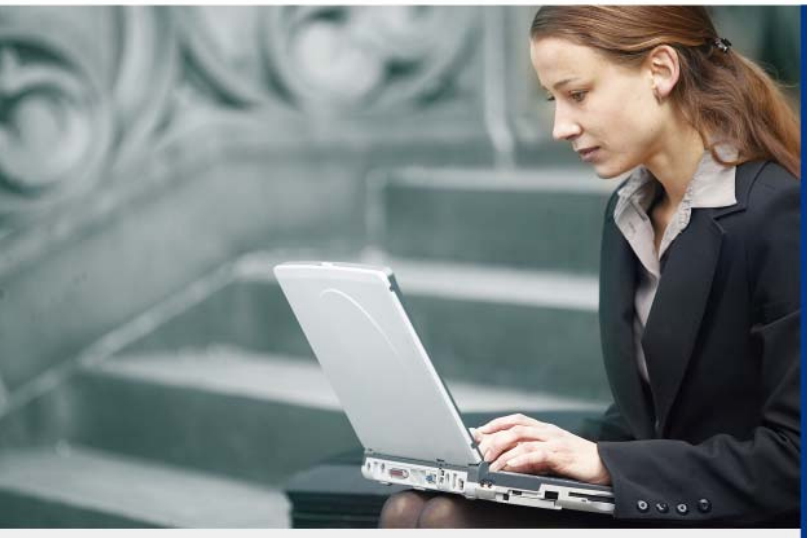
PLANET
Networking & Communication

User's Manual

1200Mbps 802.11ac Dual-Band Wireless Gigabit Router

► WDRT-1200AC



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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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:

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

FCC Caution:

To assure continued compliance, (example-use only shielded interface cables when connecting to computer or peripheral devices) any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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

(2) This Device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/CE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE).

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

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.

WEEE Regulations

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User Manual for PLANET 1200Mbps 802.11ac Dual-Band Wireless Gigabit Router

Model: WDRT-1200AC

Rev: 1.0 (July, 2014)

Part No. EM-WDRT-1200AC_v1.0 (**2081-E50330-000**)

CONTENTS

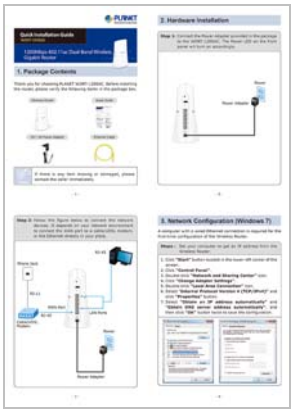
Chapter 1. Product Introduction

1.1 Package Contents

Thank you for choosing PLANET WDRT-1200AC. Before installing the router, please verify the contents inside the package box.

WDRT-1200AC Wireless Router

Quick Installation Guide



Power Adapter

12V/2A DC output
100~240V AC input

Ethernet Cable

RJ-45 Cable

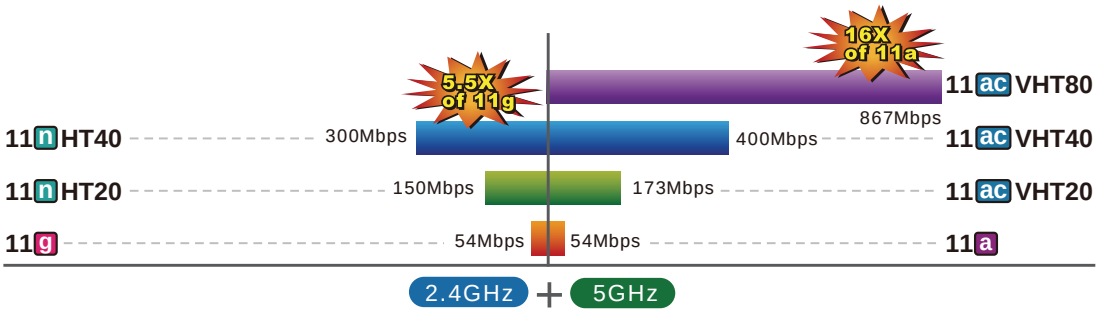
Note

If there is any item missing or damaged, please contact the seller immediately.

1.2 Product Description

Brand-new 11ac Wireless Technology for Incredibly 1200Mbps High-Speed Connection

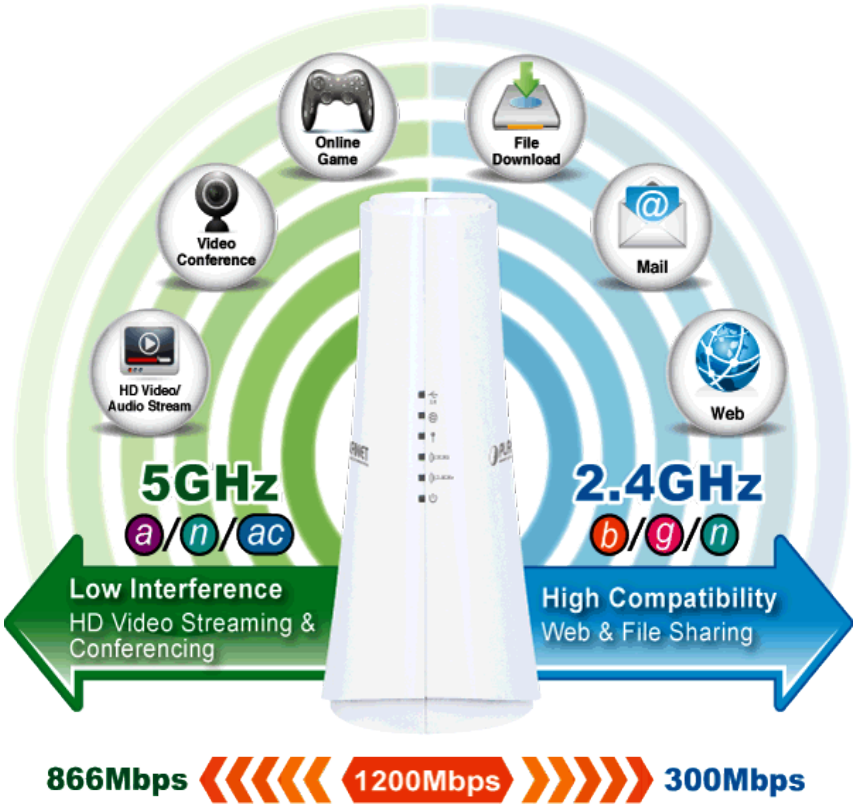
The WDRT-1200AC supports IEEE 802.11a/b/g/n/ac dual band standard technology; therefore, it can provide the wireless speed up to 300 + 867Mbps which is 16X faster than the 11a access point at 5GHz frequency and 5.5X faster than the 11g access point at 2.4GHz frequency. Compared with general wireless routers, the WDRT-1200AC offers faster transmission speed and more convenient method to enable or disable wireless signal.



WDRT-1200AC Data Transmission Rates 1200Mbps

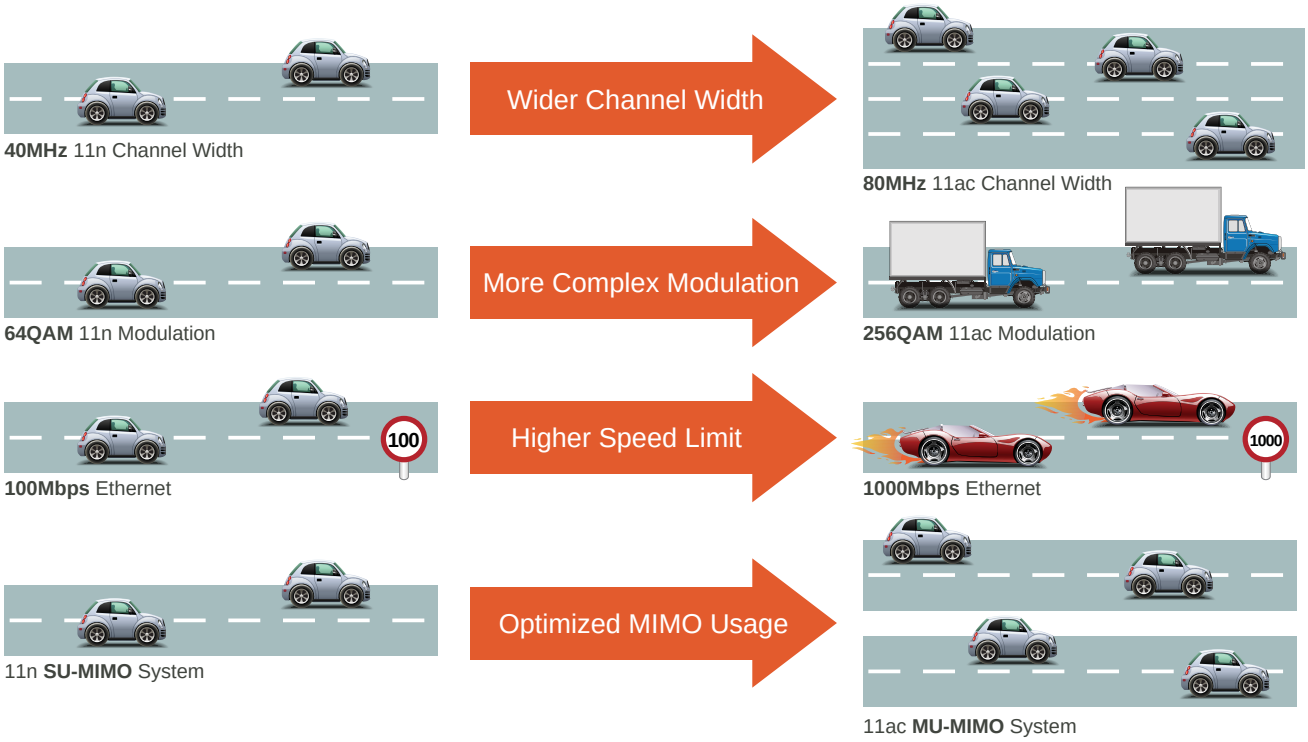
2.4G & 5G Simultaneous Dual Band Wireless Connectivity

Since there are more and more wireless applications and electric devices using the radio frequency of 2.4GHz, the wireless channel of 2.4GHz has been already too crowded for clients to enjoy the high-speed wireless connection. In order to avoid the wireless interference between each other, PLANET WDRT-1200AC provides users with the radio frequency of 5GHz for watching HD videos or playing online games additionally. At the same time, it enables other users to still surf the Internet via the original radio frequency of 2.4 GHz. The WDRT-1200AC is just like two totally independent access points in one device for you.



