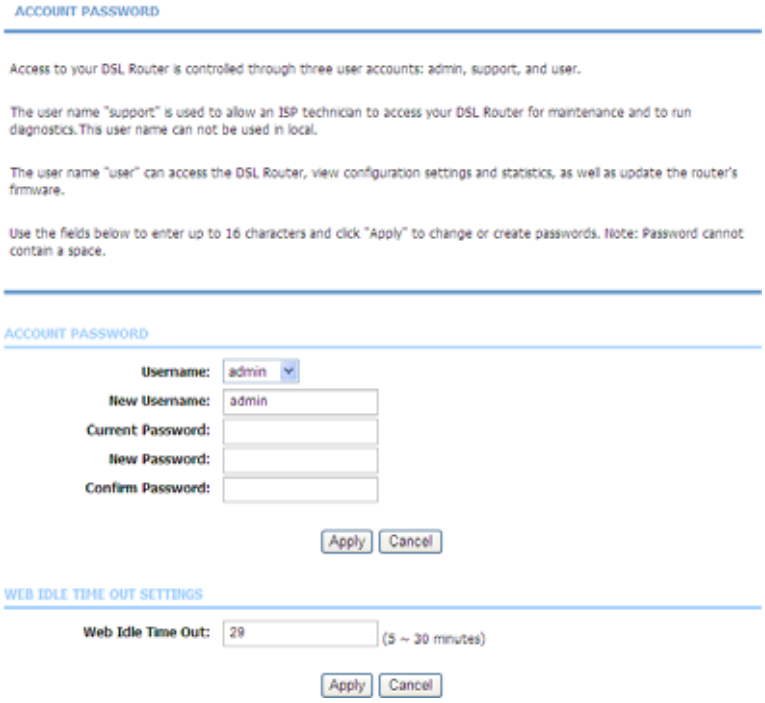
Do not turn off your device or press the Reset button while an operation in this page is in progress.

3.4.3 Access Controls

Choose **Management** > **Access Controls**. The **Access Controls** page shown in the following figure appears. The page contains **User Management**, **Services** and **IP Address**.

3.4.3.1 Account Password

In the **Access Controls** page, click **Account Password**. The page shown in the following figure appears. In this page, you can change the password of the user and set time for automatic logout.



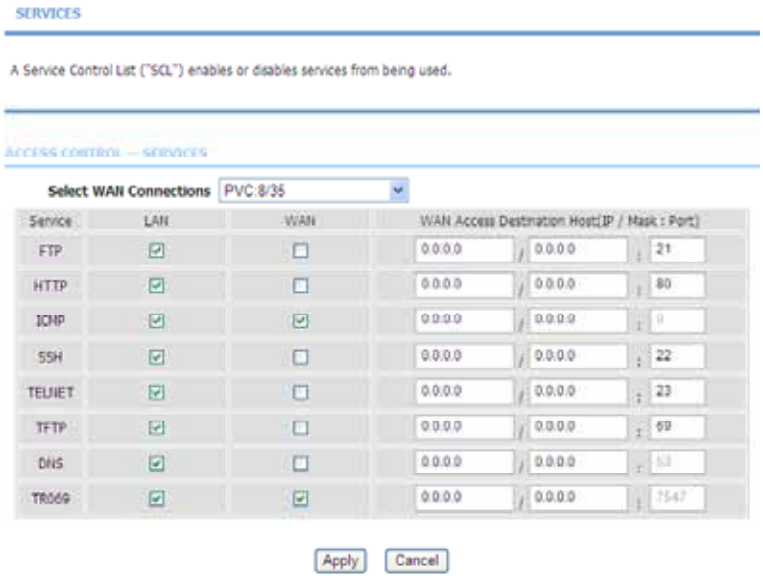
You should change the default password to secure your network. Ensure that you remember the new password or write it down and keep it in a safe and separate location for future reference. If you forget the password, you need to reset the device to the factory default settings and all configuration settings of the device are lost.

Select the **Username** from the drop-down list. You can select **admin**, **user** or **support**.

