PHICOMM

User Manual

300Mbps Wireless N Router

FWR-734N

User Manual / V2.0

Copyright Statement

CONTENTS

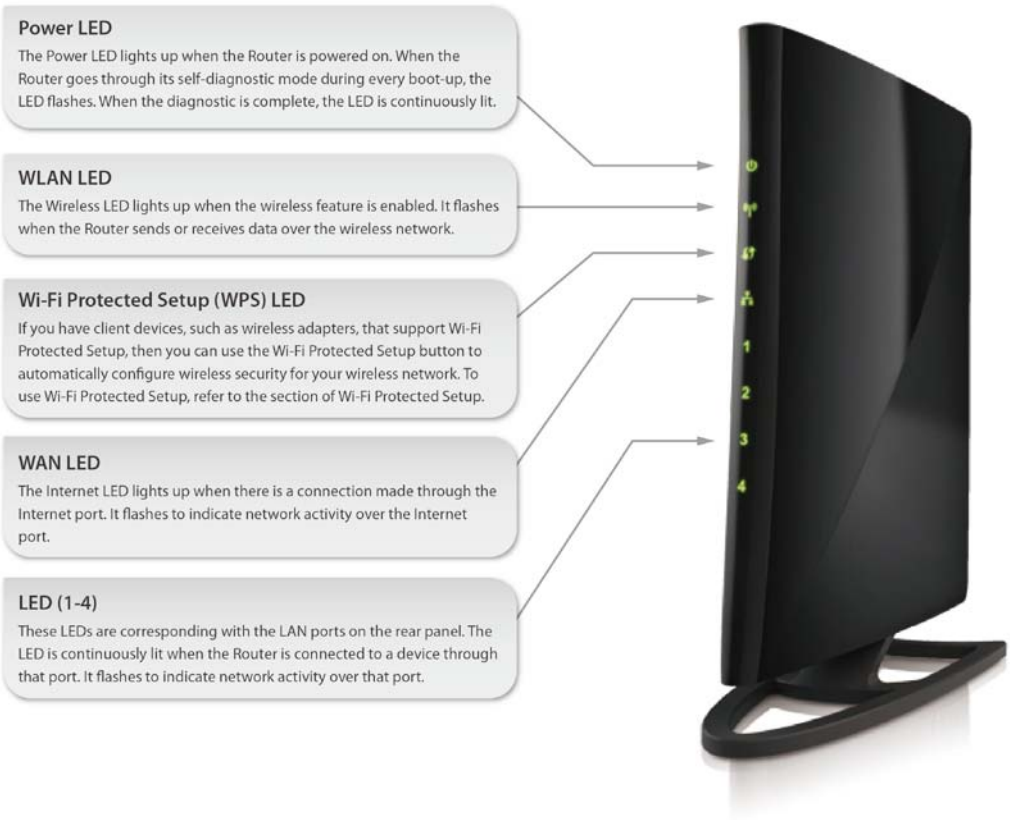
Chapter 1: Introduction

Product Overview

Thank you for choosing FWR-734N Wireless N Router.

FWR-734N 300Mbps Wireless N Router is an all-in-one router, ideal for home and SOHO users to share broadband Internet connection over the wired and wireless network. With the speed of up to 300Mbps, it can provide users with extraordinary smooth internet surfing, internet phone calling, and on-line gaming. Moreover, by adopting an built-in antenna, FWR-734N could greatly increases the wireless range & sensitivity, which enables you to receive wireless signals in the farthest corner of your home or office. And you can quickly setup the security at a simple push of the WPS (WiFi Protected Setup) button on the fashionable designed router, preventing your device from potential internet attacks.

Front Panel



Power LED: The Power LED lights up when the Router is powered on. When the Router goes through its self-diagnostic mode during every boot-up, the LED flashes. When the diagnostic is complete, the LED is continuously lit.

WLAN LED: The Wireless LED lights up when the wireless feature is enabled. It flashes when the Router sends or receives data over the wireless network.

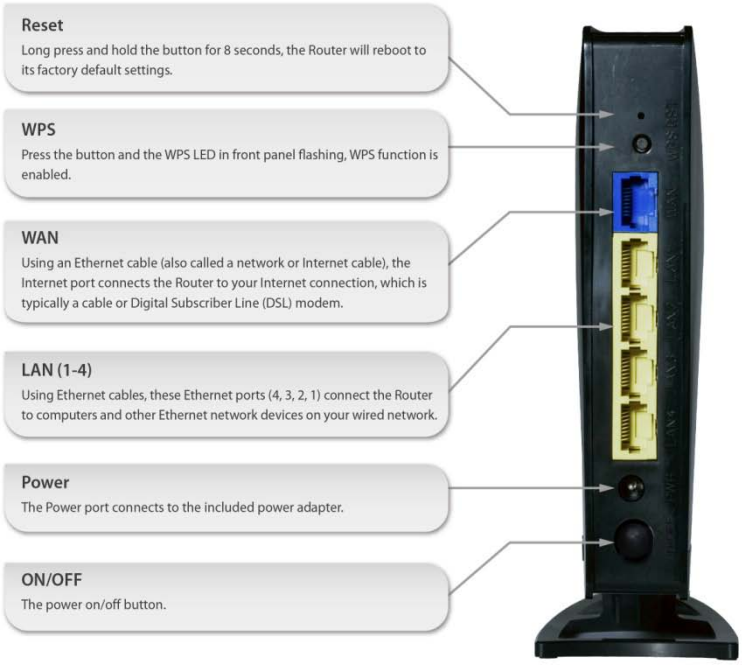
Wi-Fi Protected Setup (WPS) LED: If you have client devices (such as wireless adapters) that support Wi-Fi Protected Setup, then you can use the Wi-Fi Protected Setup button to automatically configure wireless security for your wireless network. To use Wi-Fi Protected Setup, refer to the section of **Wi-Fi Protected Setup**.

WAN: The WAN LED lights up when there is a connection made through the WAN port. It flashes to indicate network activity over the WAN port.

LED (1~4): These LEDs are corresponding with the LAN ports on the rear panel. The LED is continuously lit when the Router is connected to a device through that port. It flashes to indicate network activity over that port.

LED	Status	Description
POWER	On	Power is on
	Off	Power is off
WLAN	On	The wireless function is enabled
	Off	The wireless function is disabled
	Blinking	Sending or receiving data over wireless network
WPS	Off	WPS function is disabled
	Blinking	A wireless device is connecting to the network by WPS function. This process will last in the first 2 minutes
	On	A wireless device has been successfully connected to the network by WPS function
WAN	On	WAN port is connected
	Off	WAN port is unconnected
	Blinking	Data is transmitting
LAN (Port 1-4)	On	LAN port is connected
	Off	LAN port is unconnected
	Blinking	Data is transmitting

Rear Panel



WPS: Press the button and the WPS LED in front panel flashing, WPS function is enabled.

Reset: Long press and hold the button for 8 seconds, the Router will reboot to its factory default settings.

WAN: Using an Ethernet cable (also called a network or Internet cable), the Internet port connects the Router to your Internet connection, which is typically a cable or Digital Subscriber Line (DSL) modem.

LAN (1~4): Using Ethernet cables, these Ethernet ports (4, 3, 2, 1) connect the Router to computers and other Ethernet network devices on your wired network.

Power: The Power port connects to the included power adapter.

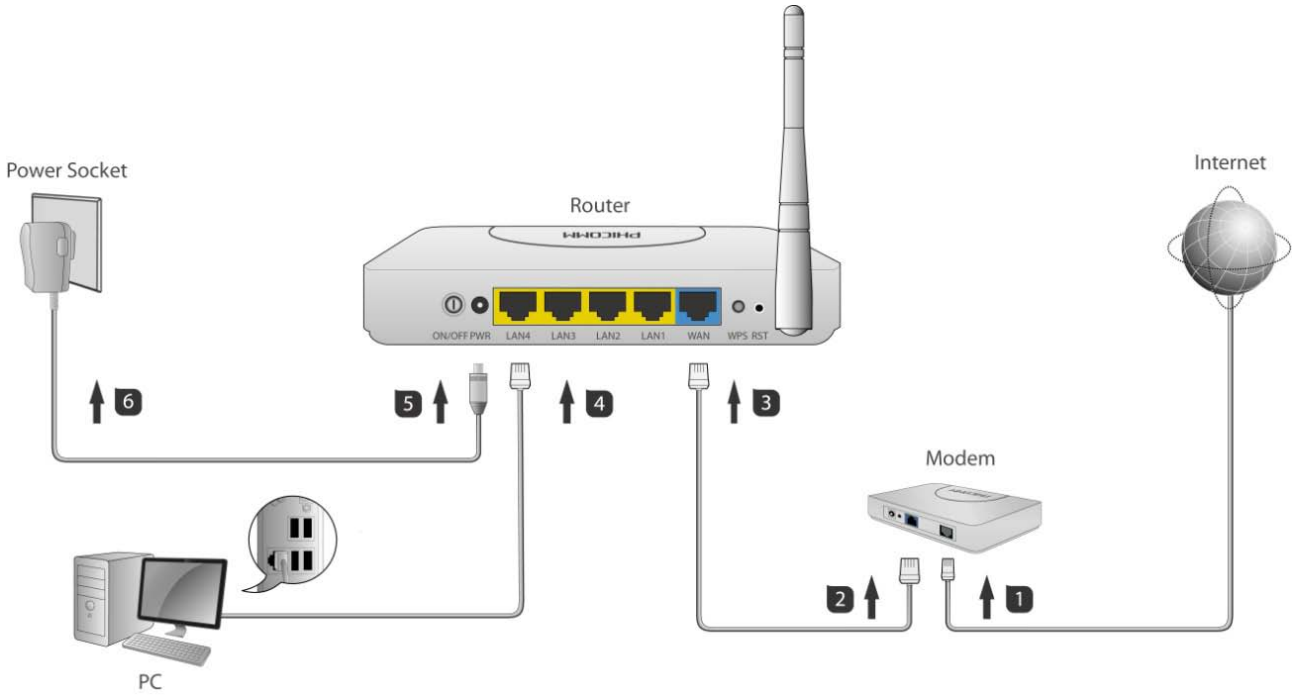
ON/OFF: The power on/off button.

Main Features

- 4 LAN ports and 1 WAN port
- Wireless N speed up to 300Mbps, ideal for internet surfing and on-line gaming
- Multi-SSID allows users to create multiple networks, and distributes access privilege of each network
- QoS controls the reasonable allocation of bandwidth to achieve optimum utilization, ensuring reliable Internet connection
- Quick wireless security setup by simply pressing the WPS button
- WDS wireless bridge provides seamless bridging to expand your wireless network
- Built-in firewall featured with IP, MAC, URL filtering and ARP attack prevention to protect your PC
- Backward compatible with 802.11b/g product
- Setup wizard simplifies installation and configuration

Chapter 2: Installation

Physical Connection



Note:

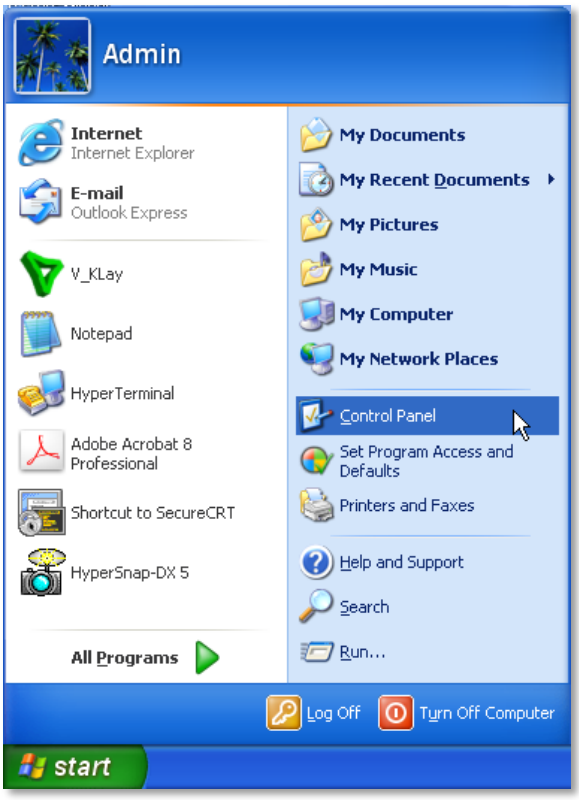
- Actual product may be different as the picture, but the installation will be the same.
- Please use the included power adapter. Use of a different power adapter could cause damage and void the warranty for this product.
- Please ensure the **Power, LAN** and **WAN** lights are ON when the installation finished successfully.

Configure the Computers IP Address

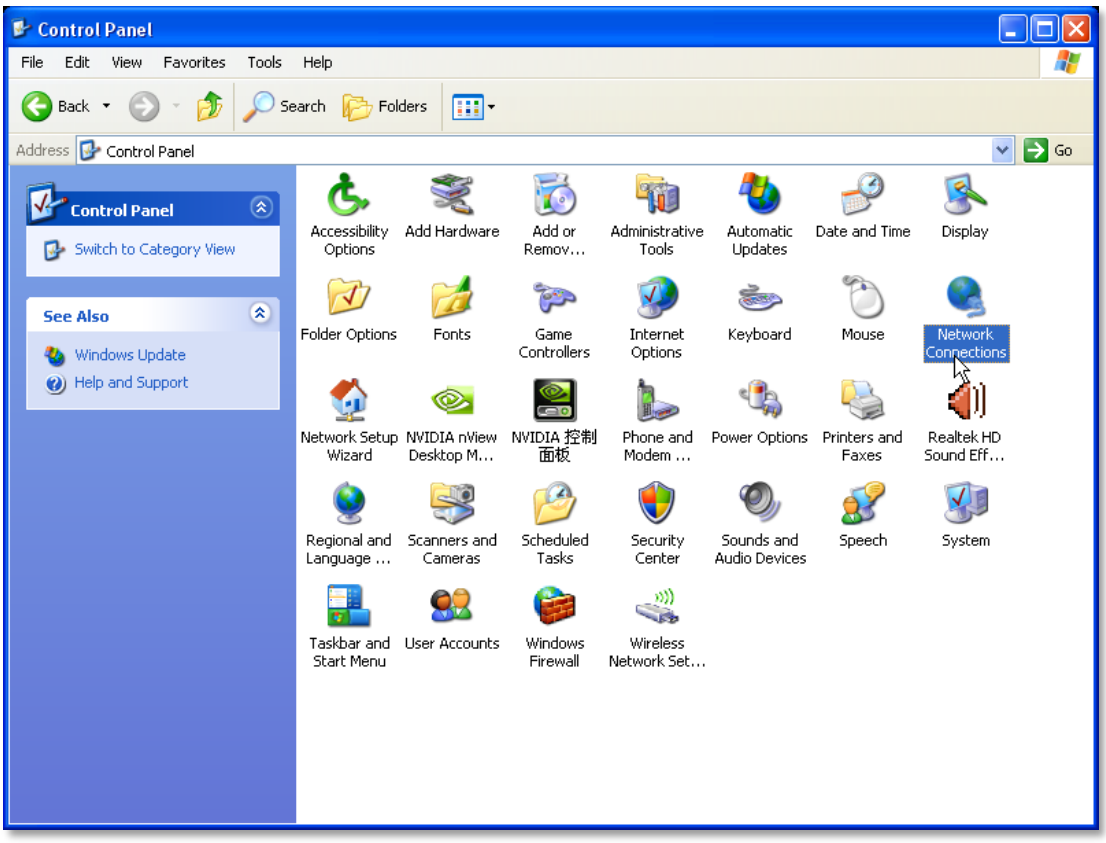
After connecting your PC to the router, you need to configure your PCs IP address.

For Windows XP/2000

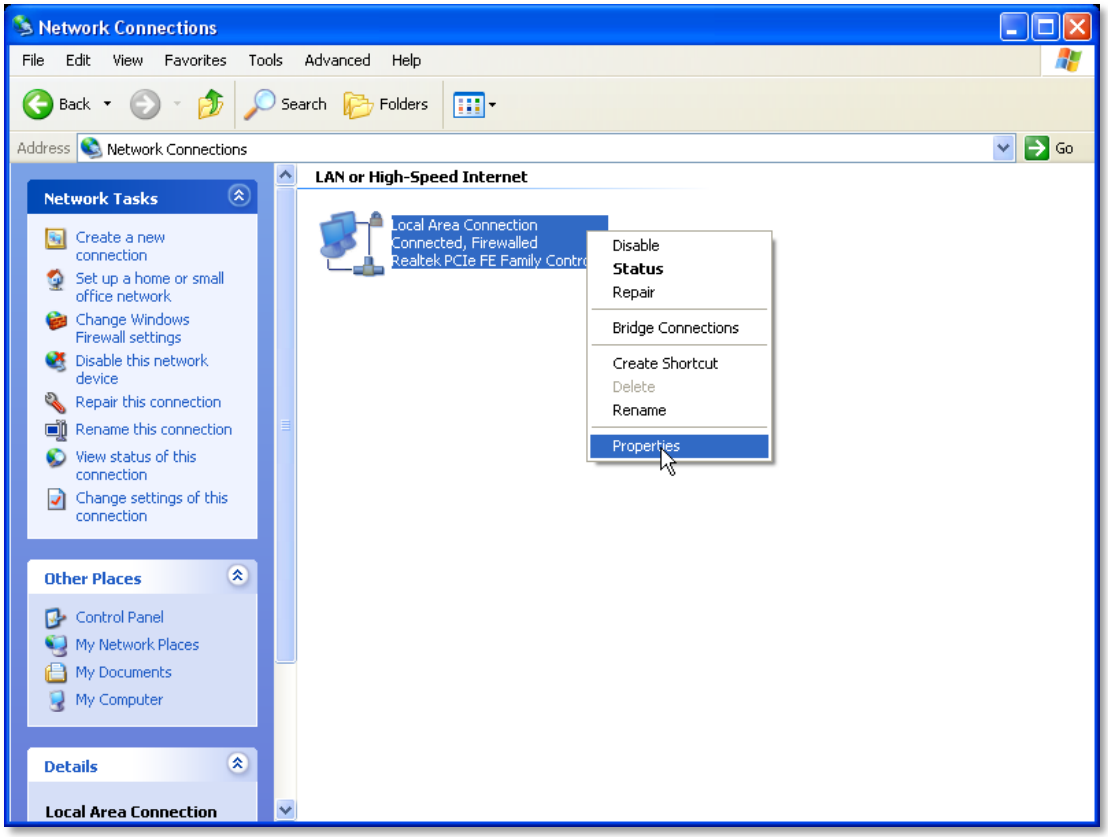
1) Click **Start** > **Control Panel**.