11ac Innovations Bring Excellent Data Link Speed

The WDRT-1200AC has a built-in high power amplifier and 4 highly-sensitive antennas which provide stronger signal and excellent coverage even in the wide-ranging or bad environment. With adjustable transmit power option, the administrator can flexibly reduce or increase the output power for various environments, thus reducing interference to achieve maximum performance. To provide extremely high-speed user experience, the WDRT-1200AC adopts IEEE 802.11ac technology to extend the 802.11n 40MHz channel binding to 80MHz and the implementation of 256-QAM modulation where higher transmission/receiving rates go up to 867Mbps in the 5GHz less interference frequency band. In addition, the WDRT-1200AC is equipped with gigabit LAN port to eliminate the restriction of 100Mbps Fast Ethernet wired connection to let users fully enjoy the high speed provided by wireless. The IEEE 802.11ac also optimizes MU-MIMO (Multi-User MIMO) mechanism to serve multiple devices simultaneously.



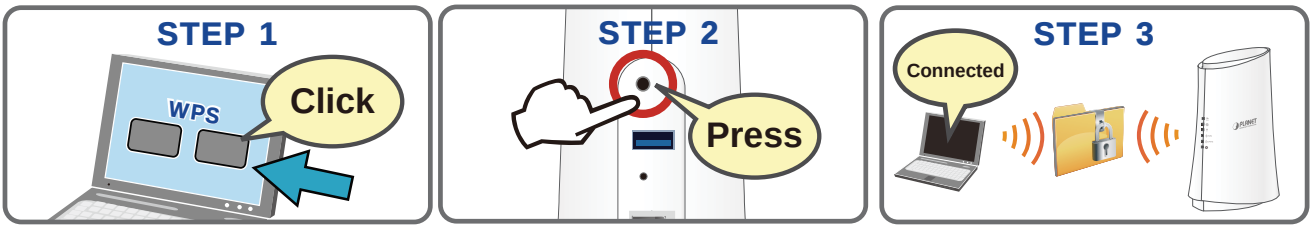
Go faster in wired & wireless

Take Advantage of 11ac to Optimize Data Link Speed

Full Support of Wireless Security Encryption

To secure the wireless communication, the WDRT-1200AC supports up-to-date encryption technology, WPA / WPA2 and WPA-PSK / WPA2-PSK with TKIP/AES. The WDRT-1200AC supports Wi-Fi Protected Setup (WPS) configuration with PBC/PIN methods to simplify the wireless security settings. By just clicking the WPS button, the secure connection between the wireless AP and wireless client will be built immediately.

WPS (Wi-Fi Protected Setup)
Quick & Easy Wireless Connection

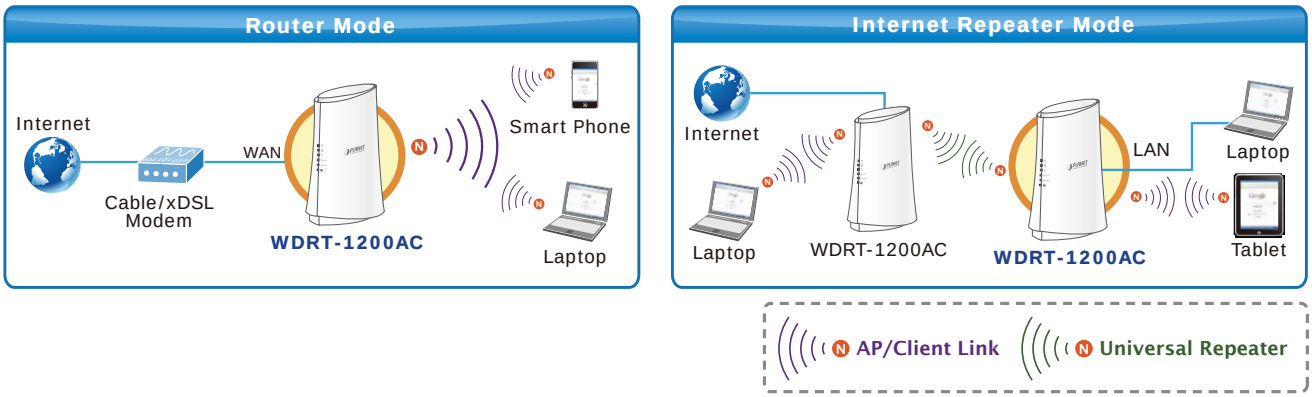


Powerful Firewall and Complete Access Control Functions

The WDRT-1200AC supports NAT function allowing multiple users to access Internet via a single legal IP. It also provides Virtual Server for the specific LAN PC to act as an application server and offer certain service to the clients on the Internet. In addition, the powerful firewall protects your Intranet clients from unauthorized accesses and various kinds of DoS attacks from the Internet. In the aspect of firewall, the WDRT-1200AC supplies MAC-based access control to prevent possible hackers attack.

Easy Setup for Multiple Wireless Modes

The WDRT-1200AC supports multiple wireless modes including AP, and Repeater, for different network applications. Furthermore, with the built-in Quick Setup function, users can configure the WDRT-1200AC easily and quickly through a couple of simple steps. It is so easy to apply the WDRT-1200AC to the existing wired network. The WDRT-1200AC definitely provides a total network solution for the home and the SOHO users.



Home DLNA Media Server over USB File Sharing

The WDRT-1200AC has one built-in USB port which can be connected to an external USB storage devices for file sharing. Moreover, the DLNA (Digital Living Network Alliance) compliant media server feature allows multimedia contents, such as stream videos, music and photos, to be easily shared among Smart TVs, tablets, mobile phones and laptops on a home network. Thus, all clients on the network can share mass storage through the WDRT-1200AC without complicated network configuration. Via the USB port, it also can output 5V DC power to charge any USB compliant devices.


Upload
Download
USB3.0
Easy to share Storage via USB Anywhere !

1.3 Product Features

- **IEEE Compliant Wireless LAN & Wired LAN**
  - Compliant with IEEE 802.11a/b/g/n/ac dual-band (2.4G&5G) wireless technology capable up to 300+867Mbps data rate
  - Auto MDI/MDI-X supported
- **Fixed-network Broadband Router**
  - Supported WAN connection types: DHCP / Static IP / PPPoE / PPTP / L2TP
  - Supports Dynamic DNS and DHCP Server
- **Secure Network Connection**
  - Supports Wi-Fi Protected Setup (WPS)
  - Advanced security: 64/128-bit WEP, WPA/WPA2 and WPA-PSK/WPA2-PSK (TKIP/AES encryption)
  - Supports NAT firewall, Port / URL-based access control and MAC address filtering
  - Support Dual-SSID to allow users to access different networks through a single AP
- **Advanced Networking Function for Specific Application**
  - Supports Bandwidth Control (QoS) based on different local IP addresses
  - Supports NTP, Virtual Server, UPnP, and DMZ for various networking applications
- **Easy Installation & Management**
  - User-friendly, Web-based UI with On-line Help
  - Remote Management allows configuration from a remote site
  - System status monitoring includes DHCP Client List and System Log

1.4 Product Specifications

Product	**WDRT-1200AC** 1200Mbps 802.11ac Dual-Band Wireless Gigabit Router	
Hardware Specifications		
Interface	WAN Port:	1 x 10/100/1000 Mbps Auto MDI/MDI-X RJ45 port
	LAN Port:	4 x 10/100/1000 Mbps Auto MDI/MDI-X RJ45 ports (LAN1~4)
	USB Port:	1 x USB 3.0, Type A, 5V 900mA
Antenna	Gain:	2.4GHz : 2 x 1.8dBi Internal Antenna 5GHz: 2 x 3.8dBi Internal Antenna
Button	1 x Reset button (Press for about 10 seconds to reset the device to factory default.) 1 x WPS button (Press for 1 second to activate WPS function.)	
LED Indicators	PWR x 1 WLAN (2.4GHz & 5GHz) x 2 WAN x 1 WPS x 1	
Material	Plastic	
Dimensions (H x W x D)	192x 115 x 90 mm (H x W x D)	
Weight	308g	
Power Requirements	12V DC, 2A	
Power Consumption	12W maximum	
Wireless Interface Specifications		
Standard	Compliant with IEEE 802.11a/b/g/n/ac	
Frequency Band	Simultaneous 2.4 GHz and 5 GHz	
Modulation Type	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM) MIMO	
Data Rates	2.4GHz up to 300Mbps 5GHz up to 867Mbps	
Channel	2.4GHz America / FCC: 2.412~2.462GHz (11 Channels) Europe / ETSI: 2.412~2.472GHz (13 Channels) Japan / TELEC: 2.412~2.484GHz (14 Channels)	
	5GHz 5.180-5.240GHz, 5.745-5.825GHz (Up to 9 channels) The actual channels in application will vary depending on the regulation in different regions and countries.	
Channel Width	20/40/80 MHz	
RF Power / EIRP	2.4GHz: 11b: 17±1.5dBm 11g: 14±1.5dBm 11n: 14±1.5dBm	5GHz: 11a: 14±1.5dBm 11n: 14±1.5dBm 11ac: 13±1.5dBm

Receive Sensitivity	2.4GHz 11b (11Mbps): -79dBm 11g (54Mbps): -70dBm 11n (20M)mode: -67dBm 11n (40M)mode: -64dBm	5GHz 11a: -70dBm 11n (20M)mode: -67dBm 11n (40M)mode: -64dBm 11ac (20M)mode: -57dBm 11ac(40M)mode: -54dBm 11ac(80M)mode: -51dBm
Wireless Management Features		
Wireless Modes	AP/ Router WDS Repeater	
Encryption Security	WEP (64/128-bit) WPA / WPA2 WPA-PSK/ WPA2-PSK encryption	
Wireless Security	Provides Wireless LAN ACL (Access Control List) filtering	
	Wireless MAC address filtering	
	Supports WPS (Wi-Fi Protected Setup)	
Wireless Advanced	Supports Dual-SSID (2.4G & 5G)	
Max. Supported Clients	Wired: 64 Wireless: 32	
Router Features		
Internet Connection Type	Shares data and Internet access for users, supporting the following internet accesses: ■ DHCP ■ Static IP ■ PPPoE ■ PPTP ■ L2TP	
Firewall	NAT firewall, SPI firewall	
	Built-in NAT server which supports Virtual Server, and DMZ	
	Built-in firewall with URL filtering, and MAC address filtering	
LAN	Built-in DHCP server supporting static IP address distribution	
	Supports UPnP, Dynamic DNS	
	Supports Packets Statistics	
	Session Number: Max. 7776	
USB Sharing	Samba FTP Server DLNA Media Server	
System Management	Web-based (HTTP) management interface	
	Remote management (WAN Access Control)	
	SNTP time synchronization	
	System Log	
OS Compatibility	Windows 7 Windows Vista	

	Windows XP Mac OS X 10.4 and higher
Standards Conformance	
IEEE Standards	IEEE 802.11ac IEEE 802.11n IEEE 802.11a IEEE 802.11g IEEE 802.11b IEEE 802.11i IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3ab 1000Base-T
Other Protocols and Standards	CSMA/CA, CSMA/CD, TCP/IP, DHCP, ICMP, NAT, PPPoE, SNTP
Regulatory	CE, RoHS, WEEE
Environments	
Temperature	Operating: 0 ~ 45 degrees C Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing) Storage: 5 ~ 90% (non-condensing)

Chapter 2. Hardware Installation

Please follow the instructions below to connect the WDRT-1200AC to the existing network devices and your computers.