Enter the current and new passwords and confirm the new password to change the password. Click **Apply** to apply the settings.

3.4.3.2 Services

In the **Access Controls** page, click **Services**. The page shown in the following figure appears.



In this page, you can enable or disable the services that are used by the remote host. For example, if telnet service is enabled and port is 23, the remote host can access the device by telnet through port 23. Normally, you need not change the settings.

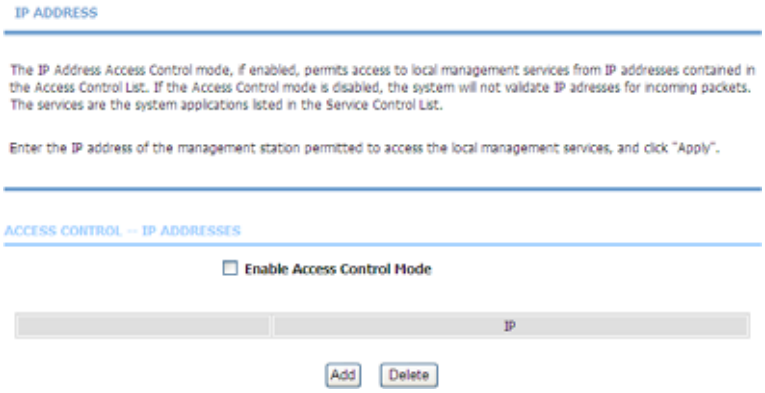
Select the management services that you want to enable or disable on the LAN or WAN interface. Click **Apply** to apply the settings.

Note:

If you disable HTTP service, you cannot access the configuration page of the device any more.

3.4.3.3 IP Address

In the **Access Controls** page, click **IP Address**. The page shown in the following figure appears.



In this page, you can configure the IP address for access control list (ACL). If ACL is enabled, only devices with the specified IP addresses can access the device. Tick **Enable Access Control Mode** to enable ACL.

Note:
If you enable the ACL, ensure that IP address of the host is in the ACL list.

To add an IP address to the IP list, cick **Add**. The page shown in the following figure appears.

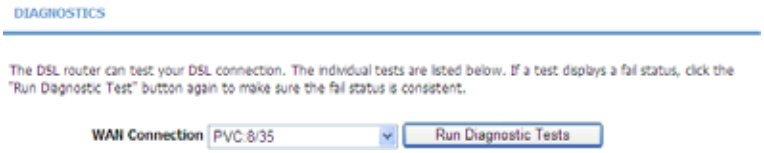
Click **Apply** to apply the settings.

3.4.4 Diagnosis

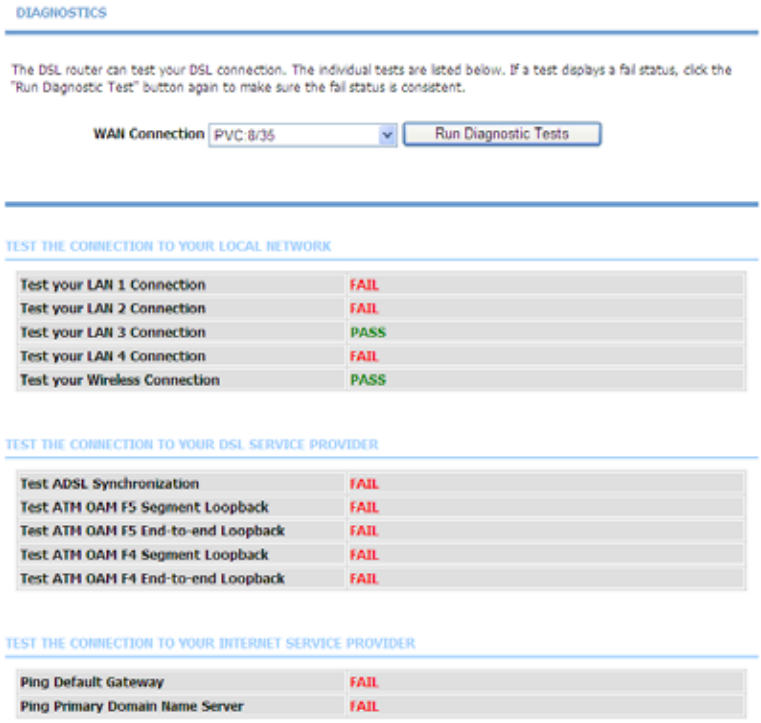
Choose **Management** > **Diagnosis**. The **Diagnosis** page shown in the following figure appears. The page contains **DSL Test** and **Traceroute**.