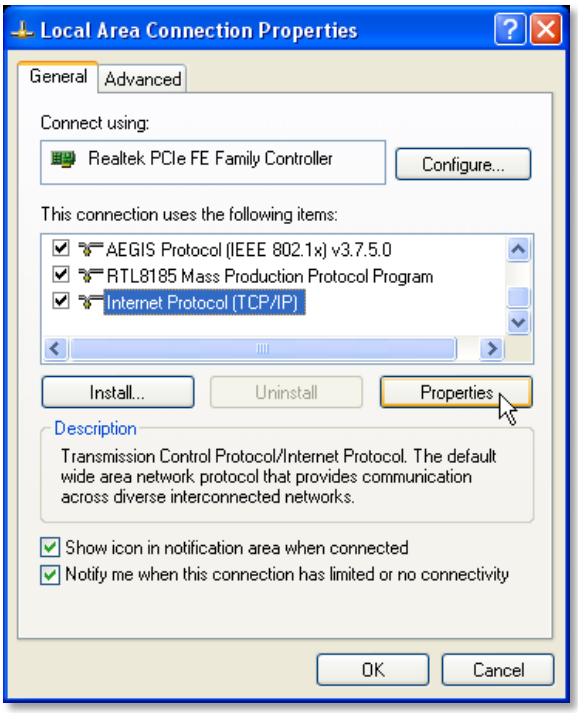
2) Select and double click **Network Connections**.



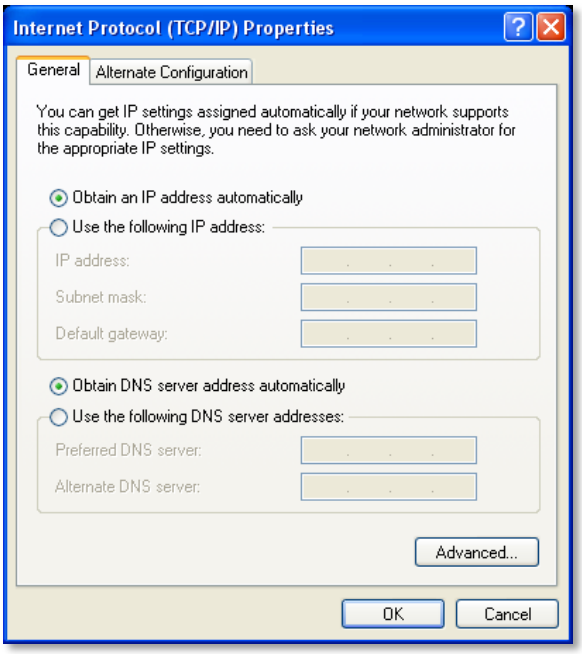
3) Right click **Local Area Connection** and then select **Properties**.



4) Select **Internet Protocol (TCP/IP)** and click **Properties**.

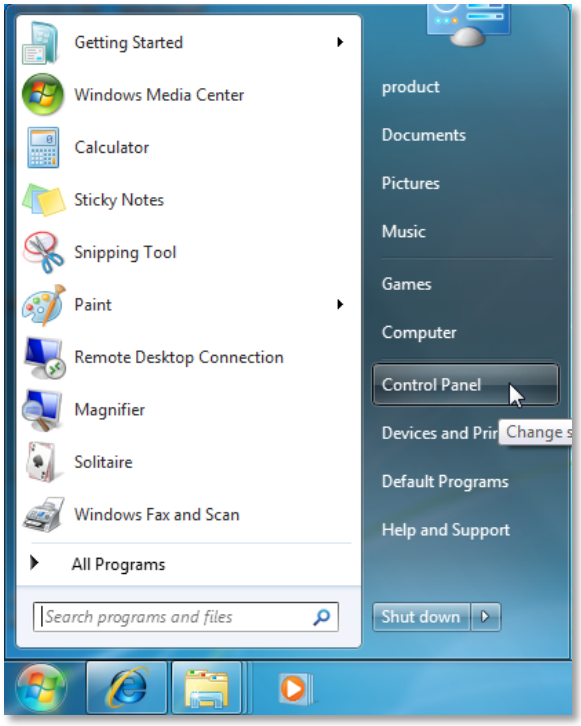


5) Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Then click **OK**.

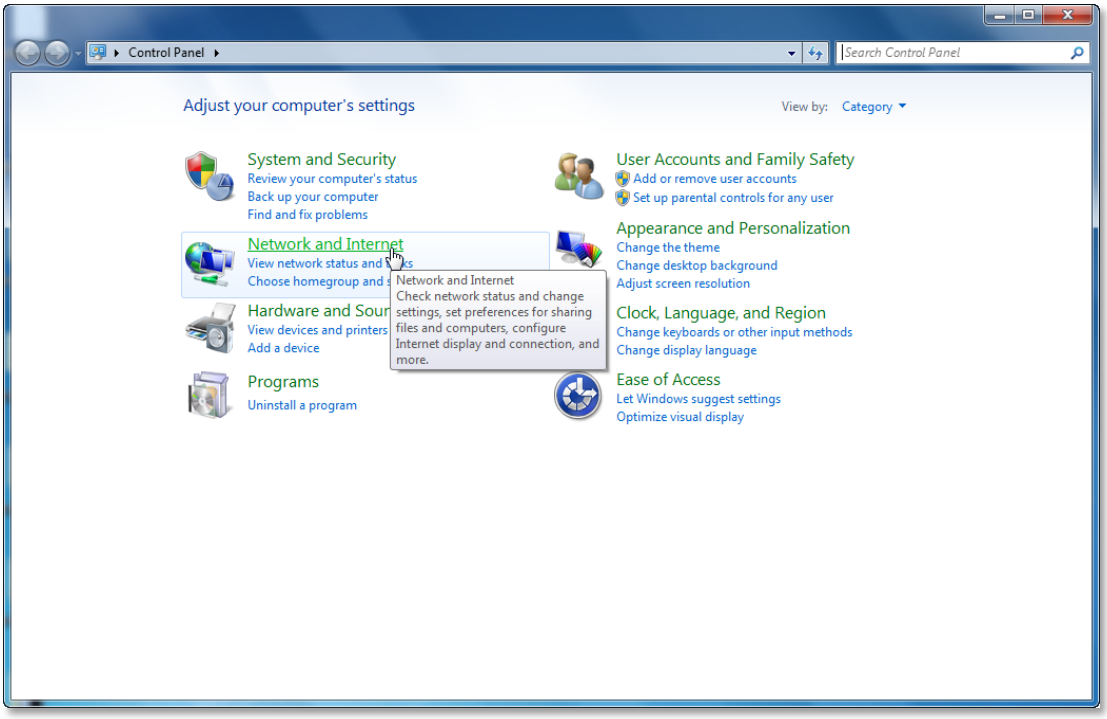


For Windows Vista/7

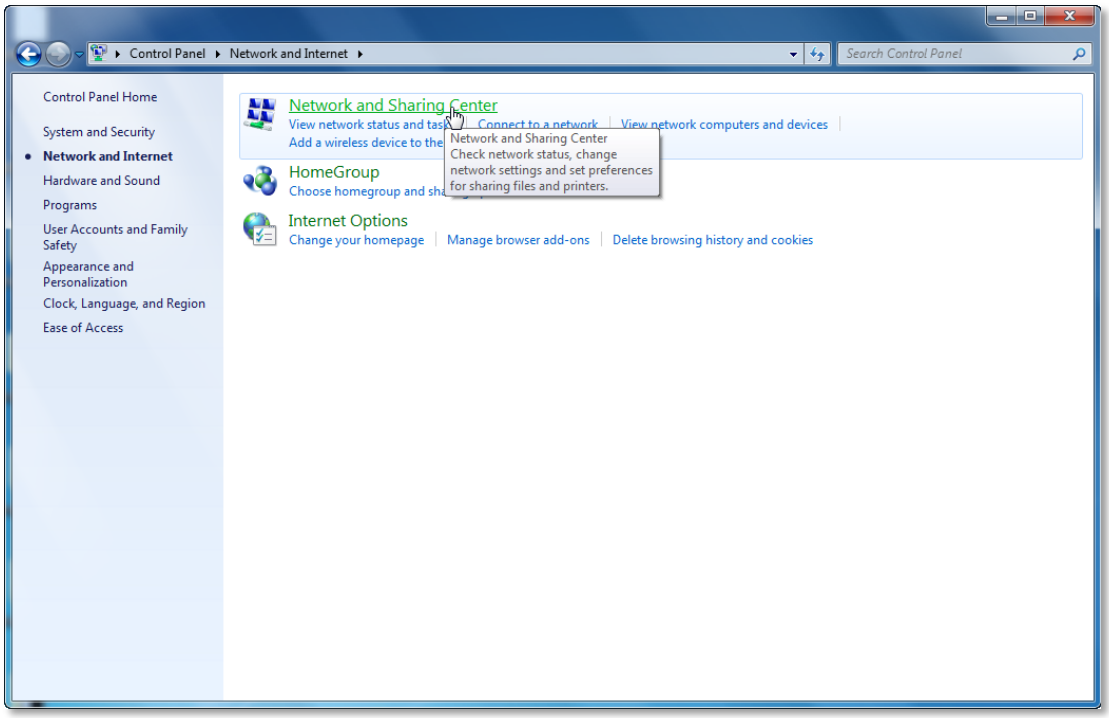
1) Click **Start**>**Control Panel**.



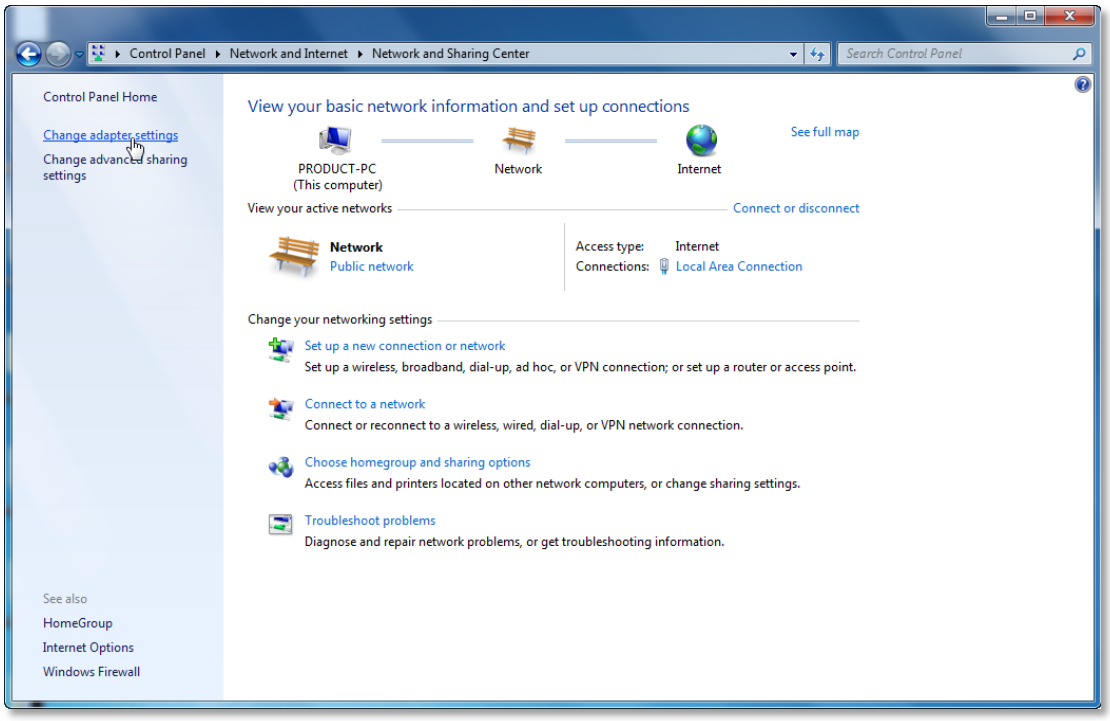
2) Click **Network and Internet.**



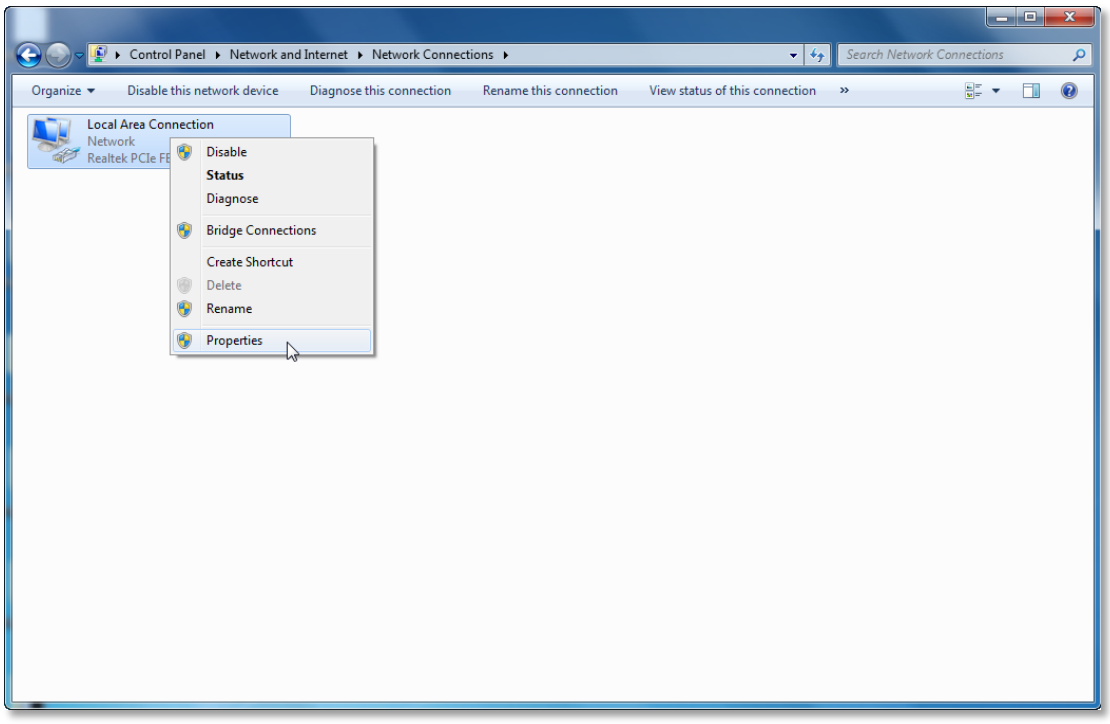
3) Click **Network and Sharing Center.**



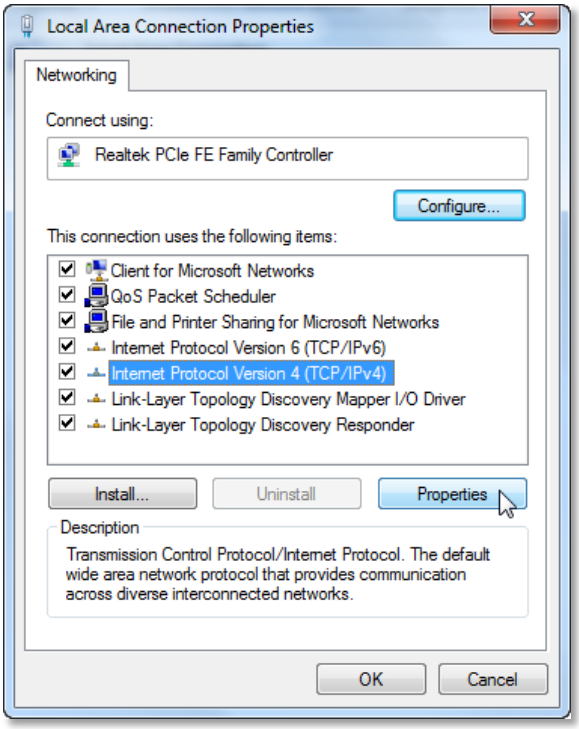
4) Go to **Change Adapter Settings** (win7)/**Manage Network Connections** (Vista).



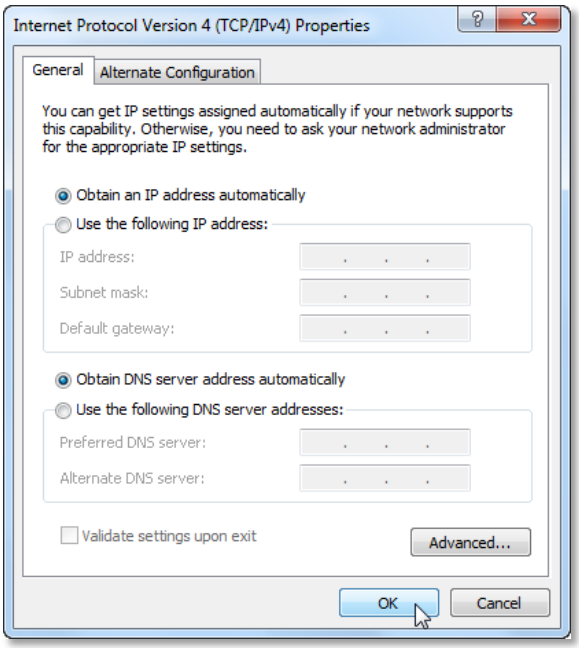
5) Right click **Local Area Connection**, choose **Properties**.



6) Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.



7) Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Then click **OK**.



Setup Wizard

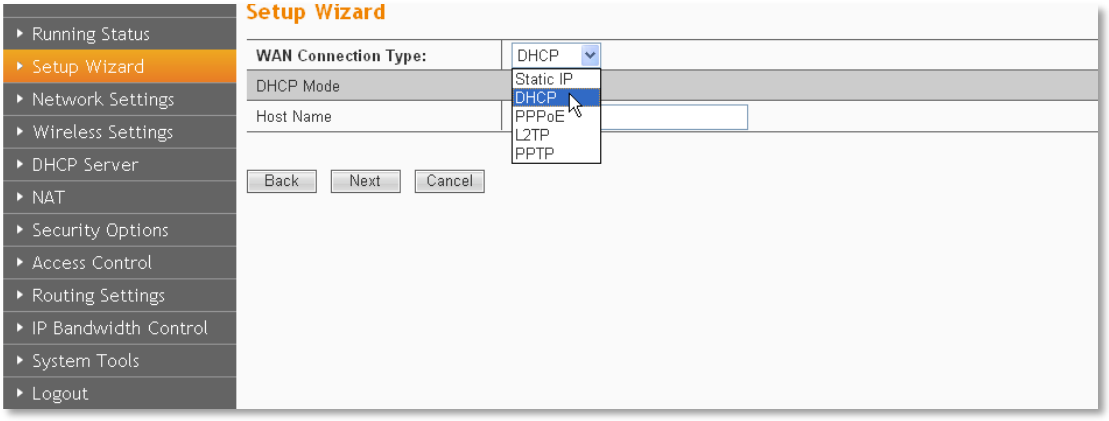
After successful installation, you can go ahead with connecting to the internet, the operations are as follow:

1) Open your web browser, in the address bar, type in 192.168.0.1

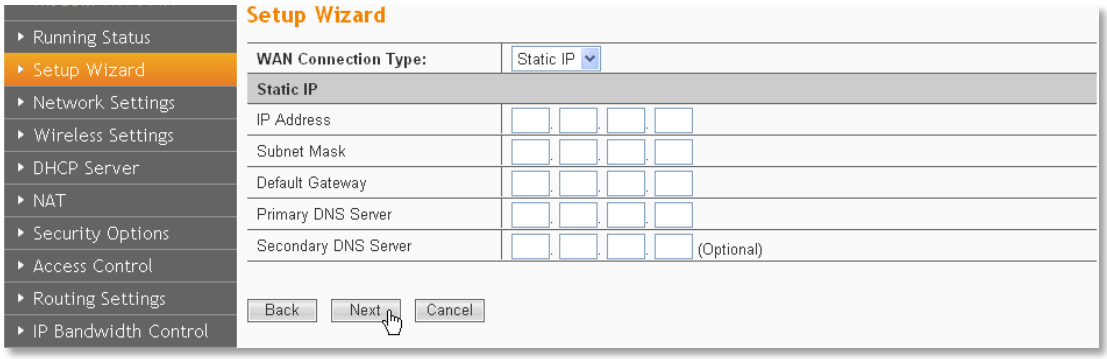
2) You are prompt to enter the Username/Password (preset as admin/admin) which you can found on the label at the bottom of your router, and then click **Login**.

3) After successful login, you can see the web management page of the router comes up, please go to **Setup Wizard** on the left side menu, Click **Next**.

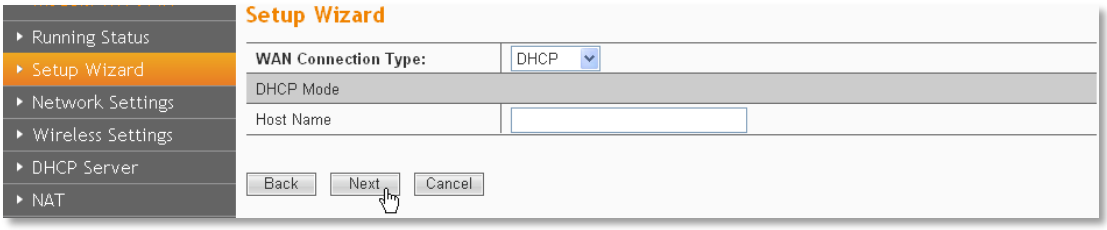
4) Please choose your WAN connection type, there are five options available: **Static IP**, **DHCP**, **PPPoE**, **L2TP** and **PPTP**.



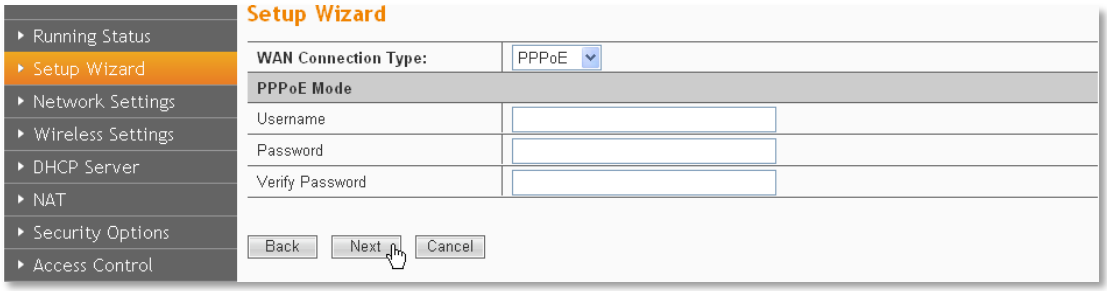
a. Select **Static IP** if your ISP gives you the **Static IP Address**, **Subnet Mask**, **Default Gateway** and **DNS Server Address**, type in those information and then click **Next**.



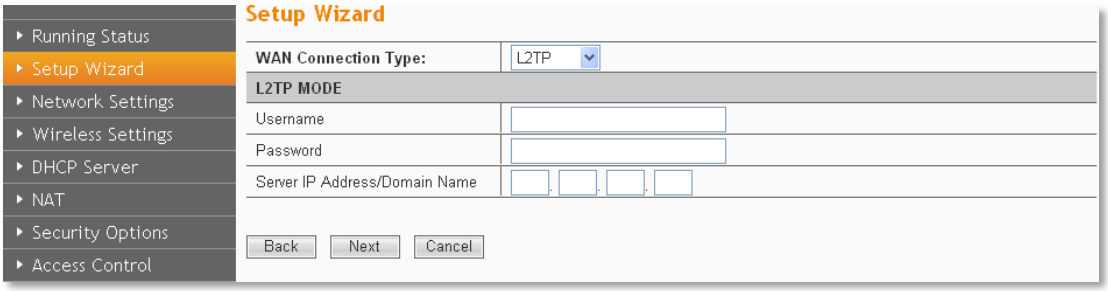
b. Select **DHCP** if your ISP does not gives you any IP numbers to use. This option is commonly used for cable modem services. Router will obtain IP address information automatically. In this case, no need to input anything but click **Next**.



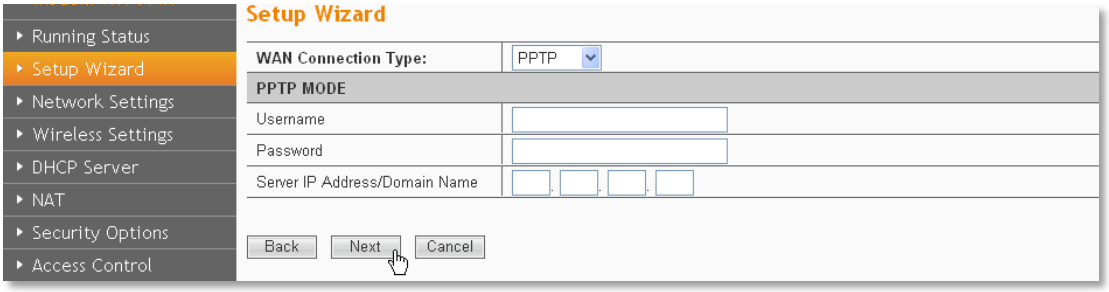
c. **PPPoE** is typically used for DSL services. Select **PPPoE** and type in the **Username** and **Password** provided by your ISP, and then click **Next**.



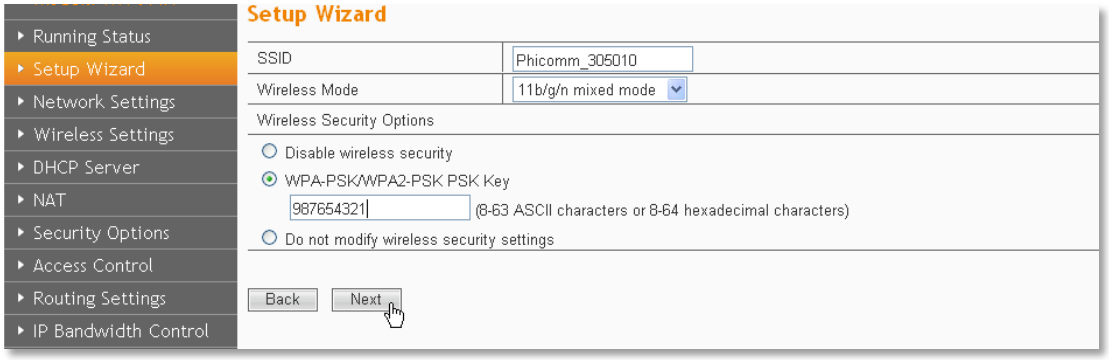
d. Select **L2TP** if your ISP provides **L2TP** connection, and then click **Next**.



e. Select **PPTP** if your ISP provides **PPTP** connection, and then click **Next**.



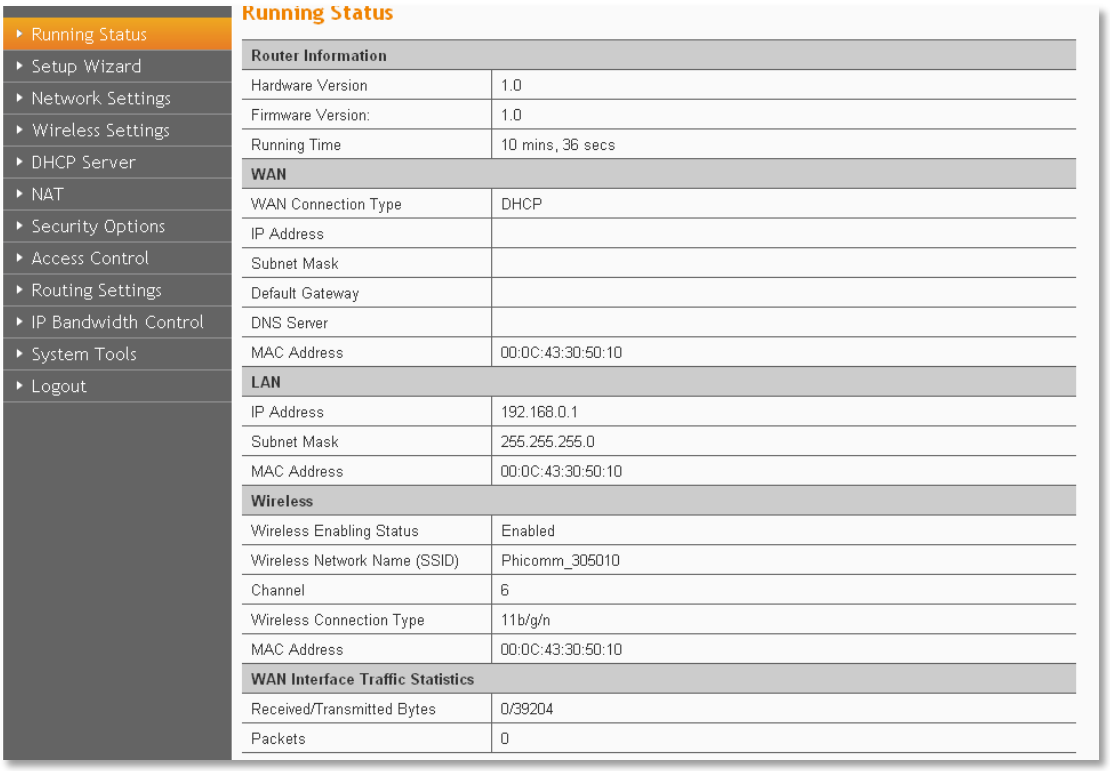
5) In this page, the **SSID** is the name of your wireless network, you can give it a different name. For the **Wireless Mode**, you can leave it as 11 b/g/n mixed mode, as for the **Wireless Security**, we recommend you to choose **WPA-PSK/WPA2-PSK**, and then set up a password, click **Next**.



6) Click **Finish**, then you can check the internet is working or not.

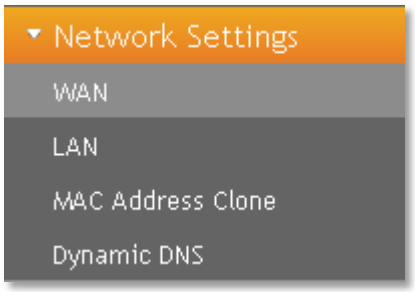
Chapter 3: Router Configuration

You can see there are twelve main menus on the left side of the router's web management page. On the right side, you can see a small **HELP** button, there are the corresponding explanations and instructions. The Running Status page shows the current status of the Router.

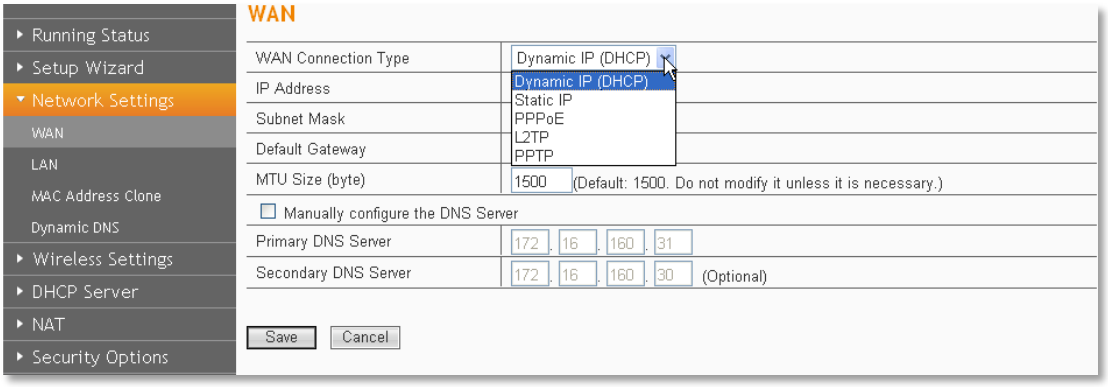


Network Settings

The **Network Settings** section helps you to configure the Router to access the Internet. There are four submenus under the wireless menu: **WAN**, **LAN**, **MAC Address Clone** and **Dynamic DNS**. Click any of them, you will be able to configure the corresponding function.



WAN



WAN Connection Type: To make sure the connection type your ISP provides, please refer to the ISP for more information.

Dynamic IP (DHCP): Connections use dynamic IP address assignment, it means your ISP is running a DHCP server.

Static IP: Connections use static IP address assignment, it means your ISP provides a static or fixed IP Address, Subnet Mask, Gateway and DNS setting.

PPPoE: Connections requires username and password.

L2TP: Layer 2 Tunneling Protocol (L2TP) is a service applies to connections in Israel only.

PPTP: Point-to-Point Tunneling Protocol (PPTP) is a service applies to connections in Europe only.

Select the connection type according to the information provided by your Internet Service Provider (ISP), and fill in the information accordingly.

MTU Size (in bytes): The default MTU (Maximum Transmission Unit) value is 1500 Bytes. Sometimes you need to modify the MTU required by your ISP.

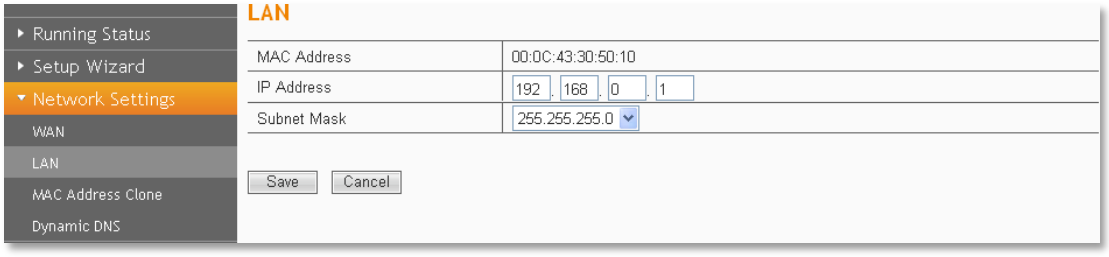
Please check **Manually configure the DNS server** if your ISP gives you one or two DNS IP addresses. Otherwise, leave it unchecked, the DNS servers will be assigned from ISP dynamically.

Primary DNS Server: Enter the DNS IP address in dotted-decimal notation provided by your ISP.

Secondary DNS Server: Enter another DNS IP address in dotted-decimal notation provided by your ISP.

Note: If you get Address not found error when you access a website, it is likely that your DNS servers are set up improperly. You should contact your ISP for correct DNS server addresses.