2.1 Hardware Description

- **Dimensions**: 192x 115 x 90mm (W x D x H)
- **Diagram :**

Figure 2-1

Figure 2-2

2.1.1 Front Panel

The front panel provides a simple interface monitoring the router. Figure 2-3 shows the front panel of the WDRT-1200AC.

Front Panel

Figure 2-3 WDRT-1200AC Front Panel

2.1.2 LED Indications

The LEDs on the front panel indicate instant status of port links, wireless data activity and system power, and help monitor and troubleshoot when needed. Figure 2-3 and Table 2-1 show the LED indications of the Wireless Router.

LED	STATE	FUNCTION
PWR	On	Device power on
	Off	Device power off
2.4GHz	On	The 2.4GHz Wi-Fi is activated.
	Flash	Device is transmitting data wirelessly over 2.4GHz.
	Off	The 2.4GHz Wi-Fi is disabled.
5GHz	On	The 5GHz Wi-Fi is activated.
	Flash	Device is transmitting data wirelessly over 5GHz.
	Off	The 5GHz Wi-Fi is disabled.
WAN	On	Link is established.

	Flash	Packets are transmitting or receiving.
	Off	WAN port is not connected.
WPS	On	WPS is under progress.
	Flash	Data is being transmitted.
	Off	WPS is disabled.
USB	On	USB connection is established.
	Flash	Data is being transmitted.
	Off	USB connection is not established.

Table 2-1 LED Indications

2.1.3 Rear Panel

The rear panel provides the physical connectors connected to the power adapter and any other network device. Figure 2-4 shows the rear panel of the WDRT-1200AC.

Rear Panel

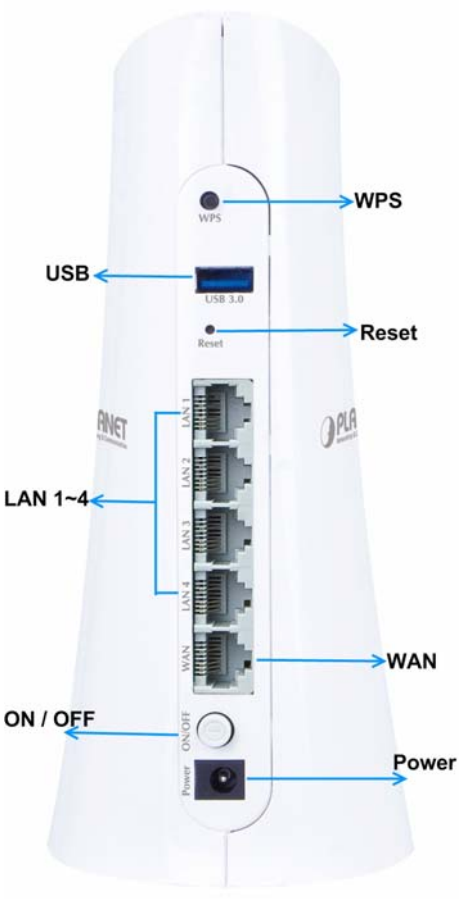


Figure 2-4 Rear Panel of the WDRT-1200AC

Interface	Description
WPS	Press the Reset button gently for 1 second and then release it. The system starts the WPS connection.
Reset	Press the Reset button gently for 10 seconds and then release it. The system restores to the factory default settings
WAN	Connect to the Cable/xDSL Modem or the Ethernet
LAN1-4	Connect to the user's PC or network devices
Power	Connect to the power adapter provided in the package

Table 2-2 Interface Indications

Chapter 3. Connecting to the Router

3.1 System Requirements

- Broadband Internet Access Service (Cable/xDSL/Ethernet connection)
- One Cable/xDSL Modem that has an RJ45 connector (not necessary if the Router is connected directly to the Ethernet.)
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ45 connectors
- PC subscribers use Windows 98/ME, NT4.0, 2000/XP, Windows Vista / Win 7, MAC OS 9 or later, or Linux, UNIX or other platforms compatible with **TCP/IP** protocols
- The above PC is installed with a Web browser

Note

1. The Router in the following instructions means PLANET WDRT-1200AC.
2. It is recommended to use Internet Explore 7.0 or above to access the Router.

3.2 Installing the Router

Before installing the Router, make sure your PC is connected to the Internet through the broadband service successfully at this moment. If there is any problem, please contact your local ISP. After that, please install the Router according to the following steps. Don't forget to pull out the power plug and keep your hands dry.

Step 1. Power off your PC, Cable/xDSL Modem and the Router.

Step 2. Locate an optimum location for the Router. The best place is usually at the center of your wireless network.

Step 3. Connect the PC or Switch/Hub in your LAN to the LAN Ports of the Router with Ethernet cable, shown in Figure 3-1.

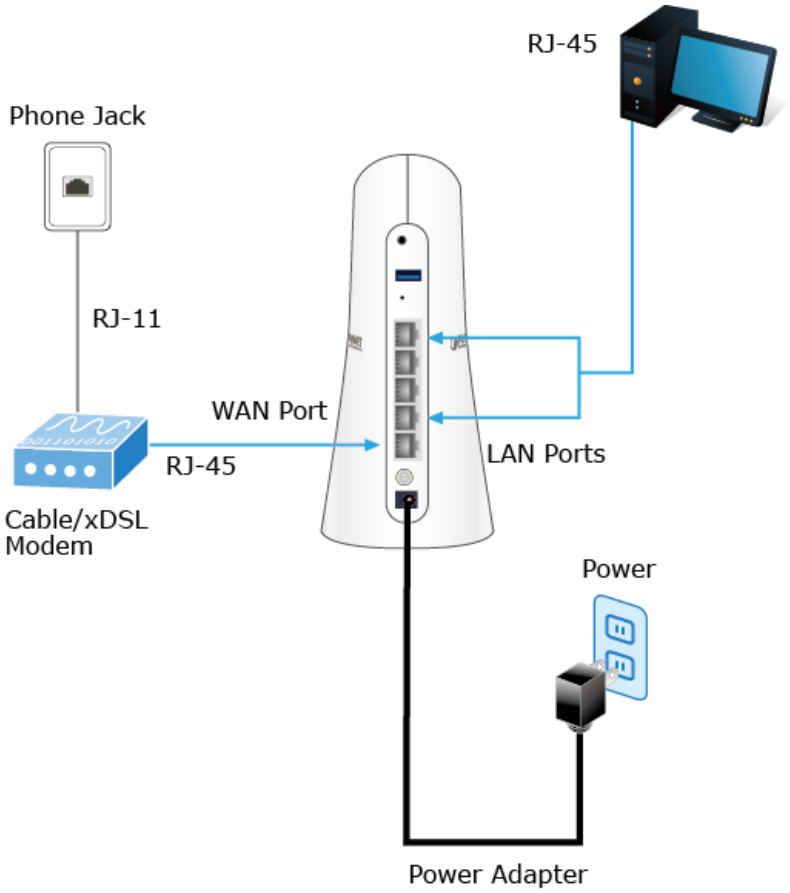


Figure 3-1 Hardware Installation of the WDRT-1200AC Wireless Router

Step 4. Connect the power adapter to the power socket on the Router, and the other end into an electrical outlet. Then power on the Router.

Step 5. Power on your PC and Cable/xDSL Modem.

Chapter 4. Quick Installation Guide

This chapter will show you how to configure the basic functions of your Wireless Router using **Quick Setup** within minutes.

A computer with wired Ethernet connection to the Wireless Router is required for the first-time configuration.

4.1 Manual Network Setup - TCP/IP Configuration

The default IP address of the Wireless Router is **192.168.1.1** and the default Subnet Mask is **255.255.255.0**. These values can be changed as you desire in the web UI of the Wireless Router. In this section, we use all the default values for description.

Whether the Wireless Router is configured via wired or wireless connection, the PC needs to be assigned an IP address first. Before you connect the local PC to the Wireless Router via wired or wireless connection, please configure the IP address for your PC in the following two ways first.

- **Obtaining an IP address automatically**
- **Configuring the IP address manually**

In the following sections, we'll introduce how to install and configure the TCP/IP correctly in **Windows 7**. And the procedures in other operating systems are similar. First, make sure your Ethernet Adapter is working, and refer to the Ethernet adapter's manual if needed.

4.1.1 Obtaining an IP Address Automatically

Summary:

1. Set up the TCP/IP Protocol in "**Obtain an IP address automatically**" mode on your PC.
2. Then the Wireless Router built-in DHCP server will assign IP address to the PC automatically.

If you are sure the DHCP server of Wireless Router is enabled (the default setting of Router Mode), you can set up the TCP/IP Protocol in "**Obtain an IP address automatically**" mode on your PC. And then the Wireless Router built-in DHCP server will assign an IP address to the PC automatically.

1. Installing TCP/IP Component

1) On the Windows taskbar, click the **Start** button, point to **Control Panel,** and then click it.

2) Under the **Network and Internet** icon, click on the **View network status and tasks.** And then click **Change adapter settings**.