3.4.4.1 DSL Test

In the **Diagnosis** page, click **DSL Test**. The page shown in the following figure appears. In this page, you can test your DSL connection.

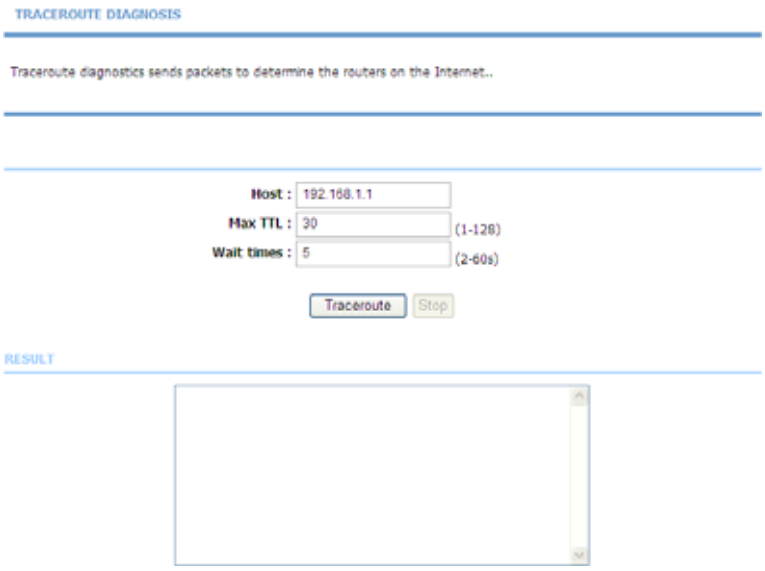


Click **Run Diagnostic Tests**. After testing, the following figure appears.

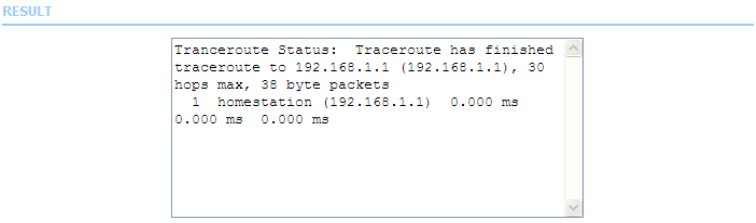


3.4.4.2 Traceroute

In the **Diagnosis** page, click **Traceroute**. The page shown in the following figure appears. In this page, you can determine the routers on the Internet by sending packets.



Click **Traceroute** to begin diagnosis. After finish, the page shown in the following figure appears.



3.4.5 Log Configuration

Choose **Management** > **Log Configuration**. The **System Log** page shown in the following figure appears.

This page displays event log data in the chronological manner. You can read the event log from the local host or send it to a system log server. Available event severity levels are as follows: Emergency, Alert, Critical, Error, Warning, Notice, Informational and Debugging. In this page, you can enable or disable the system log function.

To log the events, take the following steps.

Step 1 Select **Enable Log** check box.

Step 2 Select the display mode from the **Mode** drop-down list.

Step 3 Enter the **Server IP Address** and **Server UDP Port** if the **Mode** is set to **Both** or **Remote**.

Step 4 Click **Apply** to apply the settings.

Step 5 Click **View System Log** to view the detail information of system log.