LAN



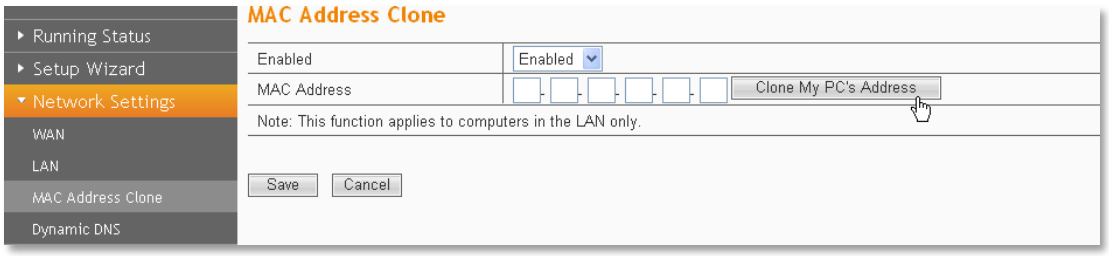
MAC Address: The physical address of the router.

IP Address: The LAN IP Address of the router.

Subnet Mask: The Subnet Mask associated with the LAN IP Address.

Note: If you changed the LAN IP Address of the router, please log in this web management page by the new IP address.

MAC Address Clone



Some ISPs require you to register the MAC Address of your computer. Choose **Enabled**, and then click **Clone My PC's MAC Address**, then click **Save.**

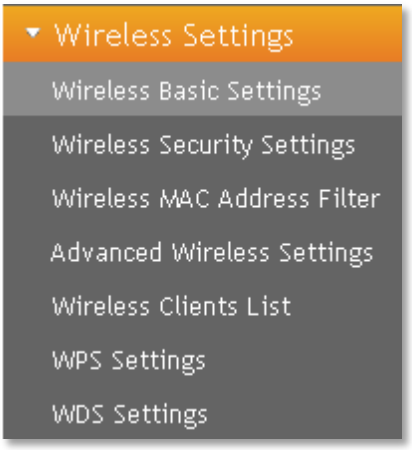
Dynamic DNS

Dynamic DNS lets you assign a fixed host and domain name to a dynamic Internet IP address. If you want to use this feature, please register for this service with DDNS service providers such as www.no-ip.com first.

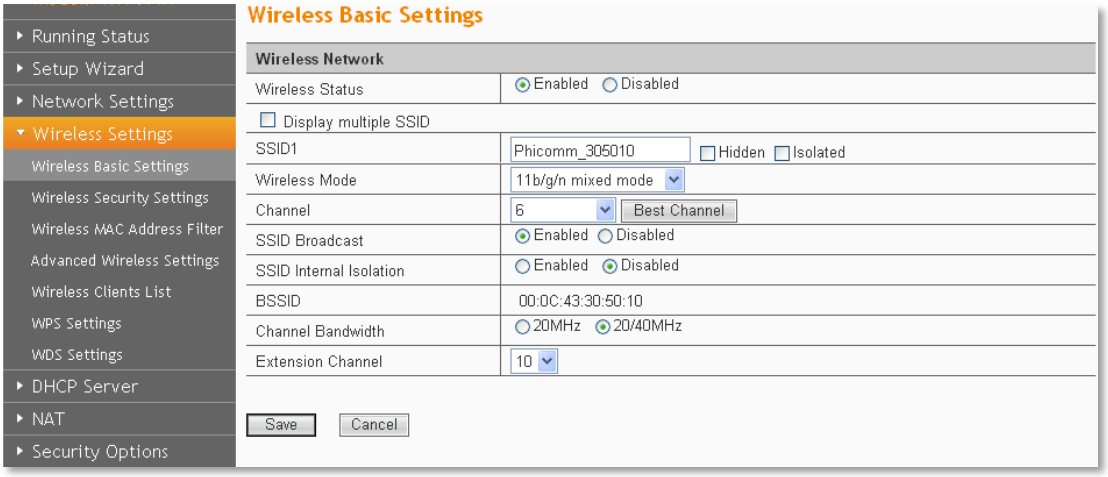
If you have registered with a DDNS service provider, select the website of your service provider, then enter the **Username**, **Password** and **Dynamic DNS service address** for your DDNS account.

Wireless Settings

There are seven submenus under the wireless menu: **Wireless Basic Settings**, **Wireless Security Settings**, **Wireless MAC Address Filter**, **Advanced Wireless Settings**, **Wireless Clients List**, **WPS Settings** and **WDS Settings**. Click any of them, you will be able to configure the corresponding function.



Wireless Basic Settings



Wireless Status: Choose **Enable** to enable the wireless function of the router, choose **Disable** to disable the wireless function of the router.

SSID: Enter a value of up to 32 characters. This is the name of your wireless network, you can give it a different name which can be easier for you to remember.

MSSID Access Local Network: If you choose Enabled, the host connect to MSSID can access local network.

Wireless Mode: If all of the wireless devices connected with this wireless router are in the same transmission mode (eg. 802.11b), you can choose "Only" mode (eg. 11b only). If you have some devices which use a different transmission mode, choose the appropriate "Mixed" mode.

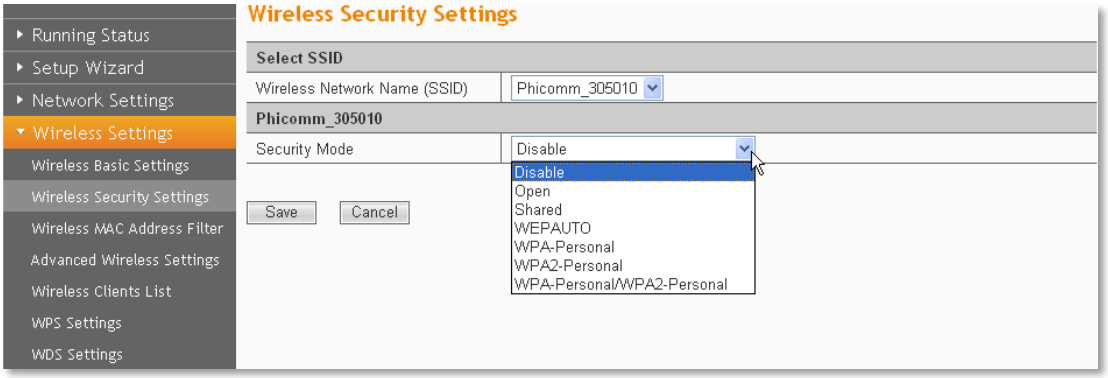
Channel: The router can choose the best channel automatically in most cases. Please try to

change the wireless channel if you notice interference problems with another nearby access point, or the wireless performance is not as good as you expected.

SSID Broadcast: If you choose Enabled, the wireless router will broadcast its name (SSID) .

Channel Bandwidth: The bandwidth of the wireless channel, you can select **20MHz** or **20/40MHz**.

Wireless Security Settings



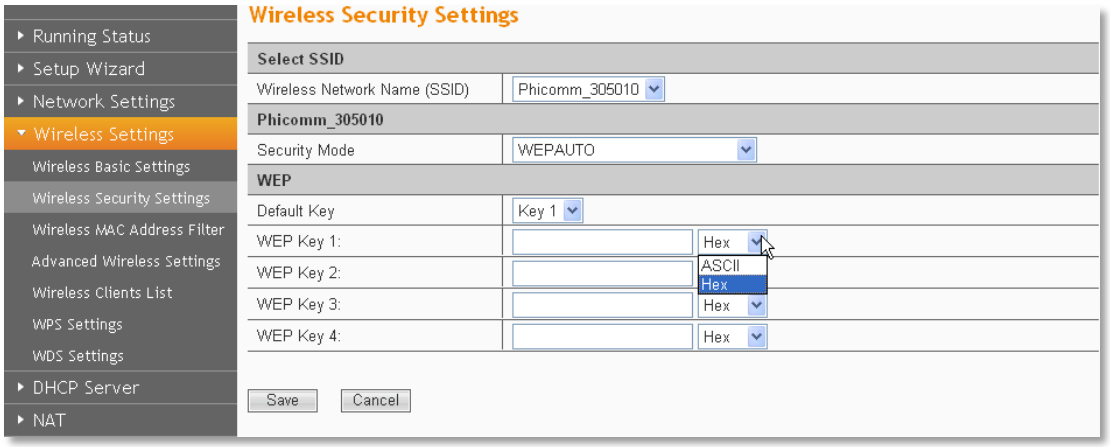
You can configure the security of your wireless network(s) in this page. There are six wireless security modes supported by this router: Open, Shared, WEPAUTO, WPA-Personal, WPA2-Personal, and WPA- Personal / WPA2-Personal.

Wireless Network Name (SSID): Select the SSID which you want to enable the security.

Security Mode: You can choose Disable, Open, Shared, WEPAUTO, WPA-Personal, WPA2-Personal, WPA- Personal/ WPA2-Personal.

Mode 1: Security Mode > Disable

If you do not want to use wireless security, highlight on this option. That means other people can connect to your wireless network without entering any password, so it may slow down your internet speed, it's recommended strongly to choose one of the following modes to enable security.



Mode 2: Security Mode > Open/Shared/ WEPAUTO

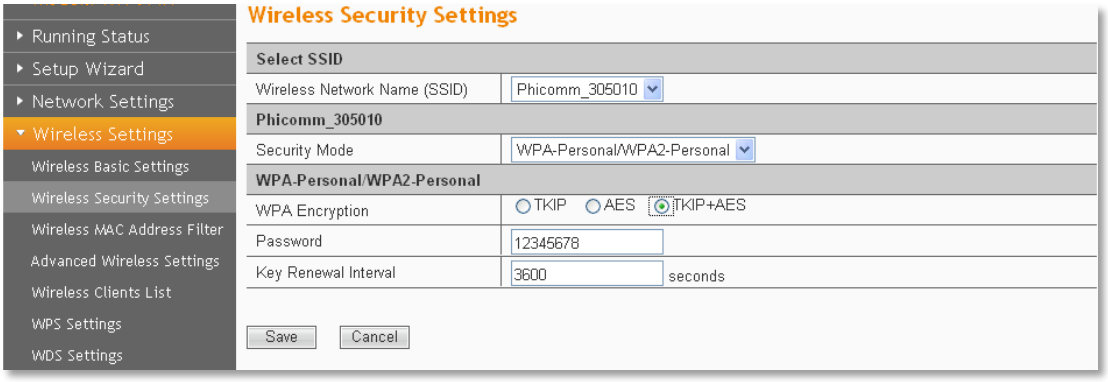
Open System: Select 802.11 Open System authentications.

Shared Key: Select 802.11 Shared Key authentications.

WEPAUTO: Select Shared Key or Open System authentication type automatically based on the wireless station's capability and request.

You can select **ASCII** or **Hex** format. ASCII Format stands for any combination of keyboard characters in the specified length. Hex format stands for any combination of hexadecimal digits (0-9, a-f, A-F) in the specified length.

You can enter 10 hexadecimal digits (any combination of 0-9, a-f, A-F, and null key is not permitted) or 5 ASCII characters. Or enter 26 hexadecimal digits (any combination of 0-9, a-f, A-F, and null key is not permitted) or 13 ASCII characters. Or enter 32 hexadecimal digits (any combination of 0-9, a-f, A-F, and null key is not permitted) or 16 ASCII characters.



Mode 3: Security Mode > WPA-Personal, WPA2-Personal, WPA- Personal/ WPA2-Personal

You can select one of following versions:

WPA-Personal: Pre-shared key of WPA.

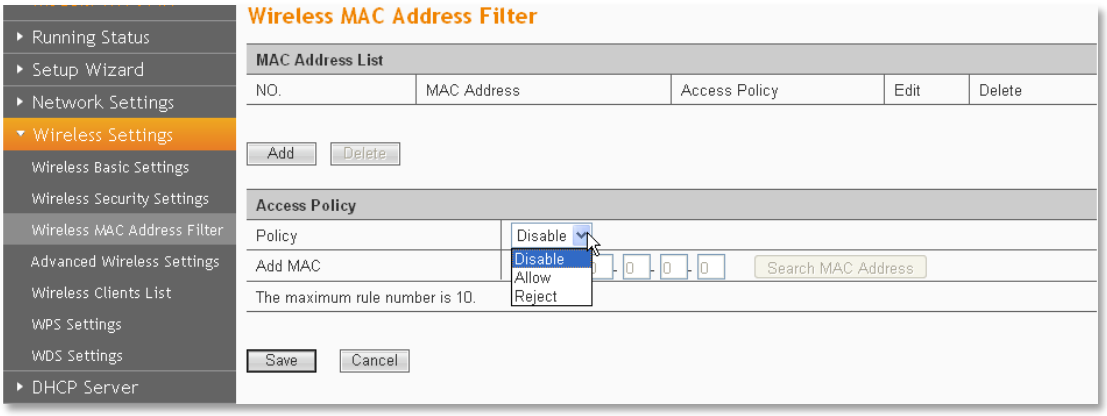
WPA2-Personal: Pre-shared key of WPA2.

WPA- Personal/ WPA2-Personal: Select WPA-Personal or WPA2-Personal automatically based on the wireless station's capability and request.

Encryption: You can select **TKIP**, **AES** or **TKIP+AES**.

Password: The password should be between 8 and 63 characters.

Wireless MAC Address Filter



You can allow/deny the computers connecting to the router wirelessly by entering the MAC address with this feature.

If you only want MAC address (00:0A:EB:00:07:5F) to access the Wireless Network while others cannot:

1: Choose **Allow** for the security policy.

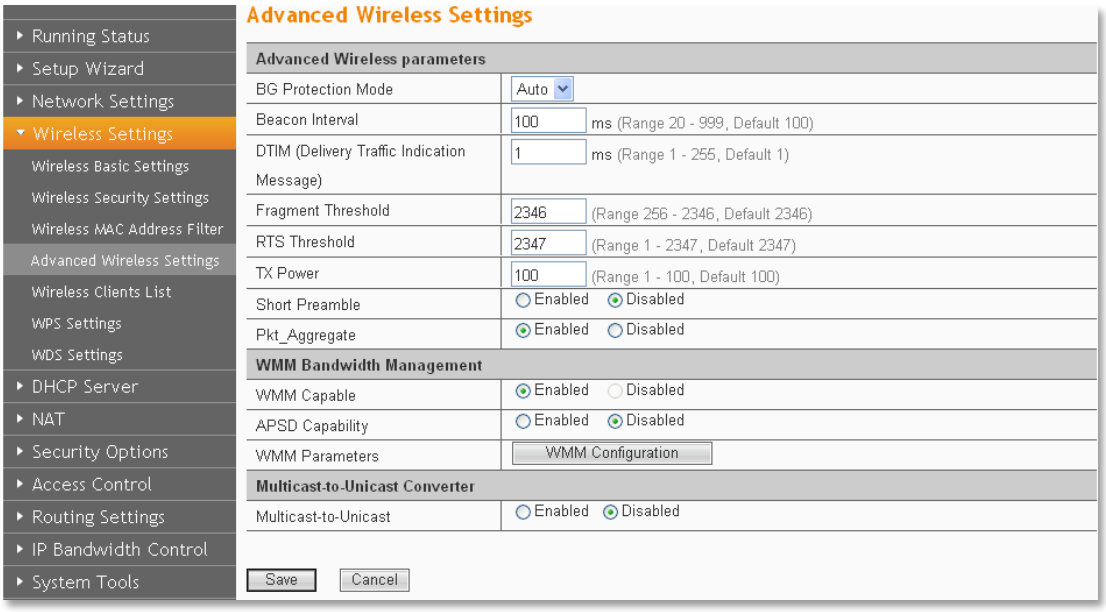
2: Fill MAC address 00:0A:EB:00:07:5F in and click **Save**.

If you want MAC address (00:0A:EB:00:07:5F) cannot access the Wireless Network while others can:

1: Choose **Reject** for the security policy.

2: Filling MAC address 00:0A:EB:00:07:5F in and click **Save**.

Advanced Wireless Settings



This section is to configure the advanced wireless setting of the Router, if you are not familiar with the setting items in this page, it's strongly recommended to keep the provided default values, otherwise it may result in lower wireless network performance.

Beacon Interval: The interval for sending packets of the Beacon frame. Its value range is 20-1000 in unit of ms. The default is 100.

DTIM Interval: It indicates the interval of the delivery traffic indication message (DTIM). The value range is between 1 and 255 milliseconds. The default value is 1.

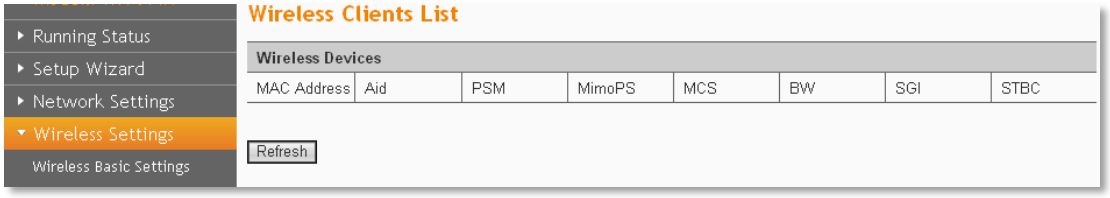
Fragment Threshold: Set the fragmentation threshold. Packets larger than the size set in this field will be fragmented. Too many data packets will lower the Wireless Network performance. The Fragment Threshold value should not be set too low. The default value is 2346.

RTS Threshold: Set the RTS (Request to send threshold.) threshold. When the packet size is larger than the preset RTS size, the wireless router will send a RTS to the destination station to start a negotiation. The default value is 2347.

Enable WMM: If you select it, the router will process the packets with the priority first. You are recommended to select this option.