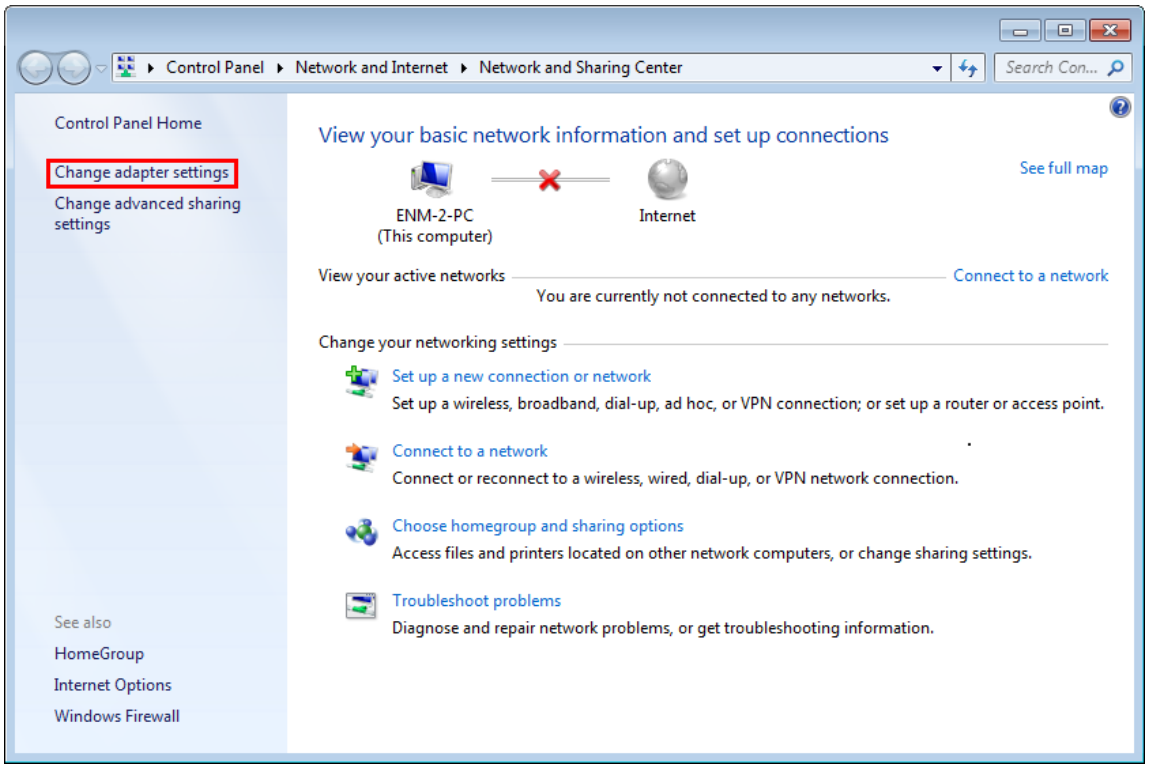


Figure 4-1 Change Adapter Settings

3) Right-click on the **Wireless Network Connection,** and select **Properties** in the appearing window.

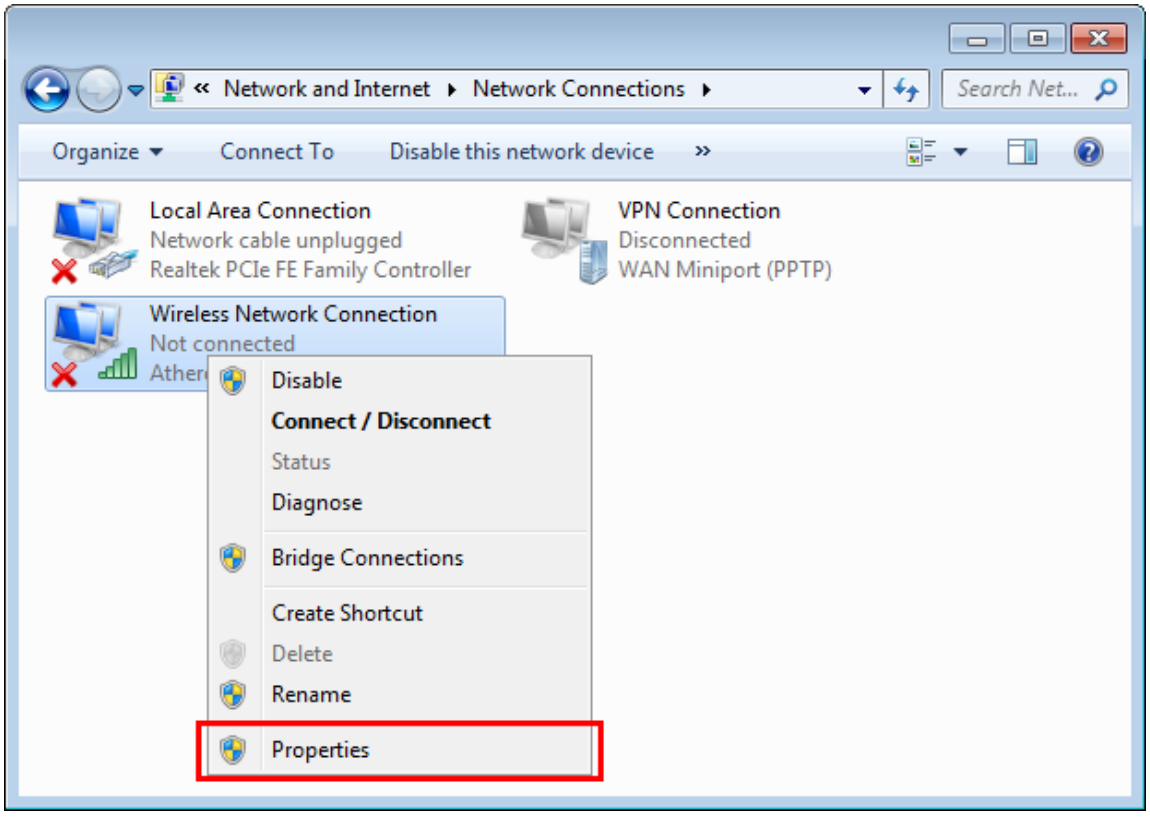


Figure 4-2 Network Connection Properties

4) In the prompt window shown below, double-click on the **Internet Protocol Version 4 (TCP/IPv4)**.

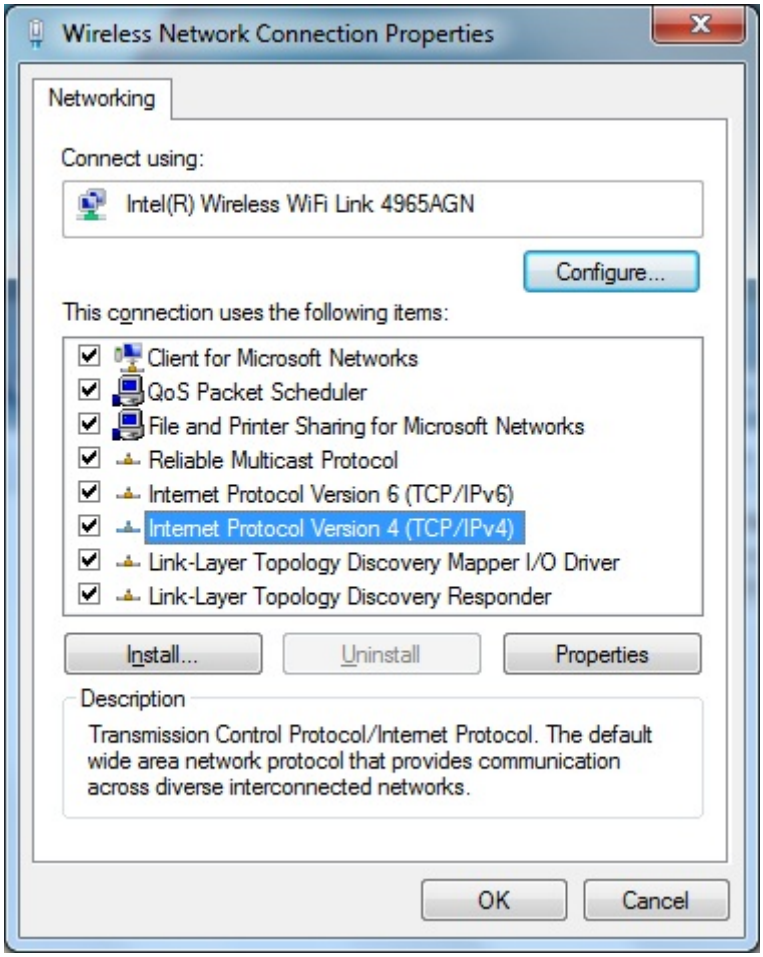


Figure 4-3 TCP/IP Setting

5) Choose **Obtain an IP address automatically**, and **Obtain DNS server address automatically** as shown in the figure below. Then click **OK** to save your settings.

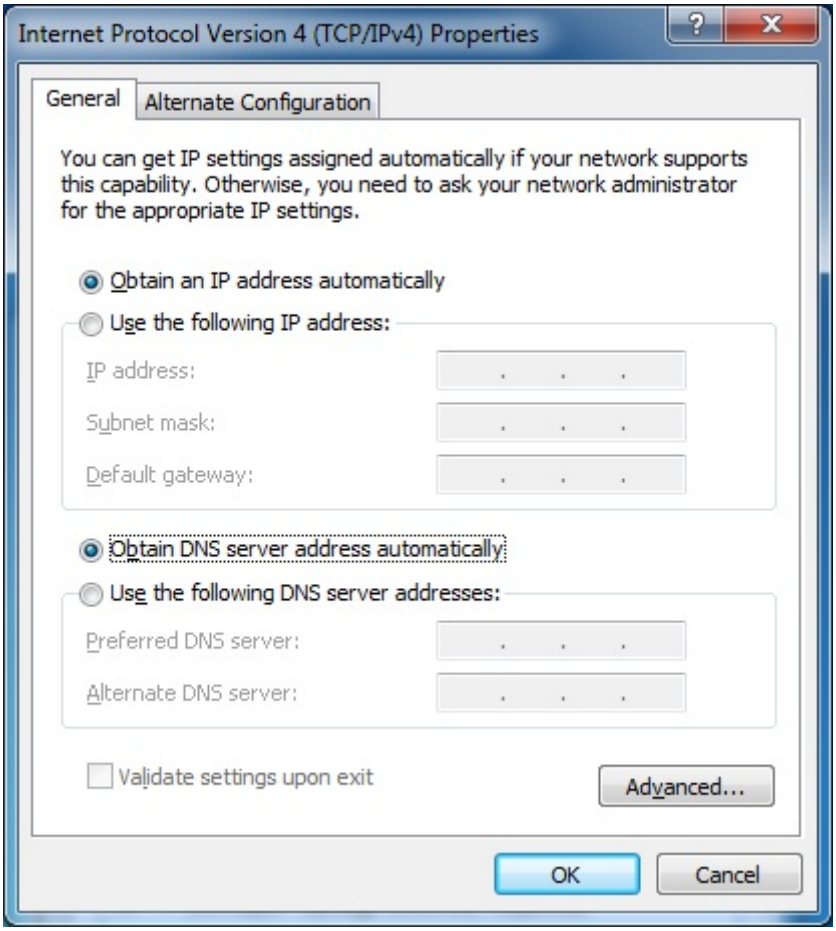


Figure 4-4 Obtain an IP Address Automatically

4.1.2 Configuring the IP Address Manually

Summary:

- Set up the TCP/IP Protocol for your PC.
- Configure the network parameters. The IP address is ***192.168.1.xxx*** ("xxx" is any number from 2 to 254), Subnet Mask is ***255.255.255.0***, and Gateway is ***192.168.1.1*** (The Router's default IP address)

If you are sure the DHCP server of Wireless Router is disabled (the default setting of AP Mode and Client Mode), you can configure the IP address manually. The IP address of your PC should be 192.168.1.xxx (the same subnet of the IP address of the Wireless Router, and "xxx" is any number from 2 to 254), Subnet Mask is 255.255.255.0, and the Gateway is 192.168.1.1 (The default IP address of the Wireless Router)

1) Continue the settings from the last figure. Select **Use the following IP address** radio button.