3.4.6 Logout

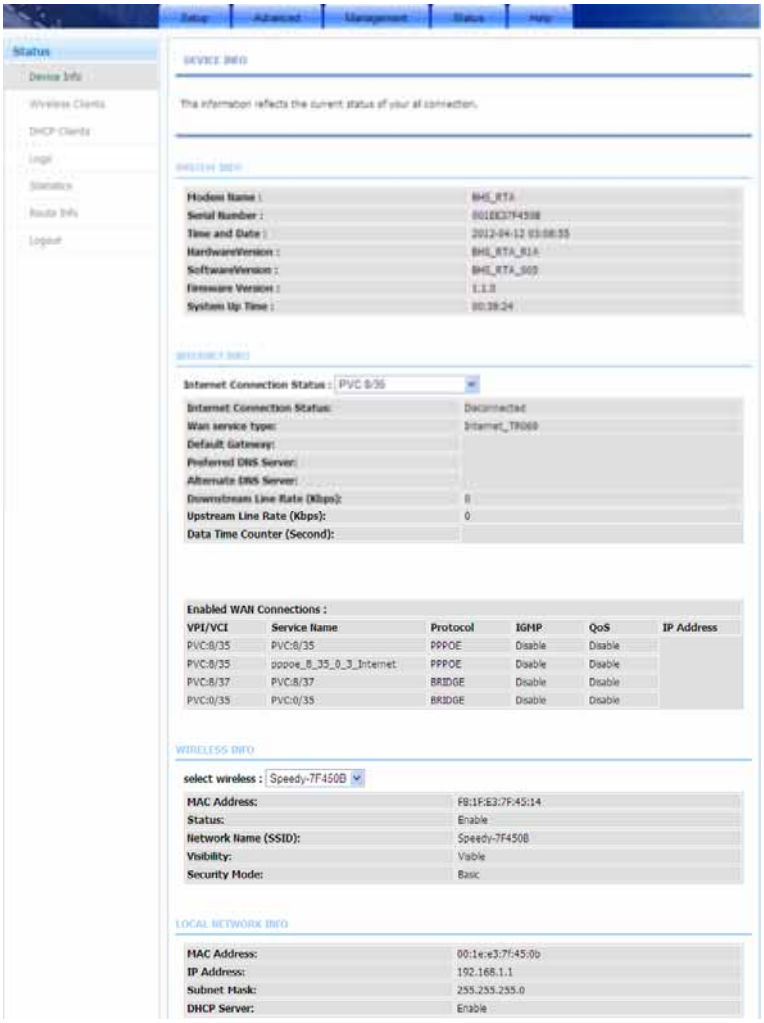
Choose **Management** > **Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.

3.5 Status

In the main interface, click **Status** tab to enter the **Status** menu as shown in the following figure. The submenus are **Device Info**, **Wireless Clients**, **DHCP clients**, **Logs**, **Statistics**, **Route Info** and **Logout**. You can view the system information and monitor performance.

3.5.1 Device Info

Choose **Status** > **Device Info**. The page shown in the following figure appears.



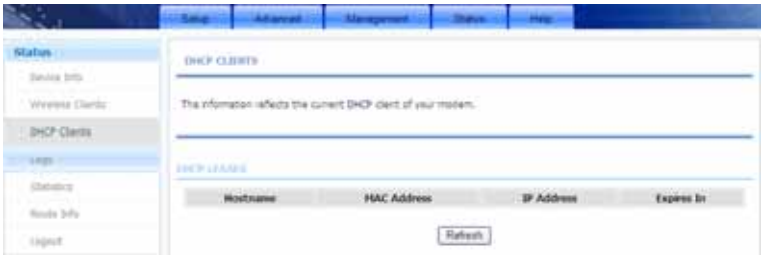
The page displays the summary of the device status. It includes the information of firmware version, upstream rate, downstream rate, uptime and Internet configuration (both wireless and Ethernet statuses).

3.5.2 Wireless Clients

Choose **Status** > **Wireless Clients**. The page shown in the following figure appears. The page displays authenticated wireless stations and their statuses.