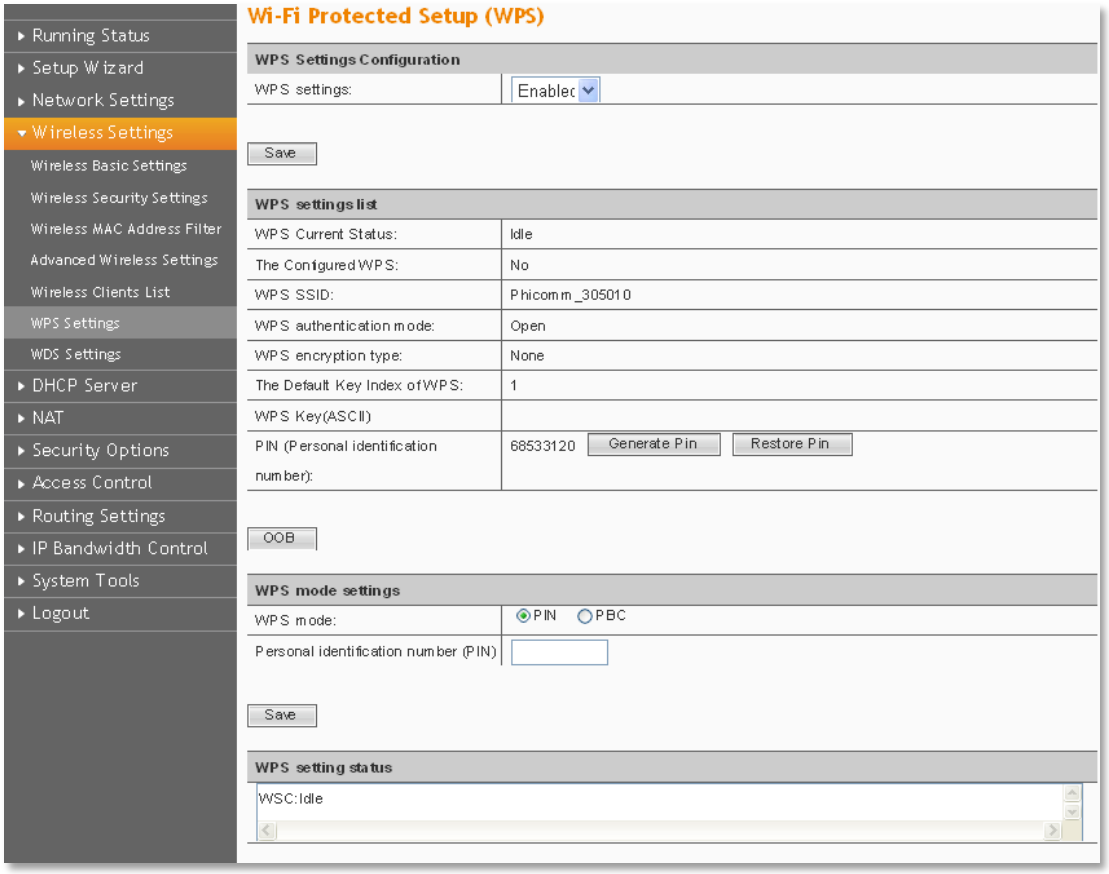
APSD Capable: It is used for auto power-saved service. It is **Disabled** by default.

Wireless Clients List



Click **Refresh** button to check the wireless clients.

WPS Settings



The WPS function can help you add a new device to the network quickly. If the client device supports Wi-Fi Protected Setup and is equipped with a WPS button, you can add it to the network by pressing the WPS button on the device and then press the button on the router within two minutes. The status LED on the router will light green for five minutes if the device has been successfully added to the network; If your client asks for the Router's PIN number, enter the router's PIN number into your client device; If your client device has a WIFI Protected Setup PIN number, enter that number in the PIN box.

WPS (Wi-Fi Protected Setting): Easy and quick to establish the connection between wireless

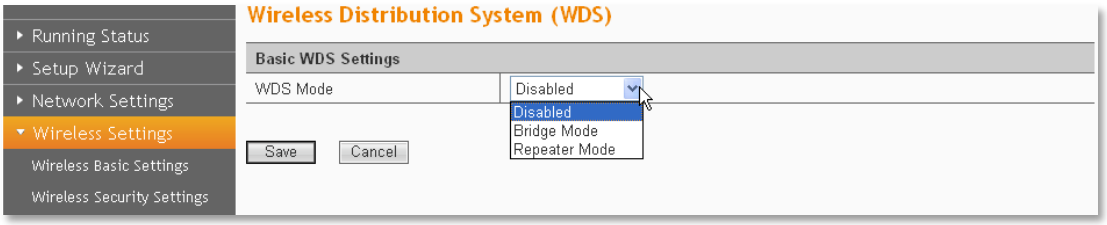
network client and the router through encrypted contents. The users only enter the PIN code to configure without selecting encryption method and entering secret keys by manual.

WPS Mode: Supports two ways to configure WPS settings: PBC (Push-Button Configuration) and PIN code.

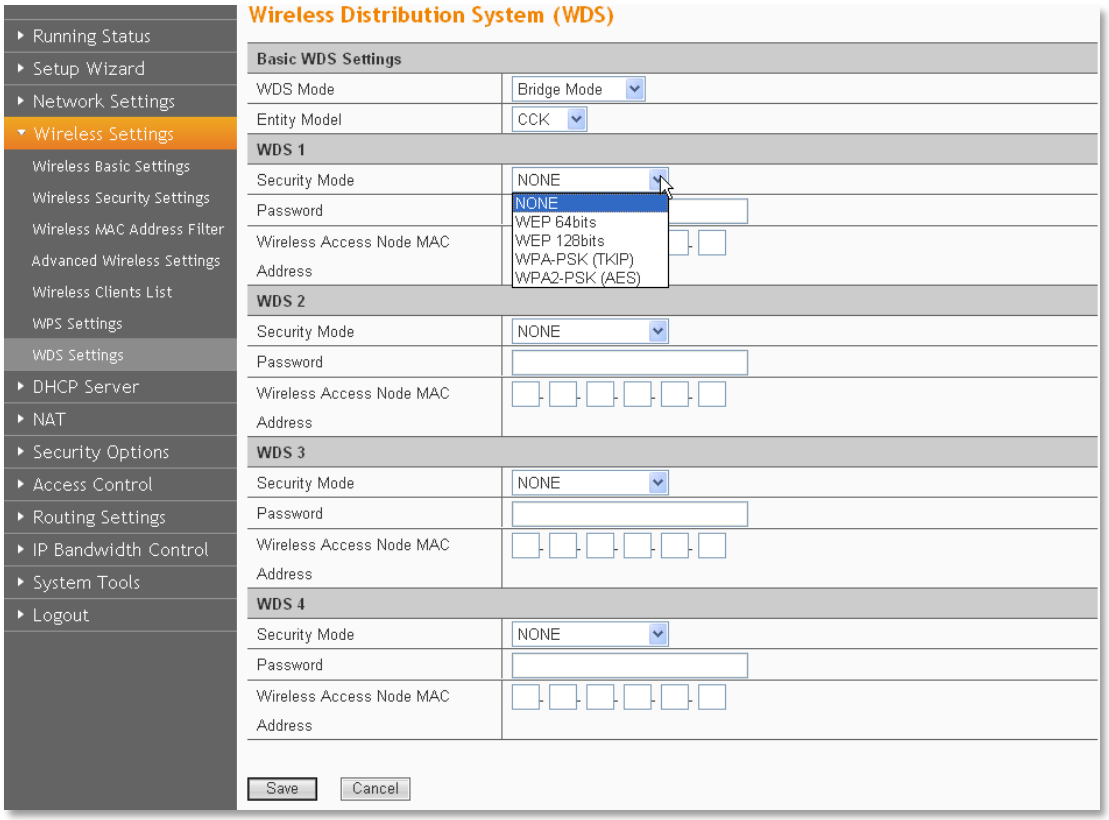
PBC: Select the **PBC** button or press the WPS button on the panel of the Router. (Press WPS button and WPS LED will blink, which means the WPS function is enabled. During the blinking time, press the WPS button on another network device, WPS LED light will become solid when the connection succeeds.)

PIN: If this option is enabled, you need to enter a wireless clients PIN code in the blank and keep the same code in the client.

WDS Settings



The WDS function can help you extend the wireless range, it supports Bridge Mode and Repeater Mode.



Bridge Mode: You can wirelessly connect two or more wired networks via this mode. In this mode, you need to add the wireless MAC address of the connecting device into the Routers AP

MAC address table or select one from the scanning table. At the same time, the connecting device should be in Lazy, Repeater or Bridge mode.

Repeater Mode: You can select the mode to extend the distance between the two WLAN devices. Functioning as a WDS repeater, the connects to both a client card as an AP and to another AP. In typical repeater applications, APs connecting to other APs equipped with WDS functionality must also support WDS. In this mode, you need to add the MAC address of the connecting device into the Routers AP MAC address table and the connecting client should be in Lazy, Repeater or client mode.

Encryption Type: You can select WEP 64bits mode, WEP 128bits mode TKIP mode, AES mode for security here.

Encryption key: Enter the key, the key format is decided by the encryption method you selected.

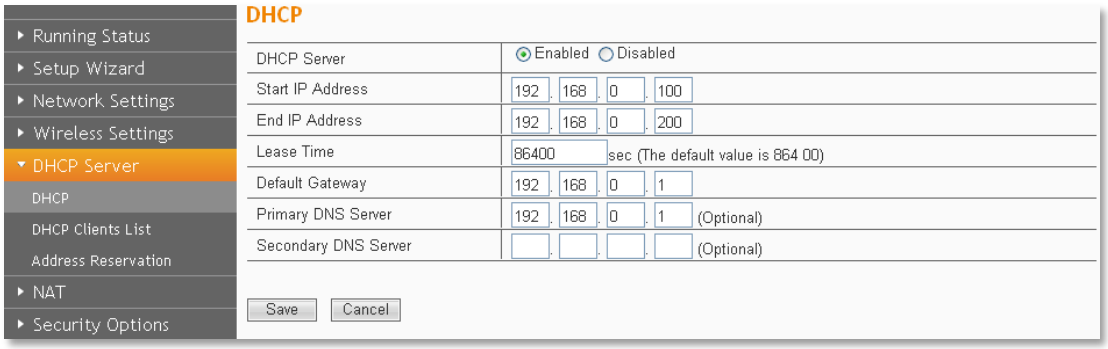
Wireless Access Node MAC Address: Input the MAC address of the other wireless router.

Note: Two wireless routers must use the same channel, encryption type and encryption key.

DHCP Server

There are three submenus under the DHCP menu: **DHCP**, **DHCP Clients List** and **Address Reservation**. Click any of them, and you will be able to configure the corresponding function.

DHCP



If you enable DHCP server of the router, the DHCP server automatically configures the TCP/IP protocol for each computer in the LAN.

DHCP Server: If you disable the server, please make sure you have another DHCP server in your network.

Start IP Address: The first address in the IP Address pool.

End IP Address: The last address in the IP Address pool.

Lease Time: It is the time interval that server will change to use another DHCP address.

Default Gateway: (Optional) Suggest to input the IP Address of the LAN port of the Router.

Primary DNS Server: (Optional) Input the DNS IP address provided by your ISP. Or consult your ISP.

Secondary DNS Server: (Optional) You can input the IP Address of another DNS server if your ISP provides two DNS servers.

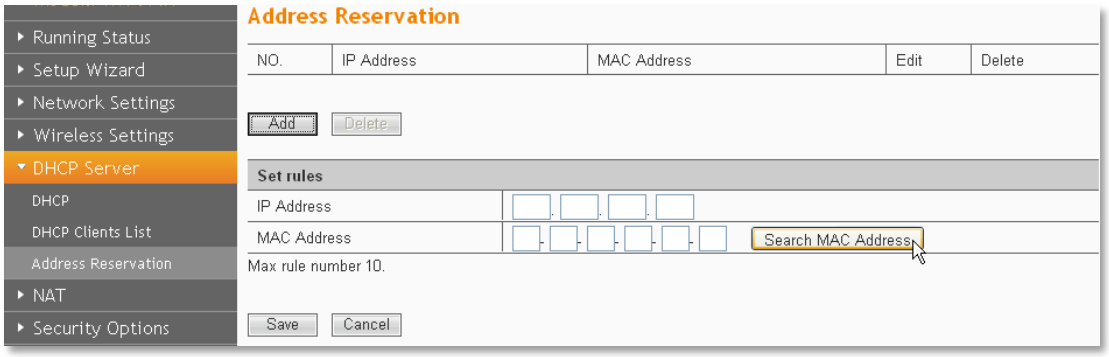
Note: To use the DHCP server function of the router, please configure all computers in the LAN as Obtain an IP Address automatically mode. This function will take effect after the router rebooted.

DHCP Clients list

Here you can see the information of DHCP Clients.

Refresh: Click **Refresh** button to refresh the DHCP clients list.

Address Reservation



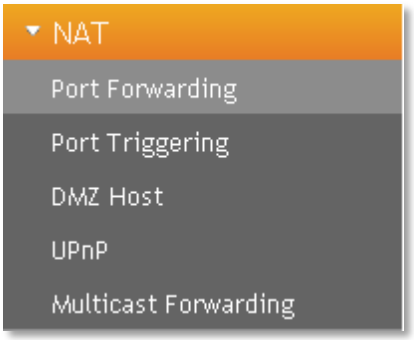
When you specify a reserved IP address for a PC in the LAN, that PC will always receive the same IP address each time when it accesses the DHCP server. Reserved IP addresses could be assigned to servers that require permanent IP settings.

IP Address: The IP address that the Router reserved.

MAC Address: The MAC Address of the PC that you want to reserve for an IP address.

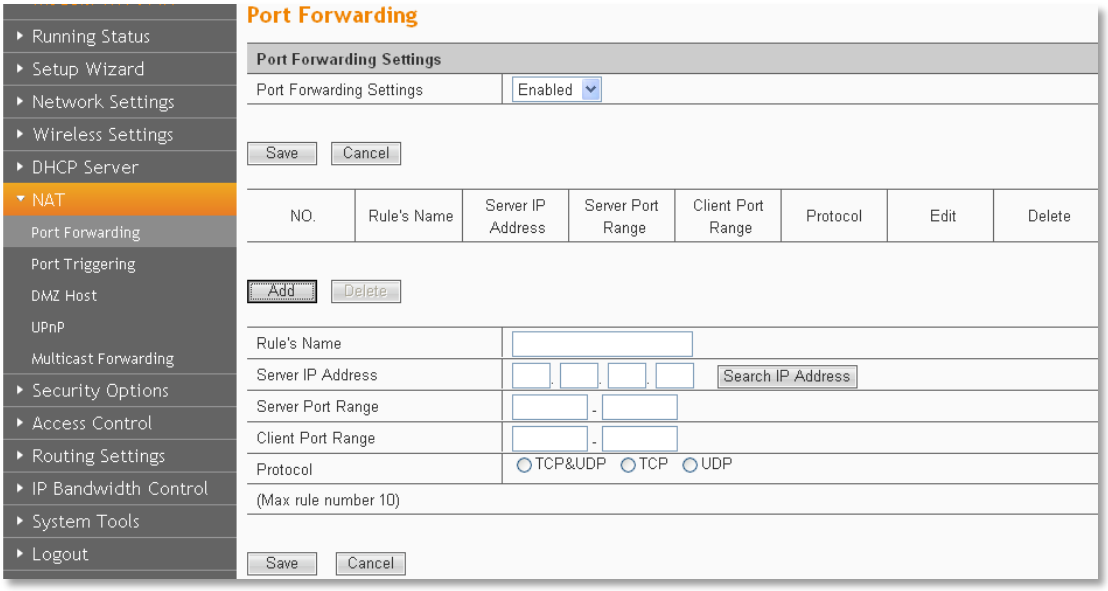
NAT

There are five submenus under the NAT menu: **Port Forwarding**, **Port Triggering**, **DMZ Host**, **UPnP** and **Multicast Forwarding**. Click any of them, and you will be able to configure the corresponding function.



Port Forwarding

Choose **Enabled**, then click **Add** button.



Rule's Name: You can give this rule a name.

Server IP Address: The IP address of the server you want to open the port, it is like 192.168.0.X.

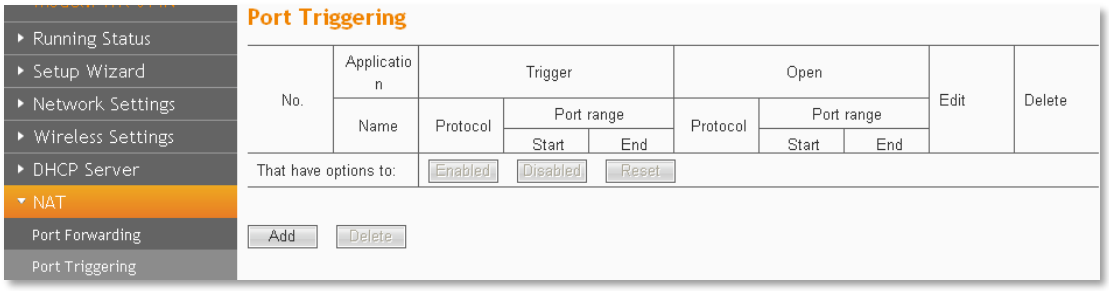
Server Port Range: The port range of the server you want to open the port.

Client Port Range: The port range of the client.