2) If the LAN IP address of the Wireless Router is 192.168.1.1, enter IP address 192.168.1.x (x is from 2 to 254), and Subnet mask 255.255.255.0.

3) Enter the LAN IP address of the Wireless Router (the default IP is 192.168.1.1) into the default gateway field.

4) Select **Use the following DNS server addresses** radio button. In the preferred DNS Server field, you can enter the DNS server IP address provided by your local ISP. Then click OK to save your settings.

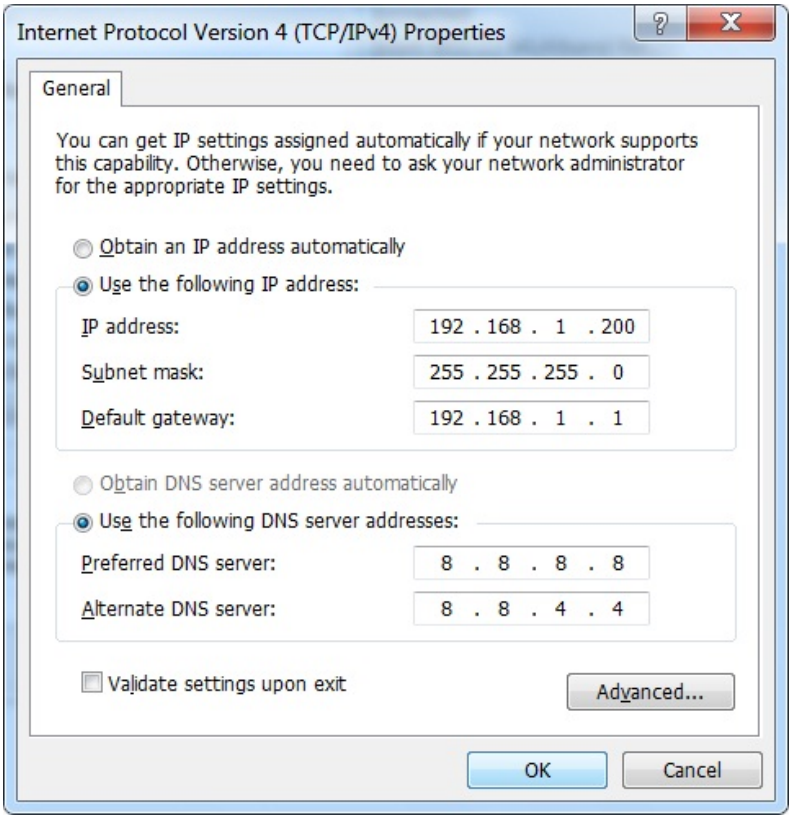


Figure 4-5 IP and DNS Server Addresses

Now, you can run the Ping command in the **command prompt** to verify the network connection between your PC and the Router. The following example is in **Windows 7** OS. Please follow the steps below:

1. Click on **Start**
2. Type "**cmd**" in the Search box.

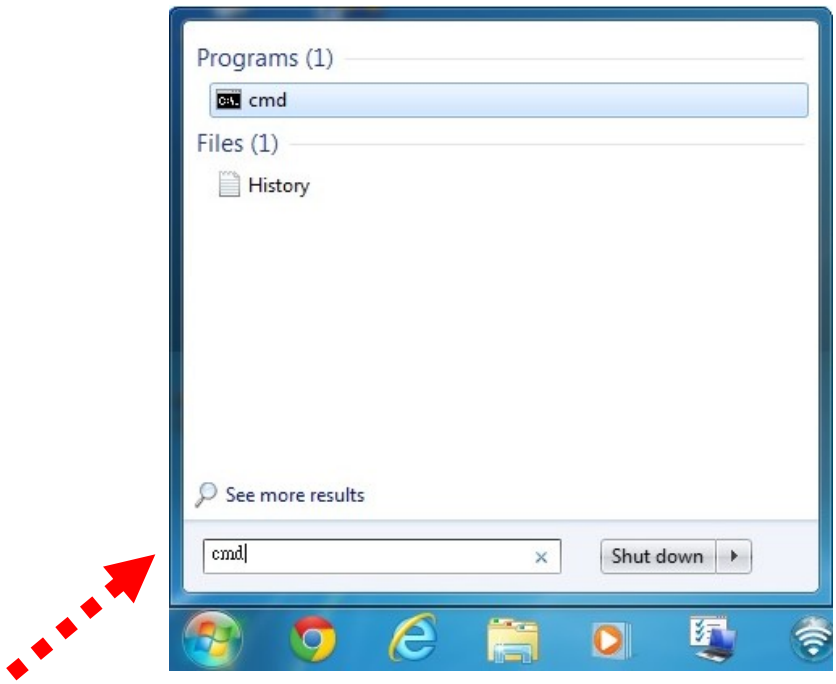


Figure 4-6

3. Open a command prompt, and type ping **192.168.1.1**, and then press **Enter**.

- If the result displayed is similar to Figure 4-7, it means the connection between your PC and the Router has been established well.

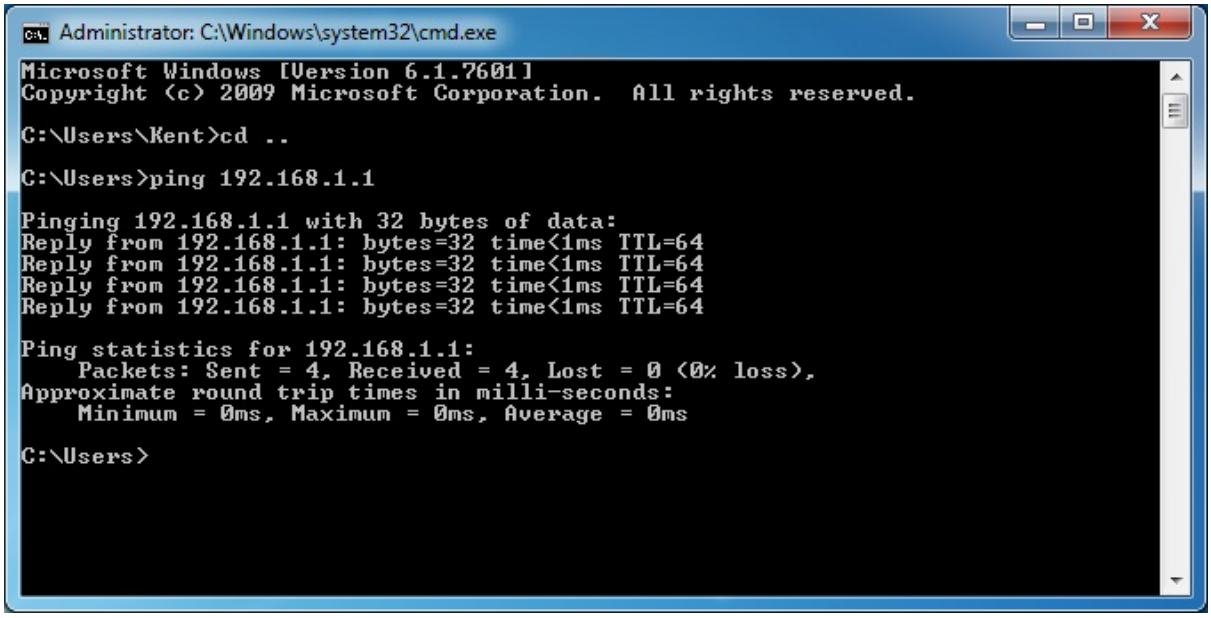


Figure 4-7 Successful Ping Command

- If the result displayed is similar to Figure 4-8, it means the connection between your PC and the Router has failed.

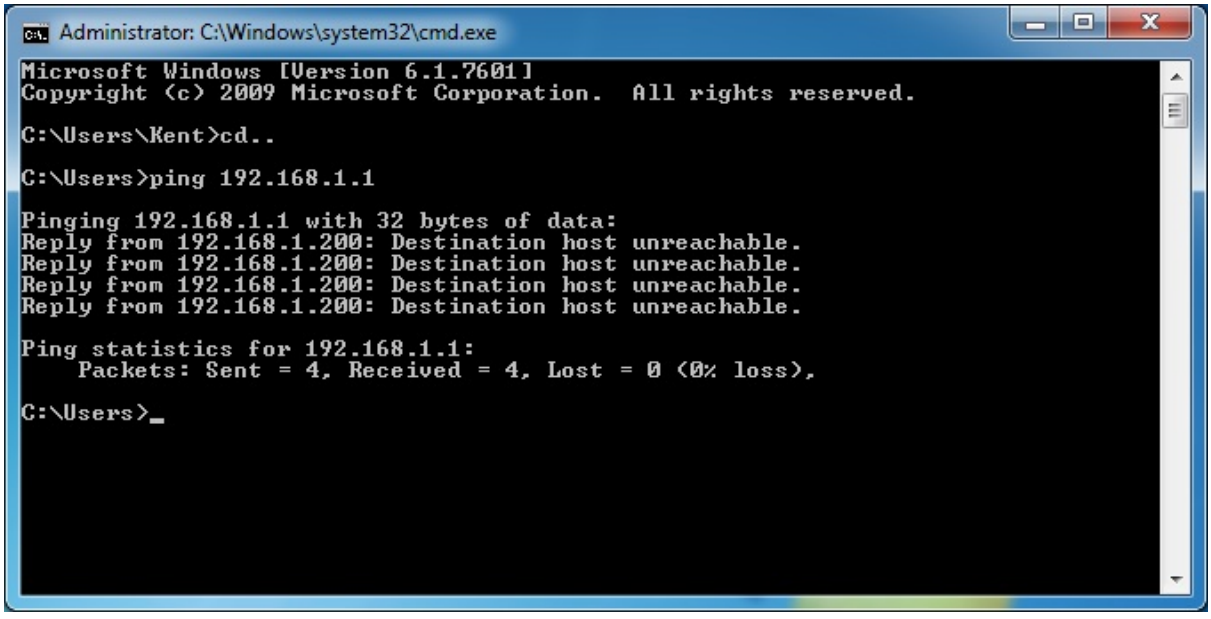


Figure 4-8 Failed Ping Command

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

If the Router's IP address is 192.168.1.1, your PC's IP address must be within the range of 192.168.1.2 ~ 192.168.1.254.