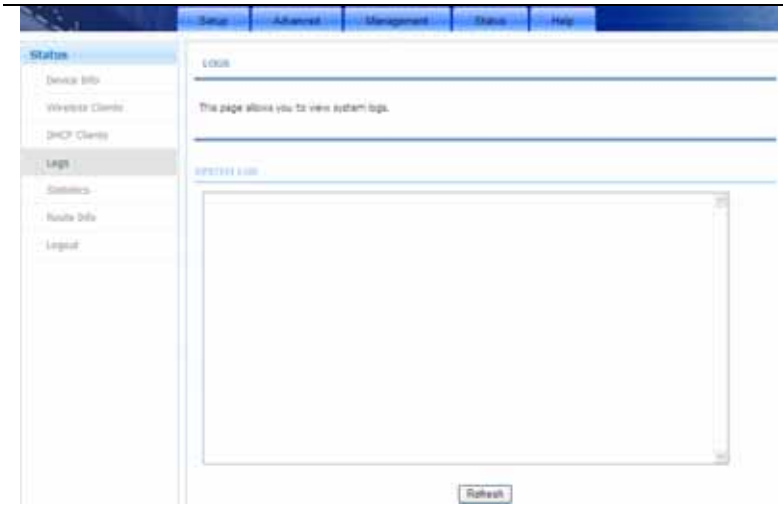
3.5.3 DHCP Clients

Choose **Status** > **DHCP Clients**. The page shown in the following figure appears. This page displays all client devices that obtain IP addresses from the device. You can view the host name, IP address, MAC address and time expired(s).



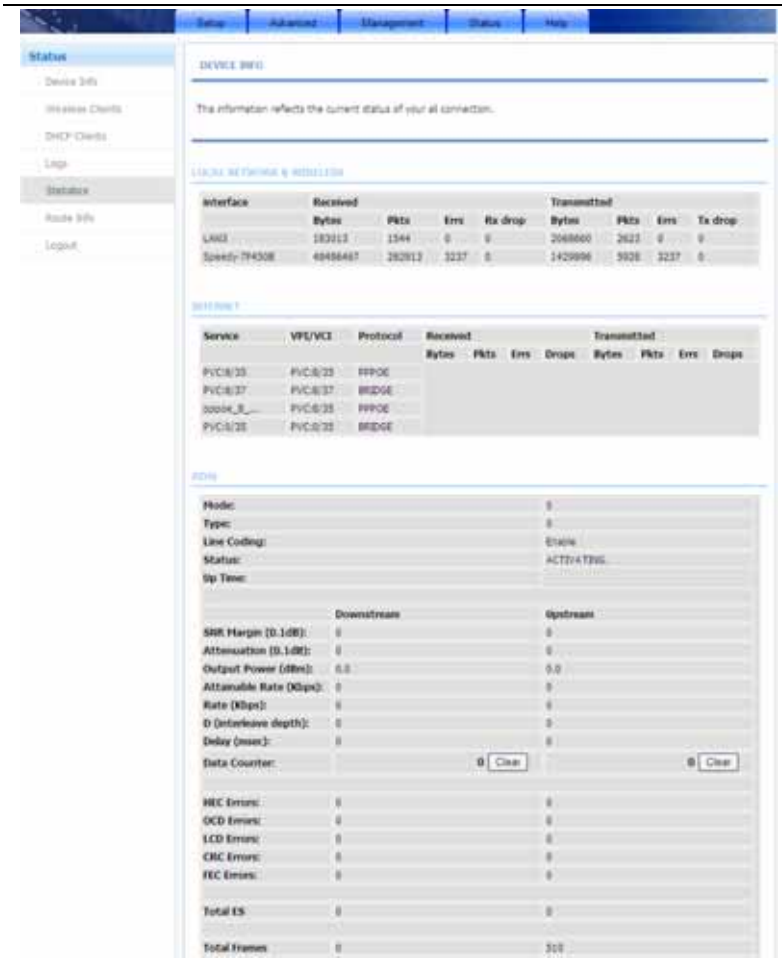
3.5.4 Logs

Choose **Status** > **Logs**. The page shown in the following figure appears. This page lists the system log. Click **Refresh** to refresh the system log shown in the table.



3.5.5 Statistics

Choose **Status** > **Statistics**. The page shown in the following figure appears. This page displays the statistics of the network and data transfer. This information helps technicians to identify if the device is functioning properly. The information does not affect the function of the device.