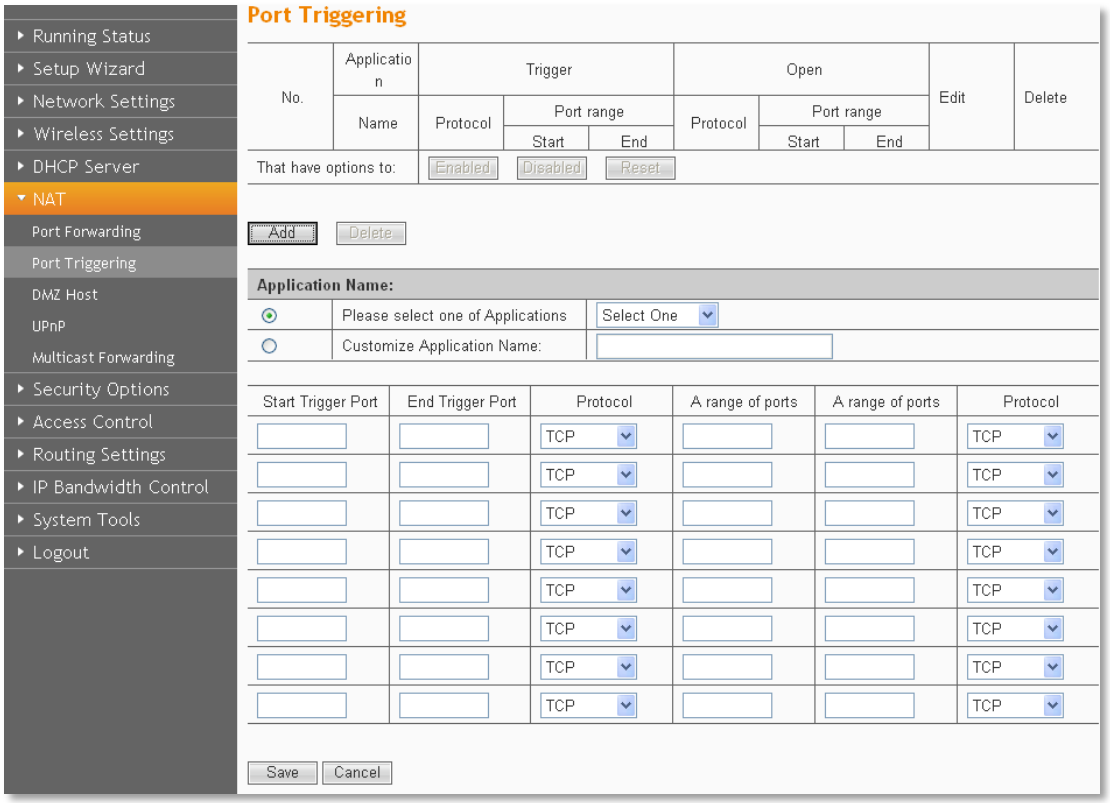
Protocol: The protocol of the server.

Note: Please assign a static IP address to the server.

Port Triggering



Click **Add** button.



Application Name: Describe the name of the application that being set.

Please select one of the applications: There are few common applications available such as Dailpad, MSN gaming, PC Phone etc. the blank will be automatically filled once been chosen.

Customize Application Name: If the application you want to add is not included, enter the blank manually.

Start/End Trigger Port: The port for outgoing traffic. An outgoing connection using this port will trigger this rule.

Protocol: The protocol used for Trigger Ports: **TCP**, **UDP** or **TCP/UDP**. If you are not clear about which protocol was being used, **TCP/UDP** is recommended.

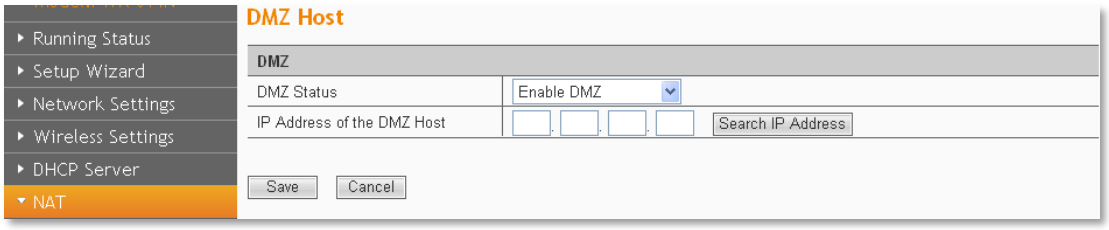
Open Port: The port or port range used by the remote system when it responds to the outgoing request. A response using one of these ports will be forwarded to the PC that triggered this rule.

Open Port Protocol: The protocol used for Incoming Ports Range, it can be **TCP**, **UDP** or **TCP/UDP**. If you are not clear about which protocol was being used, **TCP/UDP** is recommended.

Note:

- Before using Port Triggering, you should assign a static IP address to the designated server, and then enter this static IP address into router as the **Server IP Address.**
- Please ensure the SPI Firewall was closed before setting the port triggering. You could check the SPI Firewall settings at Security Options>Security Settings.

DMZ Host



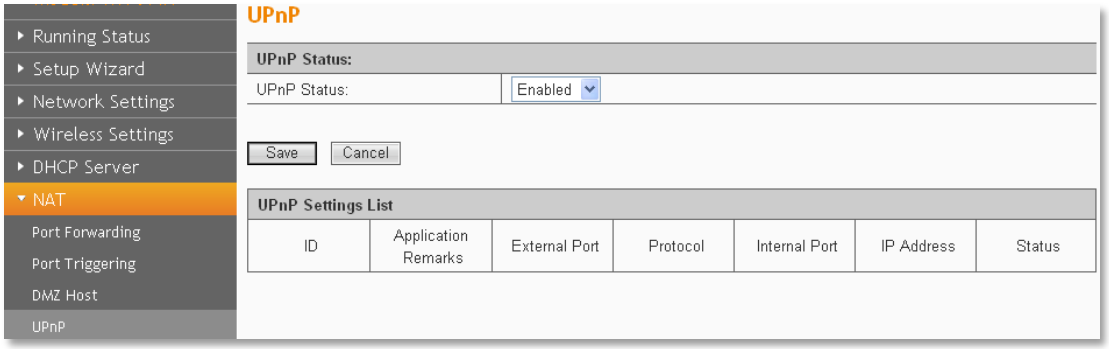
DMZ Status: Choose **Enable DMZ**.

IP Address of the DMZ Host: Enter the IP address of the computer in the LAN that you want to set to a DMZ host in the DMZ Host IP Address field.

Note:

- Before using DMZ Host, you should assign a static IP address to the designated server, and then enter this static IP address into router as the **Server IP Address.**
- DMZ priority is higher than the Port Forwarding, if the DMZ open, all the port forwarding rules are not effective.

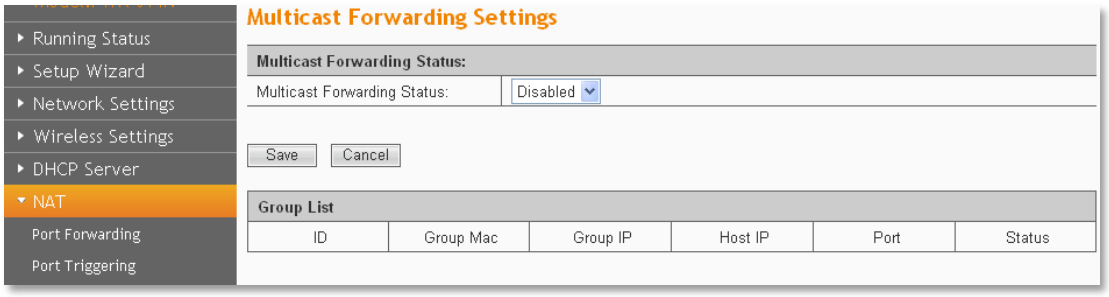
UPnP



UPnP: Click the checkbox to **Enable** or **Disable** the UPnP.

Save: Click **Save** button to save your setting.

Multicast Forwarding Settings



Multicast Forwarding enables the router to issue IGMP host message on behalf of hosts that the router discovered through standard IGMP interfaces.

Group Mac: The Mac Address of the Multicast Forwarding Group.

Group IP: The IP Address of the Multicast Forwarding Group.

Host IP: The IP Address of the Group members.

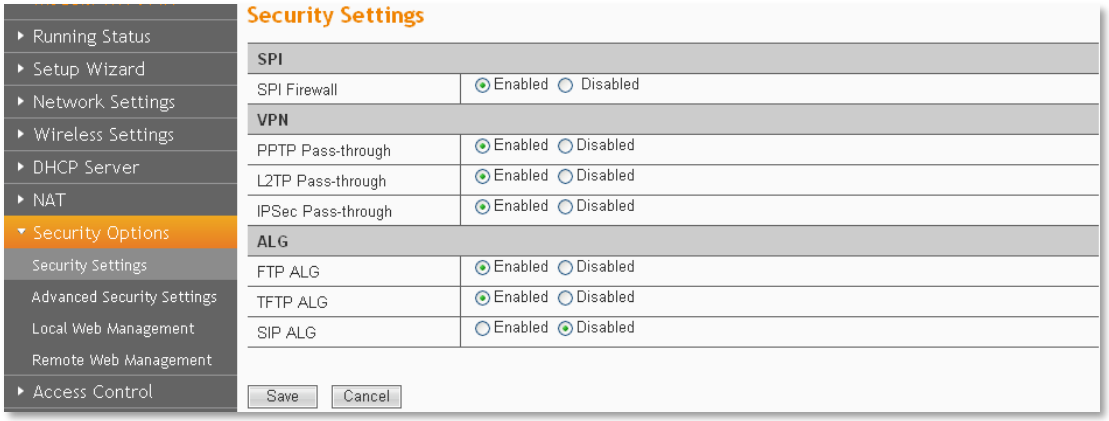
Port: The port number of the Multicast group.

Status: The status of the Multicast group.

Security Options

There are four submenus under the **Security Options** menu: **Security Settings**, **Advanced Security Settings**, **Local Web Management** and **Remote Web Management.** Click any of them, and you will be able to configure the corresponding function.

Security Settings

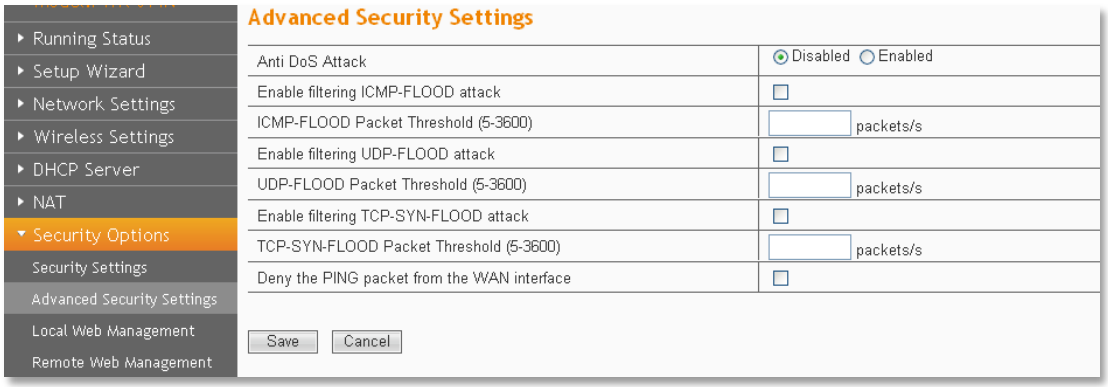


SPI (Stateful Packet Inspection): When the SPI firewall is enabled, the system refuses all requests from the Internet. Only packets that belong to connections that respond requests from the LAN and for which status database is created can pass the firewall and access to the LAN. By default, the SPI is enabled. To expose all hosts in the LAN to the Internet, you can disable SPI.

VPN (Virtual Private Network): VPN provides a safe communication method among remote computers through WAN. If a host in the LAN wants to connect to the remote VPN network through the router by using the VPN protocol, such as PPTP, L2TP, or IPSec, you need to enable the corresponding VPN pass through.

ALG (Application Layer Gateway): ALG supports that some protocols at the application layer that adopt the control/data mode, such as FTP, TFTP, and H323, help to translate network addresses and ports at the NAT gateway. You are recommended to enable this option. The Common Service Port drop-down list contains some common service ports. You can select one and click Add to add the service port to the virtual server list.

Advanced Security Settings



Anti DoS Attack: Check to enable it for attack prevention.

IGMP-Flood Packet Threshold: If the number of ICMP data packets exceeds the threshold, the defense measures act immediately.

Enable filtering UDP-FLOOD attack: Select it if you want to protect against UDP-FLOOD attacks.

UDP-Flood Packet Threshold: If the number of UDP data packets exceeds the threshold, the defense measures act immediately.

Enable filtering TCP-SYN-FLOOD attack: Select it if you want to protect against TCP-SYN-FLOOD attacks.

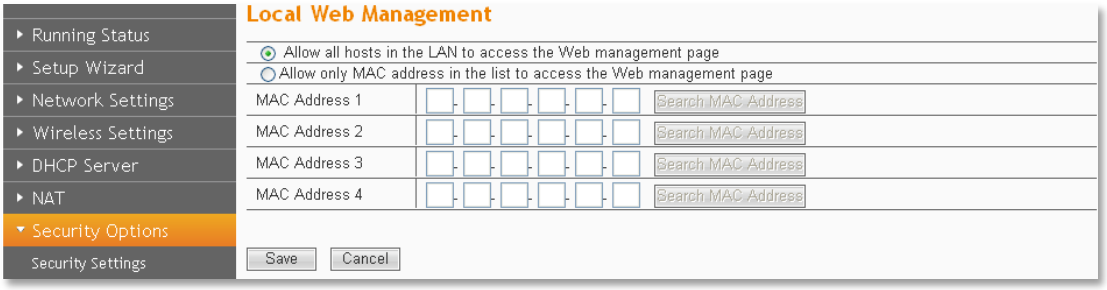
TCP-SYN-Attack Packet Threshold: If the number of TCP-SYN data packets exceeds the threshold, the defense measures act immediately.

Block the PING packets from the WAN interface: If you select this option, the PC in the WAN cannot send the PING packets to the router.

Block the PING packets from the LAN: If you select this option, the PC in the LAN cannot send

the PING packets to the WAN.

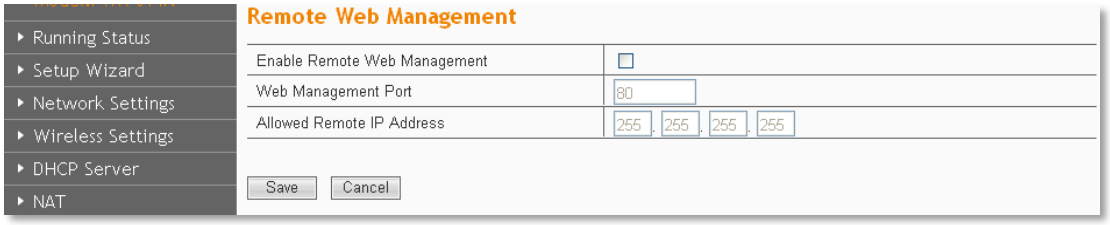
Local Web Management



By default, the router allows all computers in the LAN to log in to the router for Web management. If you select **Allow only MAC addresses in the list to access the Web management page**, and add MAC addresses to the list, only MAC addresses in the list can access the web management page of the router, while other computers in the LAN are blocked from accessing the router.

MAC Address 1/2/3/4: Enter the MAC addresses of LAN computers.

Remote Web Management



This section is to allow the network administrator to manage the Router remotely. If you want to access the Router from outside the local network, please select the **Enable Remote Web Management**.

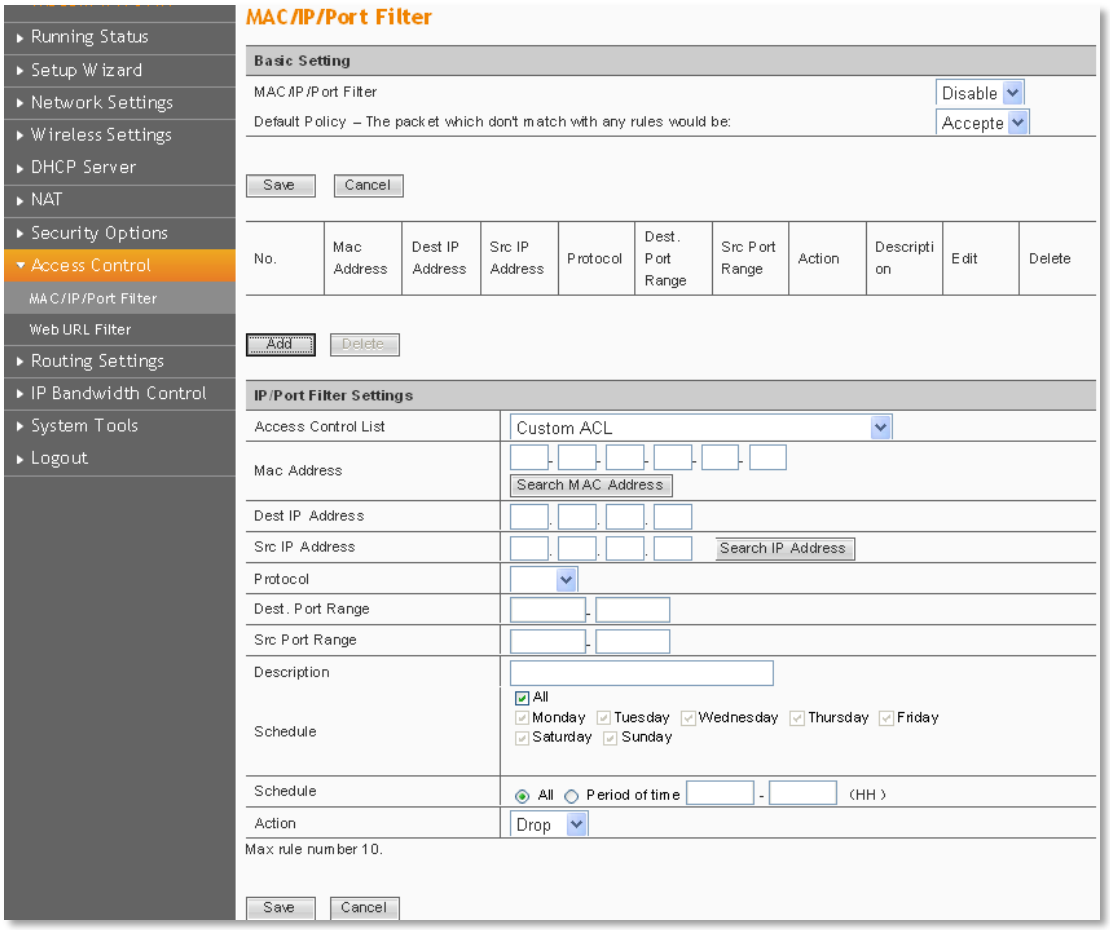
Web Management Port: The management port open to outside access the default value is 80.