4.2 Starting Setup in the Web UI

It is easy to configure and manage the WDRT-1200AC with the web browser.

Step 1. To access the configuration utility, open a web-browser and enter the default IP address http://192.168.1.1 in the web address field of the browser.

Figure 4-9 Login the Router

After a moment, a login window will appear. Enter **admin** for the User Name and Password, both in lower case letters. Then click the **OK** button or press the **Enter** key.

Figure 4-10 Login Window

Default IP Address: **192.168.1.1**

Default User Name: **admin**

Default Password: **admin**

Note

If the above screen does not pop up, it may mean that your web-browser has been set to a proxy. Go to Tools menu>Internet Options>Connections>LAN Settings in the screen that appears, cancel the Using Proxy checkbox, and click OK to finish it.

After entering the user name and password, the **Wizard Setup** page screen appears as Figure 4-11.

Figure 4-11 WDRT-1200AC Web UI Screenshot

Step 2. Choose "**Yes**" and the Smart Wizard will try to detect the connection type. Or you can configure the router by yourself.

Figure 4-12 Configure the WAN setting.

Step 3. Please enter the **Security key**. Then click **Take me to the Internet** button to check if the configuration takes effect.

Figure 4-13 Take me to the Internet

Chapter 5. Configuring the Router

This chapter delivers a detailed presentation of router's functions and features under 9 main menus below, allowing you to manage the router with ease.

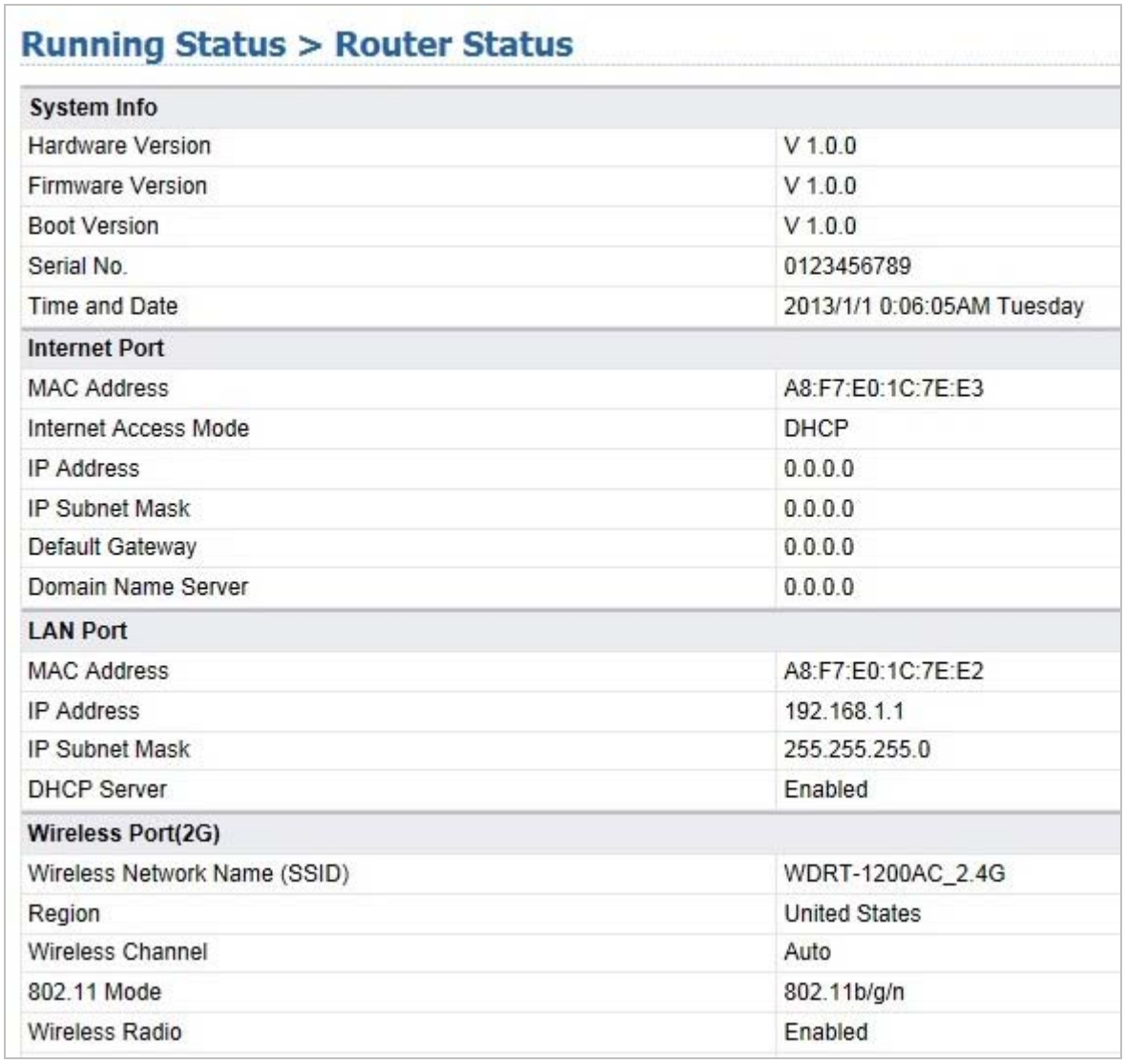
Figure 5-1 Router's Functions

During operation, if you are not clear about a certain feature, you can simply check the Help page to read all the related helpful information.

5.1 Running Status

5.1.1 Router Status

On this page, you can view information about the current running status of the WDRT-1200AC, including WAN interface, LAN interface, wireless interface settings and status, and firmware version information.



Running Status > Router Status

System Info	
Hardware Version	V 1.0.0
Firmware Version	V 1.0.0
Boot Version	V 1.0.0
Serial No.	0123456789
Time and Date	2013/1/1 0:06:05AM Tuesday
Internet Port	
MAC Address	A8:F7:E0:1C:7E:E3
Internet Access Mode	DHCP
IP Address	0.0.0.0
IP Subnet Mask	0.0.0.0
Default Gateway	0.0.0.0
Domain Name Server	0.0.0.0
LAN Port	
MAC Address	A8:F7:E0:1C:7E:E2
IP Address	192.168.1.1
IP Subnet Mask	255.255.255.0
DHCP Server	Enabled
Wireless Port(2G)	
Wireless Network Name (SSID)	WDRT-1200AC_2.4G
Region	United States
Wireless Channel	Auto
802.11 Mode	802.11b/g/n
Wireless Radio	Enabled

Figure 5-1-1 Router Status

The page includes the following information:

Object	Description
• **Hardware Version:**	The router model.
• **Firmware Version:**	This is the current software the router is using. This will change if you upgrade your router.
• **Internet Port:**	These are the current settings that you set in the Setup Wizard or Basic Settings screens.
• **MAC Address:**	The physical address of the router, as seen from the Internet.
• **IP Address:**	The current Internet IP address. If assigned dynamically, and no Internet connection exists, this will be blank or 0.0.0.0.
• **Internet Access Mode:**	Indicate either DHCP, PPPoE or Fixed IP.
• **IP Subnet Mask:**	The subnet mask associated with the Internet IP address.

• **Domain Name Server:**	Displays the address of the current DNS.
• **LAN Port:**	These are the current settings, as set in the LAN IP Setup screen.
• **MAC Address:**	The physical address of the router, as seen from the LAN.
• **IP Address:**	The LAN IP address of the router.
• **IP Subnet Mask:**	The subnet mask associated with the LAN IP address.
• **DHCP Server:**	Indicates if the router is acting as a DHCP server for devices on your LAN.
• **Wireless Port:**	These are the current settings, as set in the Wireless Settings screen.
• **Name (SSID):**	SSID of the router.
• **Region:**	The location (country).
• **Channel:**	The current channel in use.
• **Mode:**	Indicates the current mode (802.11b、802.11g、802.11n、802.11b/g/n、802.11a、802.11a/n/ac).
• **Wireless Radio:**	Indicates if the access point feature of the router is enabled or not. If not enabled, the Wireless LED on the front panel is off.
• **Broadcast Name:**	Indicates if the router is broadcasting its SSID.
• **Wireless Isolation:**	Indicates if wireless isolation is enabled.
• **Wi-Fi Protected Setup:**	Indicates if the router's wireless settings are configured.
• **Wireless Security Mode:**	The current security mode in use.

Click **Show Statistics** to see router performance statistics such as the number of packets sent and the number of packets received for each port.

5.1.2 Client List

This page shows the IP addresses, host names and MAC addresses of all the PCs in your network

Figure 5-1-2 Client List

5.2 Setup Wizard

"**Setup Wizard**" includes the following steps. Click **Next** for configuration. Below explains, in details, each such feature.