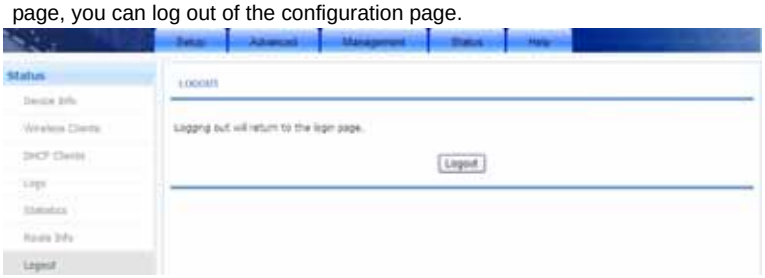


3.5.6 Route Info

Choose **Status** > **Route Info**. The page shown in the following figure appears. The table shows a list of destination routes commonly accessed by the network.

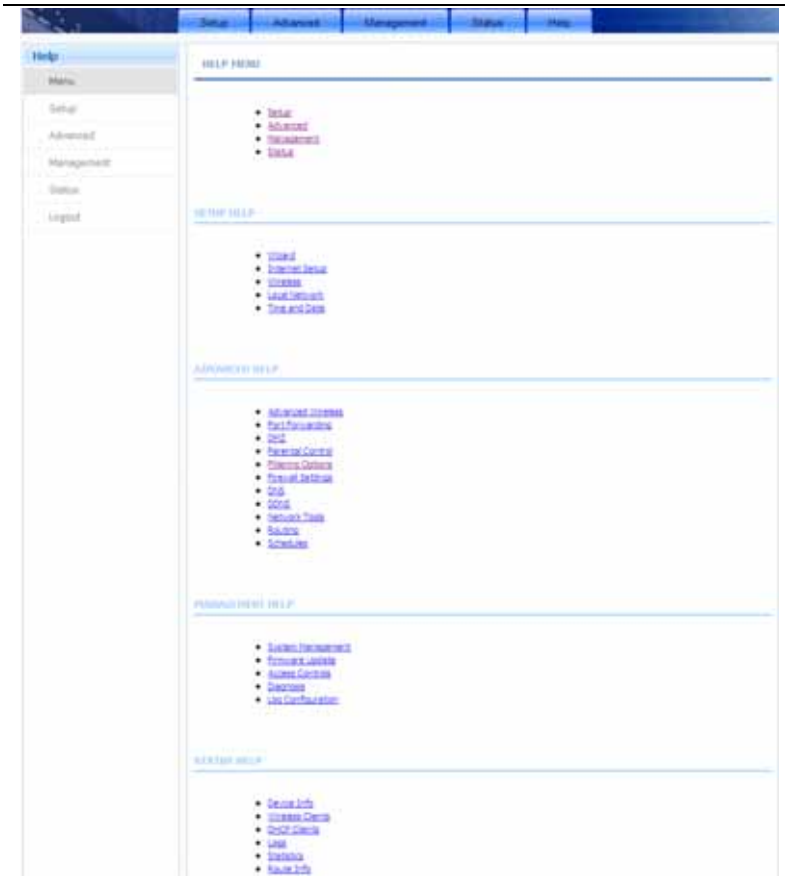
3.5.7 Logout

Choose **Status** > **Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.



3.6 Help

In the main interface, click **Help** tab to enter the **Help** menu as shown in the following figure. This section provides detailed configuration information for the device. Click a wanted link to view corresponding information.



fcc Statement and WarnInG

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 interference to radio or television reception, which can be determined by turning the equipment off and then on, the user is encouraged to try to correct the interference by one or more of the following measures:•
Reorient 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.

MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURER COULD VOID THE USER AUTHORITY TO OPERATE THE EQUIPMENT UNDER FCC RULES

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 interferecce that may cause undesired operation.

This equipment complies with FCC's and IC's RF radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this transmitter must be installed and operated to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter. Installers must ensure that 20cm separation distance will be maintained between the device (excluding its handset) and users.