IP Address of Remote Web Management: Specify the range of the WAN IP address for remote management.

Access Control

There are two submenus under the **Access Control** menu: **MAC/IP/Port Filter** and **Web URL Filter.** Click any of them, and you will be able to configure the corresponding function.

MAC/IP/Port Filter



This page is used to enable the firewall filtering function, select the filtering service or manually set the parameters that need to be filtered, such as MAC address, IP address and Port. You must set at least one filtering condition. You may also set multiple conditions or all the conditions.

MAC/IP/Port Filter: Select **Enabled** or **Disabled** to enable or disable filtering.

Default Policy： **Accepted** chose, all the packets and devices will be allowed to be passed normally, opposite action will be happened if **Dropped** was been chosen.

Current IP/Port Filtering Rules: All the existing rules will be listed below, any needed of rules deleting, please select the rules, and then click **Delete Selected**.

Note: Please synchronize the routers time first when selecting the timing function.

Web URL Filter

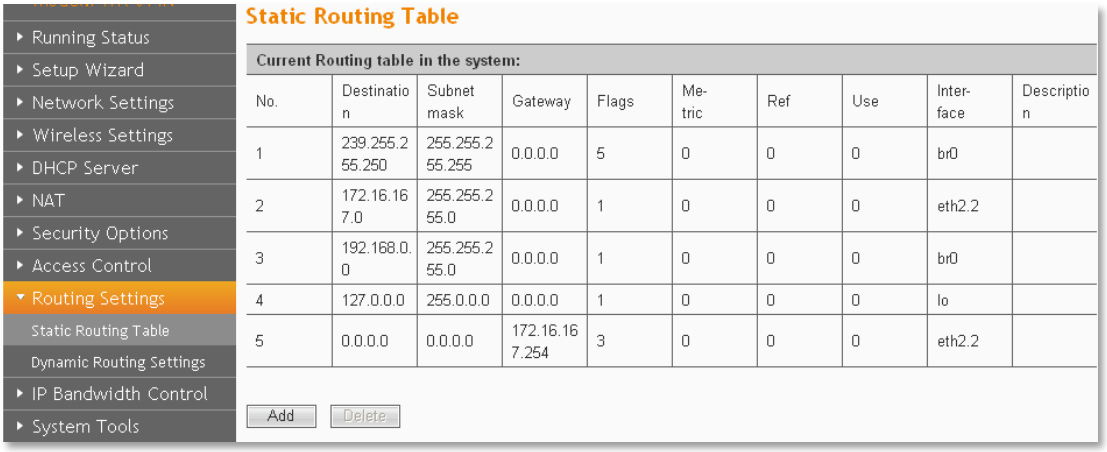
Web URL Filter: Check to enable URL filter.

URL: Put in the URL you want to filter.

Routing Settings

There are two submenus under the **Routing Settings** menu: **Static Routing Table** and **Dynamic Routing Settings**. Click any of them, and you will be able to configure the corresponding function.

Static Routing Table



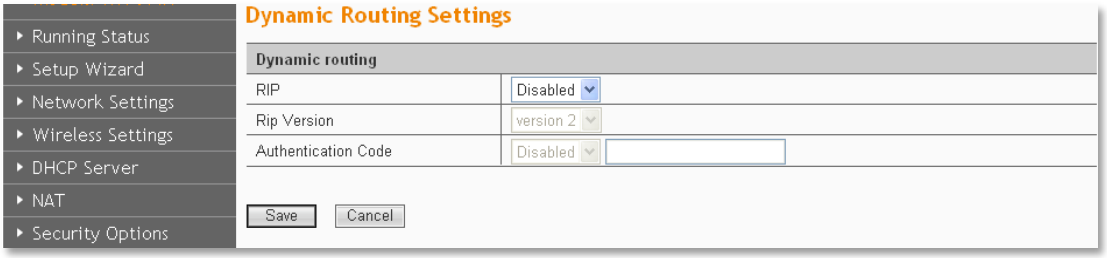
Static routes give the router information that it cannot learn automatically through other means Use the Static Routing page to add or delete a route. The max number is 10.

Destination: This is the IP address of the network or host that you want to assign to a static route.

Subnet Mask: The Subnet Mask determines which portion of an IP address is the network portion, and which portion is the host portion.

Gateway: This is the IP address of the default gateway device that allows for the contact between the Router and the network or host.

Dynamic Routing Settings

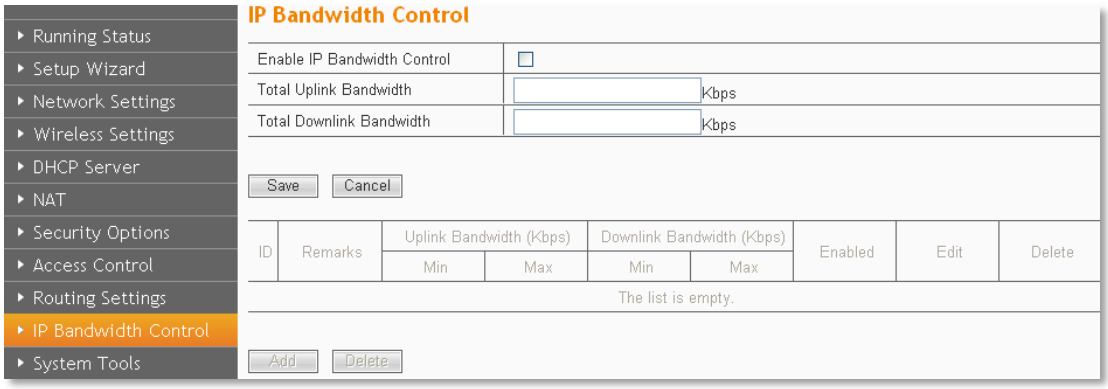


RIP: The Routing Information Protocol (RIP) is a dynamic routing protocol used in local and wide area networks. Choose **Enable** dynamic routing need to be activated.

Rip Version: Choose the version of RIP.

Authentication Code: Choose the encrypt method used between routers.

IP Bandwidth Control



Enable IP bandwidth control: If you select it, the bandwidth control rule takes effect.

Total Uplink Bandwidth: The rate of uploading through the WAN interface.

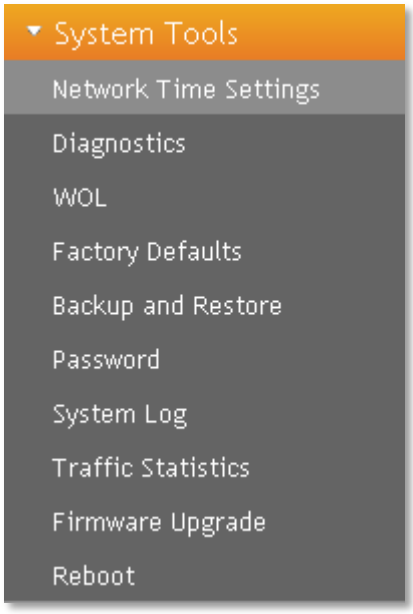
Total Downlink Bandwidth: The rate of downloading through the WAN interface.

Note:

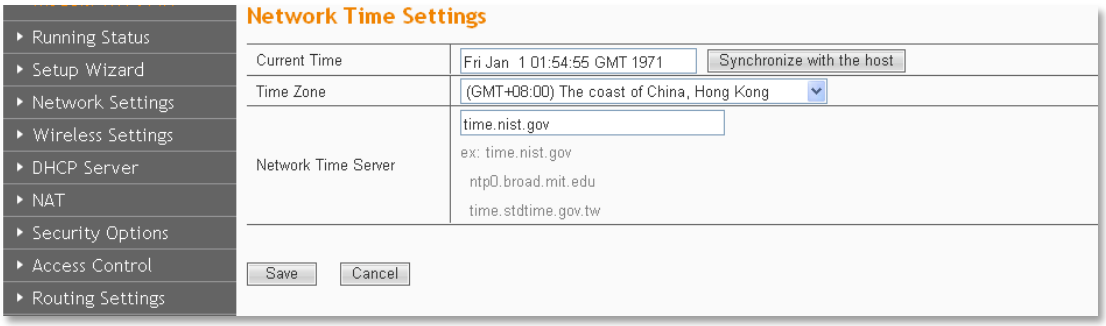
- The bandwidth conversion: 1 Mbps = 1024 Kbps.
- Select the type of the broadband line and the bandwidth according to the actual situation. If you are not sure about the information, consult your broadband provider.
- After finishing the settings, click the Save button to apply the settings.

System Tools

There are ten submenus under the **System Tools**: **Network Time settings**, **Diagnostics**, **WOL**, **Factory Defaults**, **Backup and Restore**, **Password**, **System Log**, **Traffic Statistics**, **Firmware Upgrade** and **Reboot**. Click any of them, and you will be able to configure the corresponding function.



Network Time Settings



Current time: Show the current time.

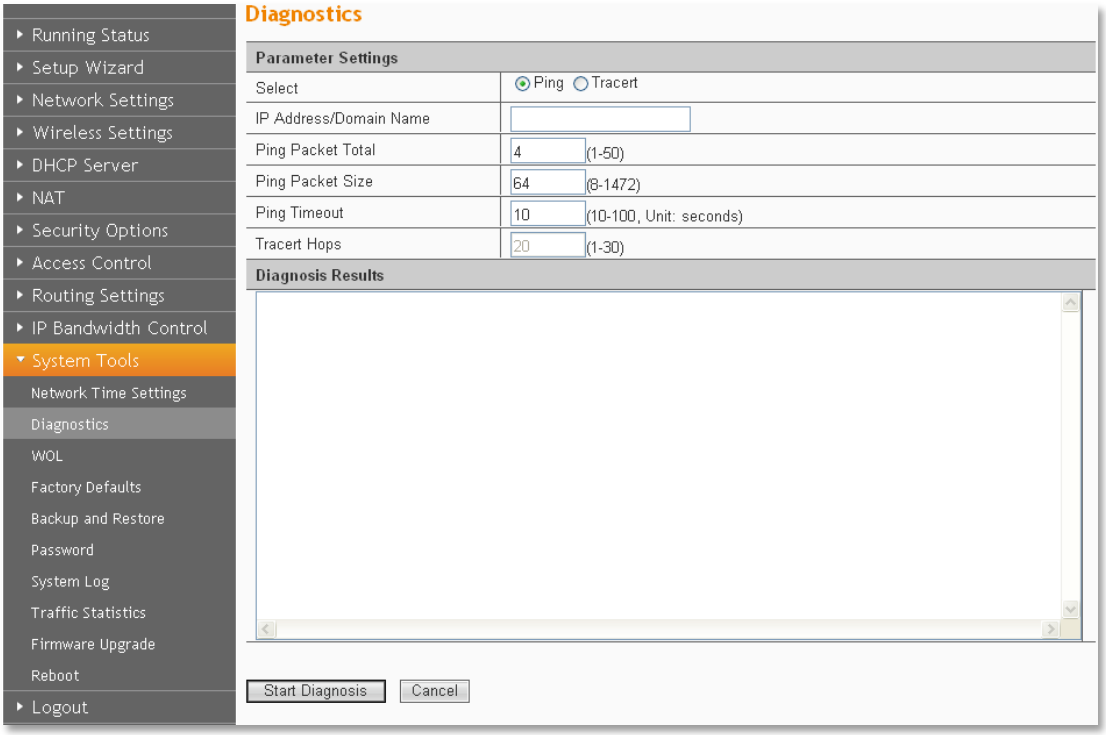
Time Zone: Select your time zone from the drop-down menu.

Network time server: To set NTP server.

Save: Click the **Save** button to save your setting.

Note: The system will Synchronous with the Network Time Server every hour after saving, and it will affect the WAN dial-up on demand.

Diagnostics



Select: Select Ping or Tracert.

IP Address/Domain Name: The destination IP address or domain name.

Ping Packet Total: The number of transmitted data packet when Ping operation is carried out.

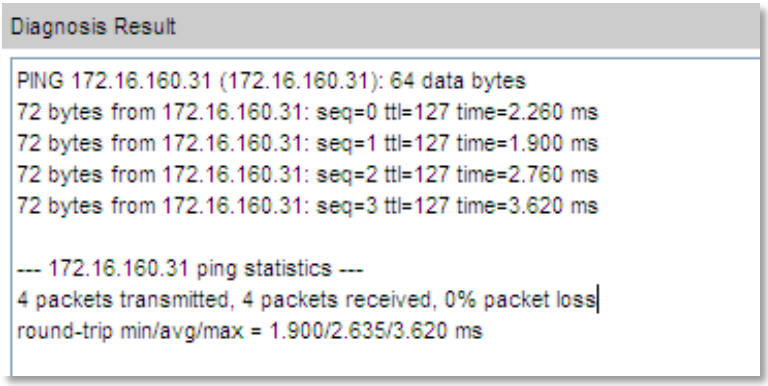
Ping Packet Size: The size of transmitted data packet when Ping operation is carried out.

Ping Timeout: The timeout time of the ping operation.

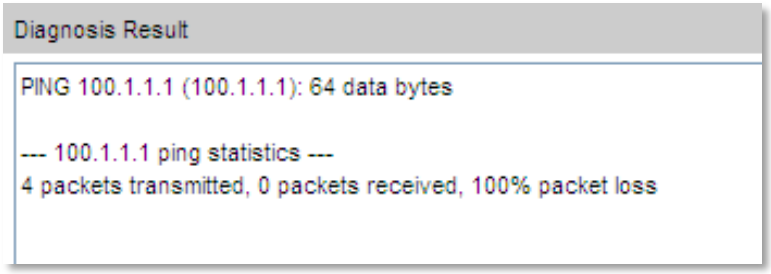
Tracert Hops: The hops of tracert.

Click **Start Diagnosis** button, the selected ping or tracert testing will be started.

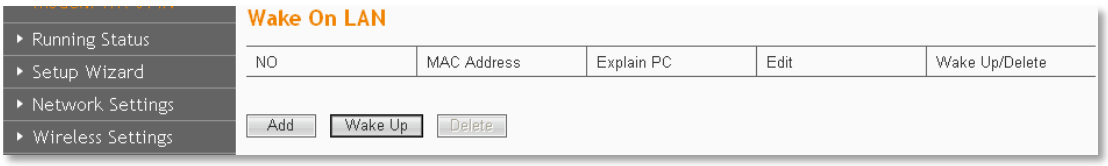
Below is a Ping diagnosis example that router has been connected to IP 172.16.160.31:



Below is a Ping diagnosis example that router has failed to connect to IP 100.1.1.1:



Wake On LAN

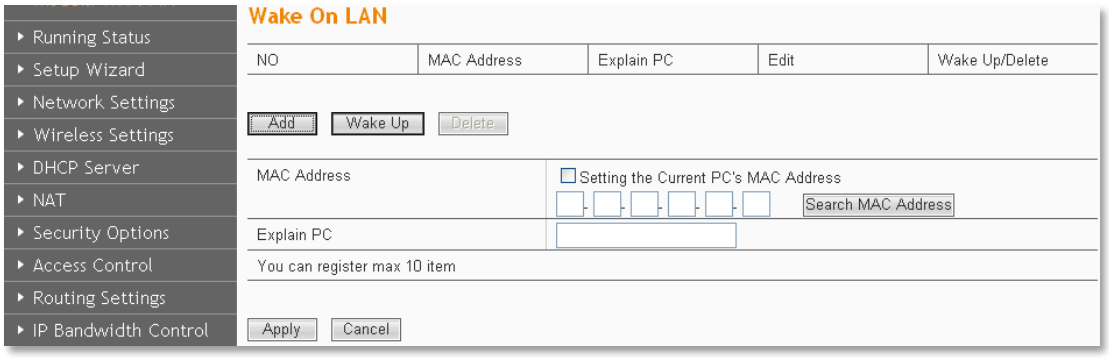


WOL broadcasts so called Magic Packet Frames across a network to wake up hardware that understands such packets. These are normally NICs with Wake On LAN function.

MAC Address: Add a MAC address to wake the computer on.

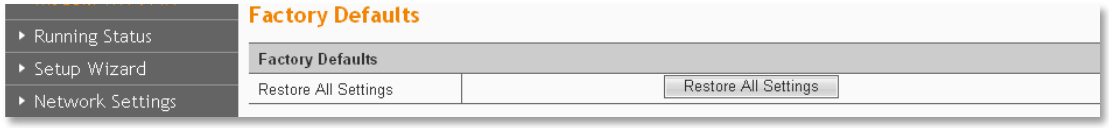
Explain PC: Description about the computer.

Add: Click **Add** button to finish, and the computer will display in the list.



Select one or more computers in the list, and click **Apply** button, these computers will be waked up.