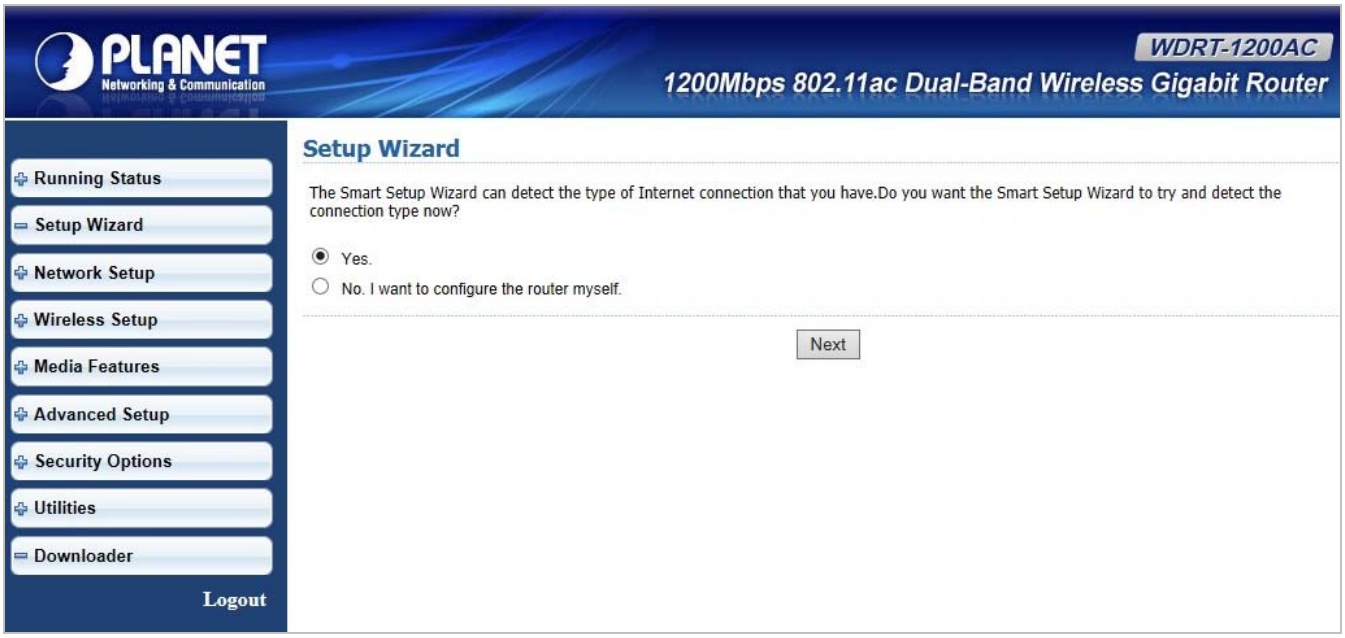


Figure 5-2-1 Setup Wizard Page Screenshot

Or you can choose **No. I want to configure the router myself**.

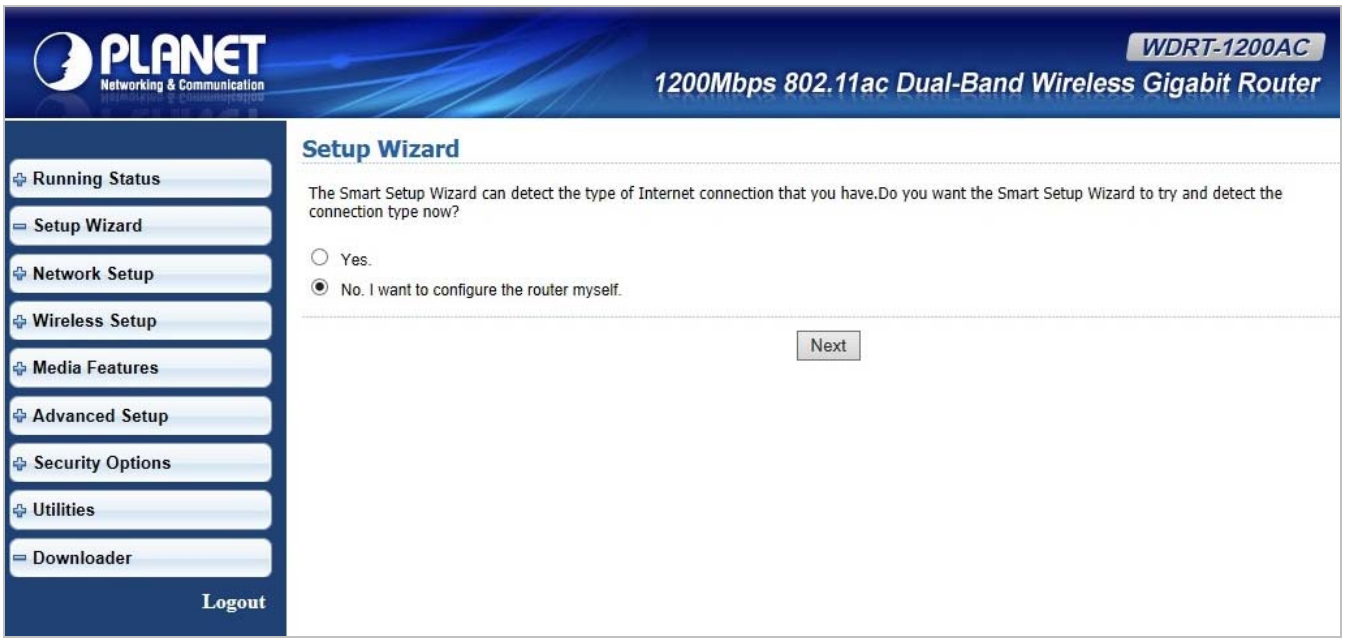


Figure 5-2-2 Self-configuration of the Router

The page includes the following fields:

Object	Description
• **DHCP:**	Select this option to let router obtain IP settings automatically from your ISP, if your ISP does not give you any IP information or

	account information. You don't need to configure any settings for this connection.
• **Static IP Address:**	If your ISP offers you static IP Internet connection type, select "Static IP" from corresponding drop-down menu and then enter IP address, subnet mask, primary DNS and secondary DNS information provided by your ISP in the corresponding fields.
• **PPPoE:**	Select PPPoE, if your ISP is using a PPPoE connection and provide you with PPPoE user name and password info.

Note

WAN IP, whether obtained automatically or specified manually, should NOT be on the same IP net segment as the LAN IP; otherwise, the router will not work properly. In case of emergency, press the hardware "Reset" button.

■ DHCP

Select this option to let the router obtain IP settings automatically from your ISP, if your ISP does not give you any IP information or account information. You don't need to configure any settings for this connection.

Figure 5-2-3

Note

DO NOT change the factory default MTU value unless necessary as an improper MTU value may degrade your network performance or even lead to network malfunction.

■ Static IP Address

If your ISP offers you static IP Internet connection type, select "**Static IP**" from corresponding drop-down menu and then enter IP address, subnet mask, primary DNS and secondary DNS information provided by your ISP in the corresponding fields.

Figure 5-2-4 Setup Wizard

The page includes the following fields:

Object	Description
• **IP Address:**	Enter the WAN IP address provided by your ISP. Inquire your ISP if you are not clear.
• **IP Subnet Mask:**	Enter WAN Subnet Mask provided by your ISP.
• **Gateway IP Address:**	Enter the WAN Gateway address provided by your ISP.
• **Primary DNS:**	Enter the necessary DNS address provided by your ISP.
• **Secondary DNS:**	Enter the other DNS address if your ISP provides you with 2 such addresses, and it is optional.

Note

DO NOT change the factory default MTU value unless necessary as an improper MTU value may degrade your network performance or even lead to network malfunction.

■ PPPoE

Select PPPoE, if your ISP is using a PPPoE connection and provide you with PPPoE user name and password info.

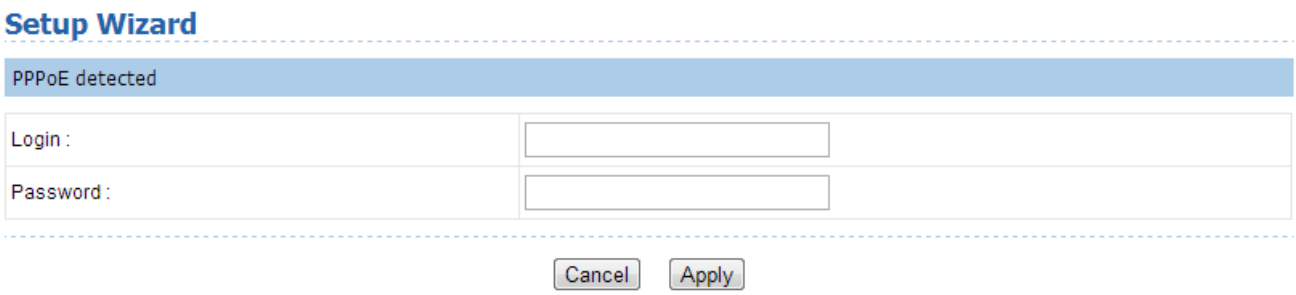


Figure 5-2-5

The page includes the following fields:

Object	Description
• **Login:**	Enter the User Name provided by your ISP.
• **Password:**	Enter the password provided by your ISP.

Note

DO NOT change the factory default MTU value unless necessary as an improper MTU value may degrade your network performance or even lead to network malfunction.

After configuring the WAN type, enter a network key of 8 to 63 characters, including spaces and symbol or 64 Hex (O~F) only for Wireless LAN.