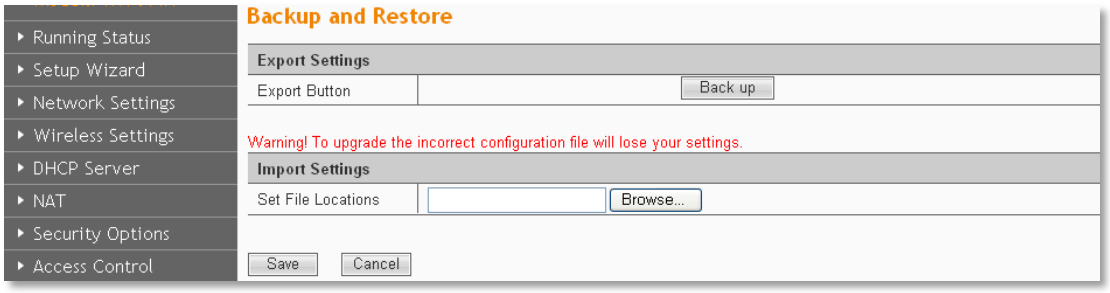
Factory Defaults



Click **Restore All Settings** button to reset all configuration settings to their default values.

Note: All changed settings will be lost when defaults are restored.

Backup and Restore



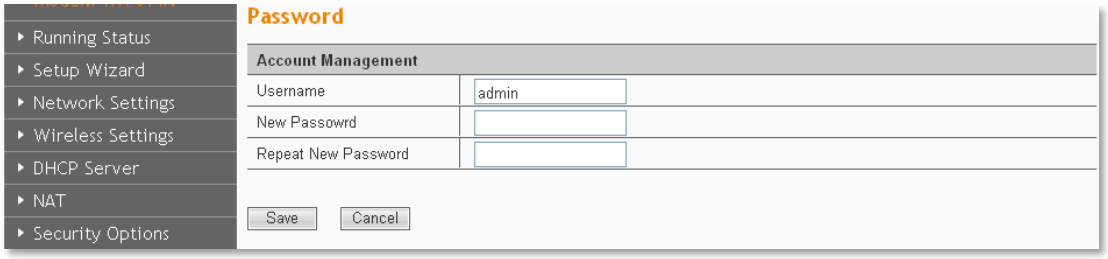
In the Export Settings column, click **Backup** button to save all configuration settings to your local computer as a file.

To restore the Router's configuration, follow these instructions:

1) Click Browse button to find the configuration file which you want to restore.
2) Click Save button to update the configuration with the file whose path is the one you have input or selected in the blank.

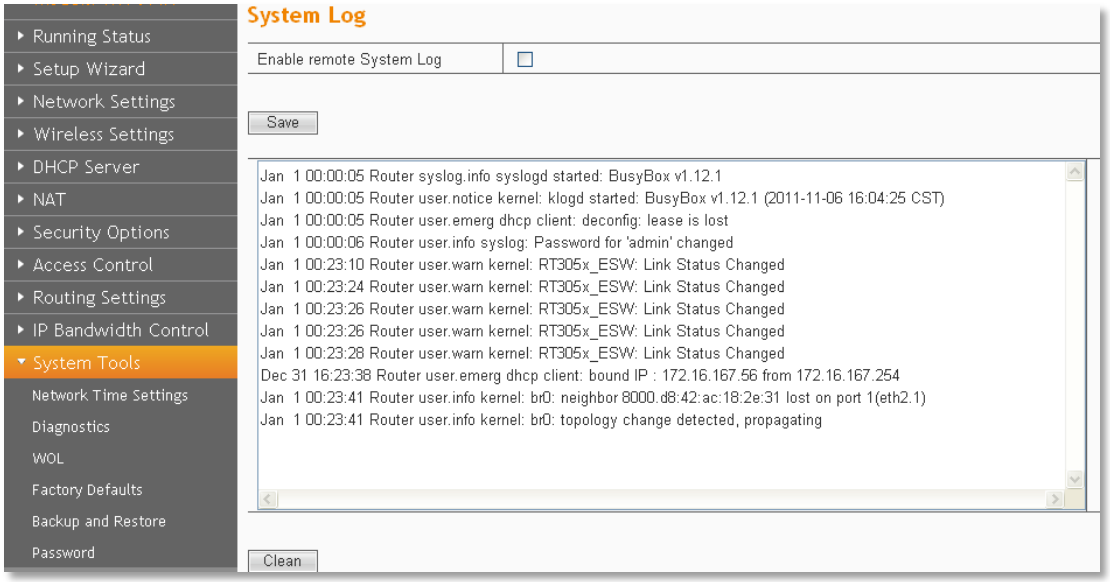
Note: Keep the power on during the process, in case of any damage.

Password



You can change the log in password for this web management page, not your ISP password or the wireless password.

System Log



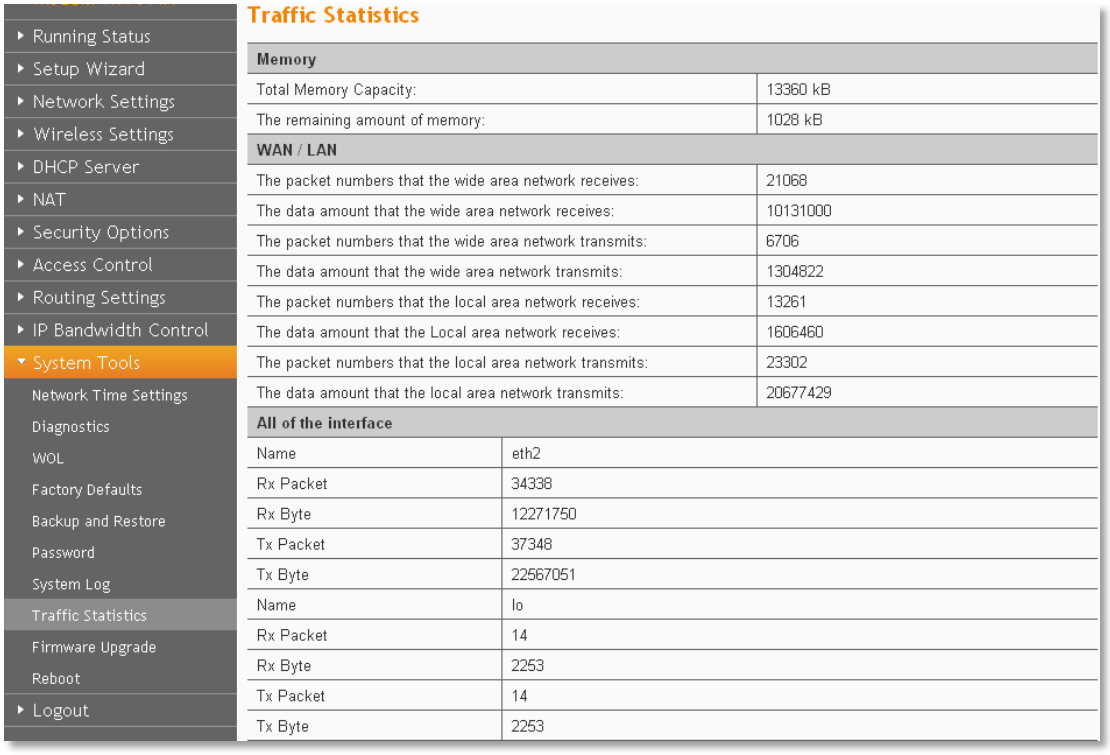
The system log is a detailed record of the websites that users on your network have accessed or attempted to access. You can enable remote System Log function to view the log in remote place.

Enable remote System Log: Check the radio button to enable remote System Log.

Save: Click **Save** button to save your Log.

Clean: Click **Clean** button to clear all shown information.

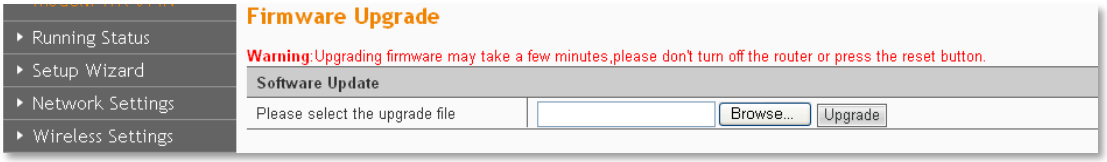
Traffic Statistics



Memory	
Total Memory Capacity:	13360 kB
The remaining amount of memory:	1028 kB
WAN / LAN	
The packet numbers that the wide area network receives:	21068
The data amount that the wide area network receives:	10131000
The packet numbers that the wide area network transmits:	6706
The data amount that the wide area network transmits:	1304822
The packet numbers that the local area network receives:	13261
The data amount that the Local area network receives:	1606460
The packet numbers that the local area network transmits:	23302
The data amount that the local area network transmits:	20677429
All of the interface	
Name	eth2
Rx Packet	34338
Rx Byte	12271750
Tx Packet	37348
Tx Byte	22567051
Name	lo
Rx Packet	14
Rx Byte	2253
Tx Packet	14
Tx Byte	2253

This page used to display the current system memory usage, WLAN, LAN and WAN networks to send and receive data packets to the number.

Firmware Upgrade



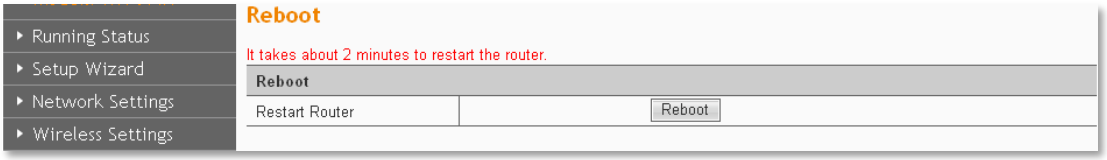
You can upgrade the router to the lasted version in this page, please download a most recent firmware upgrade file from our website. After downloading the file, you need to extract the zip file before upgrading the router. Browse for the upgrade file, then click **Upgrade** button.

Caution! Once you click **Upgrade** button, do not interrupt the process, loss of power during the upgrade could damage the Router.

Note:

- Router might be changed to factory default settings after upgrade, please backup in advance.
- During the updating, please do not turn off the power.
- Please make sure the software version is matching with the existing hardware.

Reboot



Click **Reboot** button to reboot the Router.

Logout

Click to logout from the router configuration web.

Chapter 4: Specification

Wireless	
Standards	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b, CSMA/CA with ACK
Data Rate	11n: 300Mbps 11g: 54Mbps 11b: 11Mbps
Frequency Range	2.4-2.4835GHz
Wireless Transmit Power	< 20dBm
Modulation Type	OFDM/CCK/16-QAM/64-QAM
Receive Sensitivity	300M: -68dBm@10% PER 108M: -68dBm@10% PER 54M: -68dBm@10% PER 11M: -85dBm@8% PER 6M: -88dBm@10% PER
Wireless Security	64/128-bit WEP, WPA/WPA2-Enterprise, WPA /WPA2-Personal (TKIP/AES)
System Requirements	Microsoft® Windows® 98SE, NT, 2000, XP, Vista and Windows 7
Hardware	
Interfaces	4 x 10/100Mbps LAN Port 1 x 10/100Mbps WAN Port 1 x Power Connector
Buttons	Power Button WPS Button Reset Button
Power Supply	12VDC, 0.5A
Dimensions (W x D x H)	150mm x 144mm x 28mm
Others	
Operating Temperature	0°C~40°C (32°F~104°F)
Storage Temperature	-40°C~70°C (-40°F~158°F)
Relative Humidity	10%~90%, non-condensing
Storage Humidity	5%~95%, non-condensing
Certifications	FCC,CE, RoHS
Package Contents	1 x Wireless N Router 1 x Power Adapter 1 x Resource CD 1 x Quick Installation Guide 1 x Ethernet Cable

Appendix A: Troubleshooting

1. **PHICOMM Setup cannot find my Router.**

   If PHICOMM Setup is not able to communicate with your Router during installation, please check the following items:

   1) Ensure that the router and modem are both on.
   2) Make sure the computer goes into the LAN port of the router.
   3) Make sure the DSL modem goes into the WAN port of the router.
   4) There may be firewall software on your computer preventing an outgoing connection. You may choose to temporarily disable this software before attempting setup.
   5) Unplug the Routers power supply for 10 seconds, then plug it back in.

2. **The DSL telephone line does not fit into the Router's Internet port.**

   The Router does not replace your modem. You still need your DSL modem to work with the Router. Connect the telephone line to the DSL modem, and then insert the setup CD into your computer. Follow the QIG to install your router.

3. **I cannot login the router's web management page.**

   1) Make sure the computer goes into the LAN port of the router.
   2) Check the computer's IP address, make sure the IP address is obtained automatically, for details please refer to the section of Configure the Computers IP Address in this manual.
   3) Make sure you put 192.168.0.1 into the address bar, not the search bar.
   4) Check your web browser, make sure the Proxy server is unchecked. Take Internet Explorer as an example, go to **Tools**>**Internet Options**>**Connections**>**LAN Settings**, uncheck **Use a proxy server for your LAN**
   5) If it tells you the username or password is error, and you cannot remember the new one, please reset router by pressing reset button for at least 6 seconds, and then try to login with default username and password (admin/admin).

4. **The computer cannot connect to the Internet.**

   1) Make sure the DSL/cable modem goes into the WAN port of the router.
   2) Make sure the computer goes into the LAN port of the router.
   3) Ensure that the router and modem are both on.
   4) Unplug the router, connect your computer to the modem directly, check the internet is working or not through your modem.

5. **The computer cannot connect to the internet wirelessly.**

   Please make sure you can access the Internet when plug in the Ethernet cable from the router to the computer, otherwise, please refer to Question 4. Then check the wireless connection status on your computer:

   1) Search available networks and connect to your wireless network. If your wireless network name (SSID) is not listed in, please connect to router's LAN port by an Ethernet cable, login router's web management page 192.168.0.1 to make sure the Broadcast SSID is enabled. Please refer to Page 20 in this manual.
   2) If you cannot connect to your wireless network, please make sure the password is correct. You can connect to router's LAN port by an Ethernet cable, login router's web management page 192.168.0.1 to double check your password. Please refer to Page 21 in this manual.
   3) If there is no wireless network found in range on your computer, please make sure the wireless switch is turned on, and the wireless network adapter is working properly.

6. **I've installed this new Router and some of my network clients (computers, game consoles etc.) are unable to connect.**

   Your new Router came pre-configured with a network name and no password. All clients must use this network name to connect wirelessly to your Router. You will need to find the network settings on your client, and select the network name from the list of available networks to join the wireless network. Details please refer to your client (computer, game consoles etc.).

Appendix B: Certification

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

FCC Caution

- Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- 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.
- For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible.
- This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.
- This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

- This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

CE Mark Warning

Marking with the above symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC).

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

National Restrictions

This device is intended for home and office use in all EU countries (and other countries following the EU Directive 1999/5/EC) without any limitation except for the countries mentioned below:

Country	Restriction	Reason/remark
Bulgaria	None	General authorization required for outdoor use and public service
France	Outdoor use limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz	Military Radiolocation use. Refarming of the 2.4 GHz band has been ongoing in recent years to allow current relaxed regulation. Full implementation planned 2012
Italy	None	If used outside of own premises, general authorization is required
Luxembourg	None	General authorization required for network and service supply(not for spectrum)
Norway	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund
Russian Federation	None	Only for indoor applications

Note: Please don't use the product outdoors in France.

Appendix C: Glossary

802.11b: The 802.11b standard specifies a wireless networking at 11 Mbps using direct-sequence spread-spectrum (DSSS) technology and operating in the unlicensed radio spectrum at 2.4GHz, and WEP encryption for security. 802.11b networks are also referred to as Wi-Fi networks.

802.11g: Specification for wireless networking at 54 Mbps using direct-sequence spread-spectrum (DSSS) technology, using OFDM modulation and operating in the unlicensed radio spectrum at 2.4GHz, and backward compatibility with IEEE 802.11b devices, and WEP encryption for security.

DDNS (Dynamic Domain Name System): The capability of assigning a fixed host and domain name to a dynamic Internet IP Address.

DHCP (Dynamic Host Configuration Protocol): A protocol that automatically configure the TCP/IP parameters for the all the PC(s) that are connected to a DHCP server.

DMZ (Demilitarized Zone): A Demilitarized Zone allows one local host to be exposed to the Internet for a special-purpose service such as Internet gaming or videoconferencing.

DNS (Domain Name System): An Internet Service that translates the names of websites into IP addresses.

Domain Name: A descriptive name for an address or group of addresses on the Internet.

DSL (Digital Subscriber Line): A technology allowing data to be sent or received over existing traditional phone lines.

ISP (Internet Service Provider): A company that can provide access to the Internet.

MTU (**Maximum Transmission Unit**): The size in bytes of the largest packet that can be transmitted.

NAT (Network Address Translation): NAT technology translates IP addresses of a local area network to a different IP address for the Internet.

PPPoE (Point to Point Protocol over Ethernet): PPPoE is a protocol for connecting remote hosts to the Internet over an always-on connection by simulating a dial-up connection.

SSID (Service Set Identification): It is a thirty-two character (maximum) alphanumeric key identifying a wireless local area network. For the wireless devices in a network to communicate with each other, all devices must be configured with the same SSID. This is typically the configuration parameter for a wireless PC card. It corresponds to the ESSID in the wireless Access Point and to the wireless network name.

WEP (Wired Equivalent Privacy): A data privacy mechanism based on a 64-bit or 128-bit or 152-bit shared key algorithm, as described in the IEEE 802.11 standard.

Wi-Fi: A trade name for the 802.11b wireless networking standard, given by the Wireless Ethernet Compatibility Alliance (WECA, see http://www.wi-fi.net), an industry standards group promoting interoperability among 802.11b devices.

WLAN (Wireless Local Area Network): A group of computers and associated devices communicate with each other wirelessly, which network serving users are limited in a local area.

PHICOMM

Shanghai Feixun Communication Co., Ltd.
E-mail: support@phicomm.com
Website: www.phicomm.com