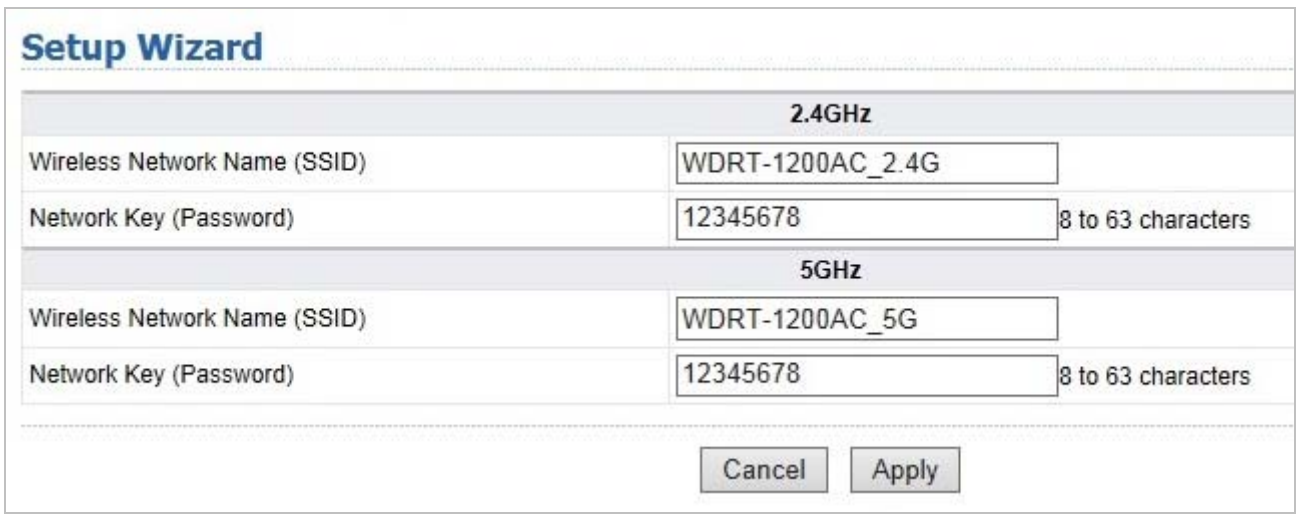


Figure 5-2-6 Setup Wizard

Click **Take me to the Internet** to start surfing on the Internet

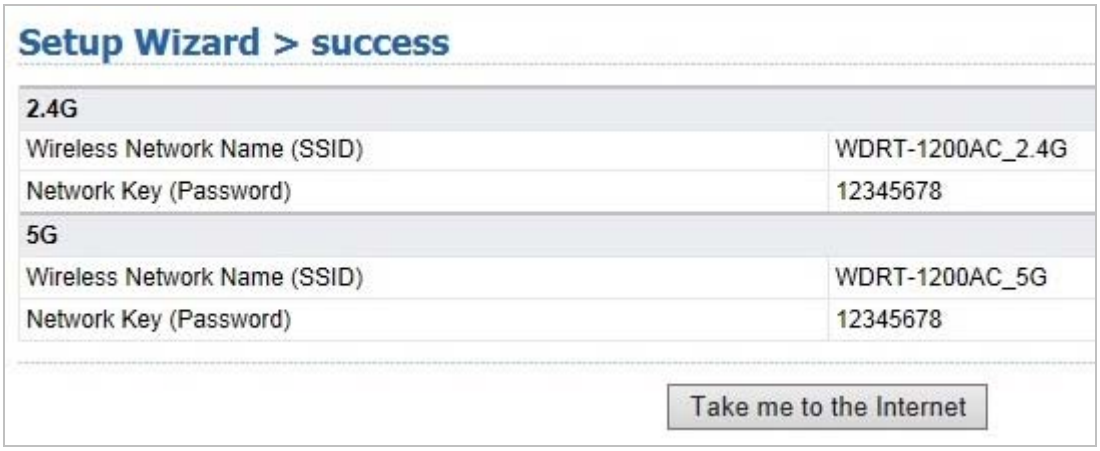


Figure 5-2-7 Setup Wizard

5.3 Network Setup

5.3.1 LAN Setup

Click "**Network Setup**" → "**LAN Setup**" and the following page will be displayed.

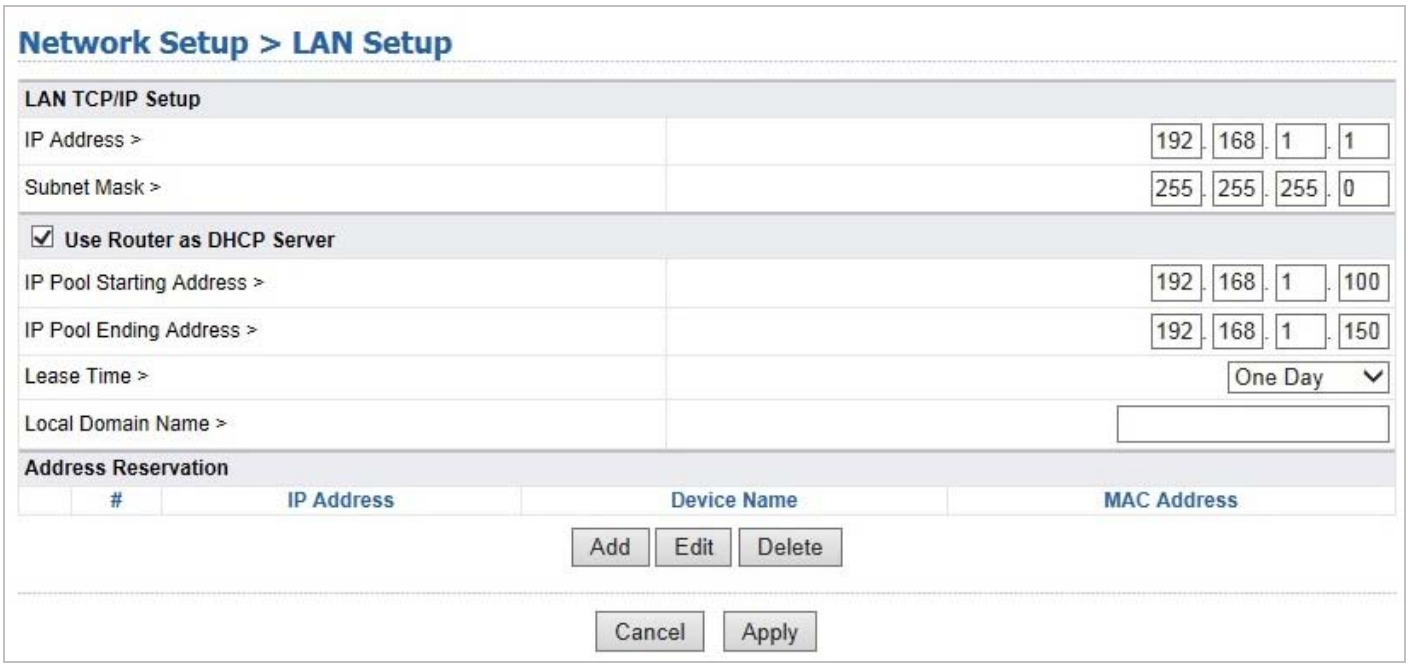


Figure 5-3-1 LAN Setup

The page includes the following fields:

Object	Description
• **IP Address:**	Router's LAN IP. The default is **192.168.1.1**. You can change it according to your needs.
• **Subnet Mask:**	Router's LAN subnet mask.
• **Use Router as DHCP Server:**	If it is selected, the router serves as the DHCP server and automatically assigns IP addresses for all computers in the LAN.
• **IP Pool Starting Address:**	The start IP address of all the available successive IPs.
• **IP Pool Ending Address:**	The end IP address of all the available successive IPs.
• **Lease Time:**	Select the time for using one assigned IP from the dropdown list. After the lease time, the AP automatically assigns new IP addresses to all connected computers.
• **Local Domain Name:**	Set the domain name of the server.
• **Address Reservation:**	Select Add to enable DHCP Reserved Address service.

Note

If you change the device's LAN IP address, you must enter the new one in your browser to get back to the web-based configuration utility. And LAN PCs' gateway must be set to this new IP for successful Internet connection.

5.3.2 WAN Setup

On this page, you can configure the parameters of the WAN interface.

Note

If you have installed PPP software such as WinPoET (from Earthlink) or Enternet (from PacBell), then you have PPPoE. Select Yes. After selecting Yes and configuring your router, you will not need to run the PPP software on your PC to connect to the Internet.

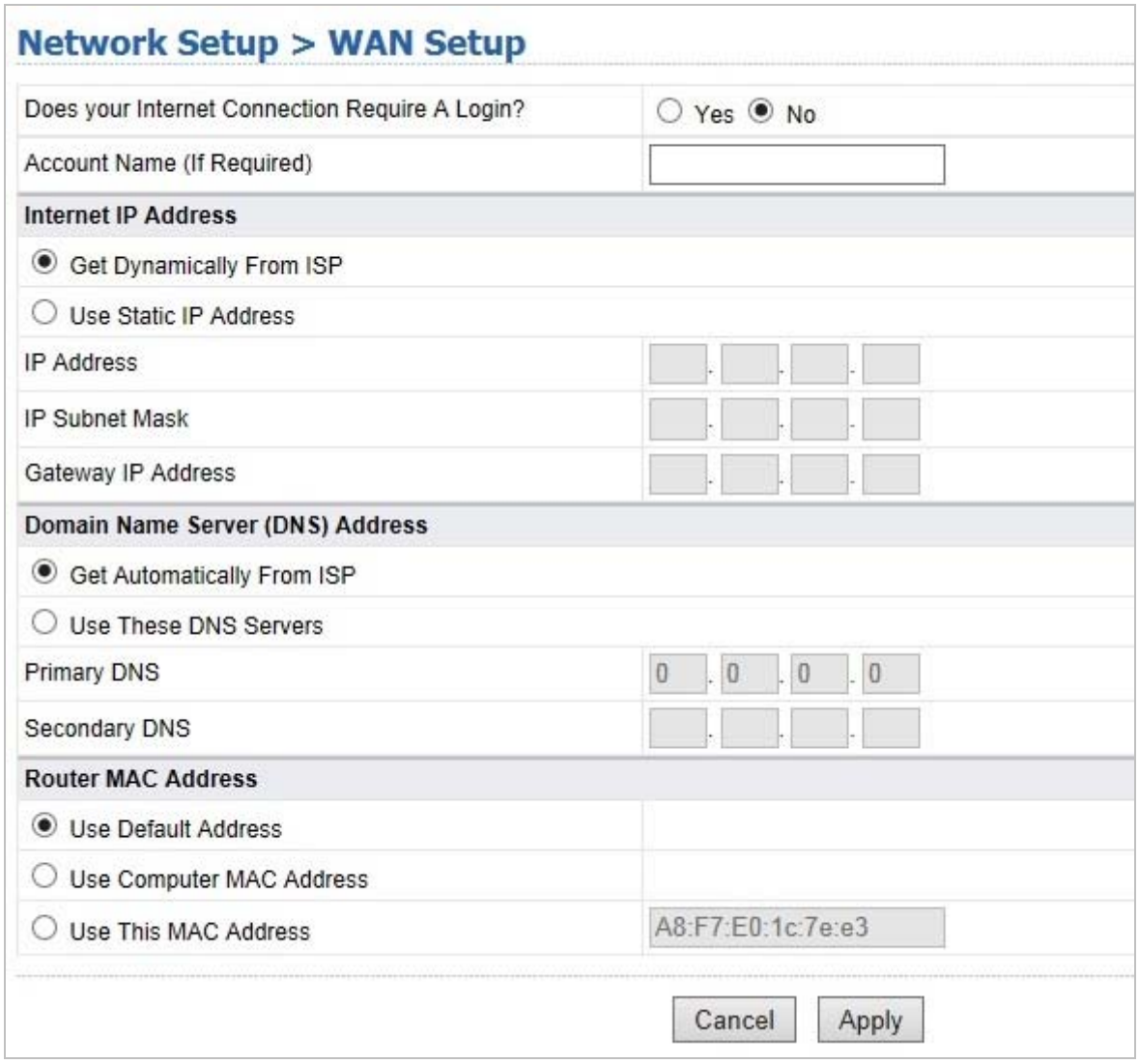


Figure 5-3-2 WAN Setup

■ DHCP

Choose “**Get Dynamically From ISP**” and the router will automatically obtain IP addresses, subnet masks and gateway addresses from your ISP.

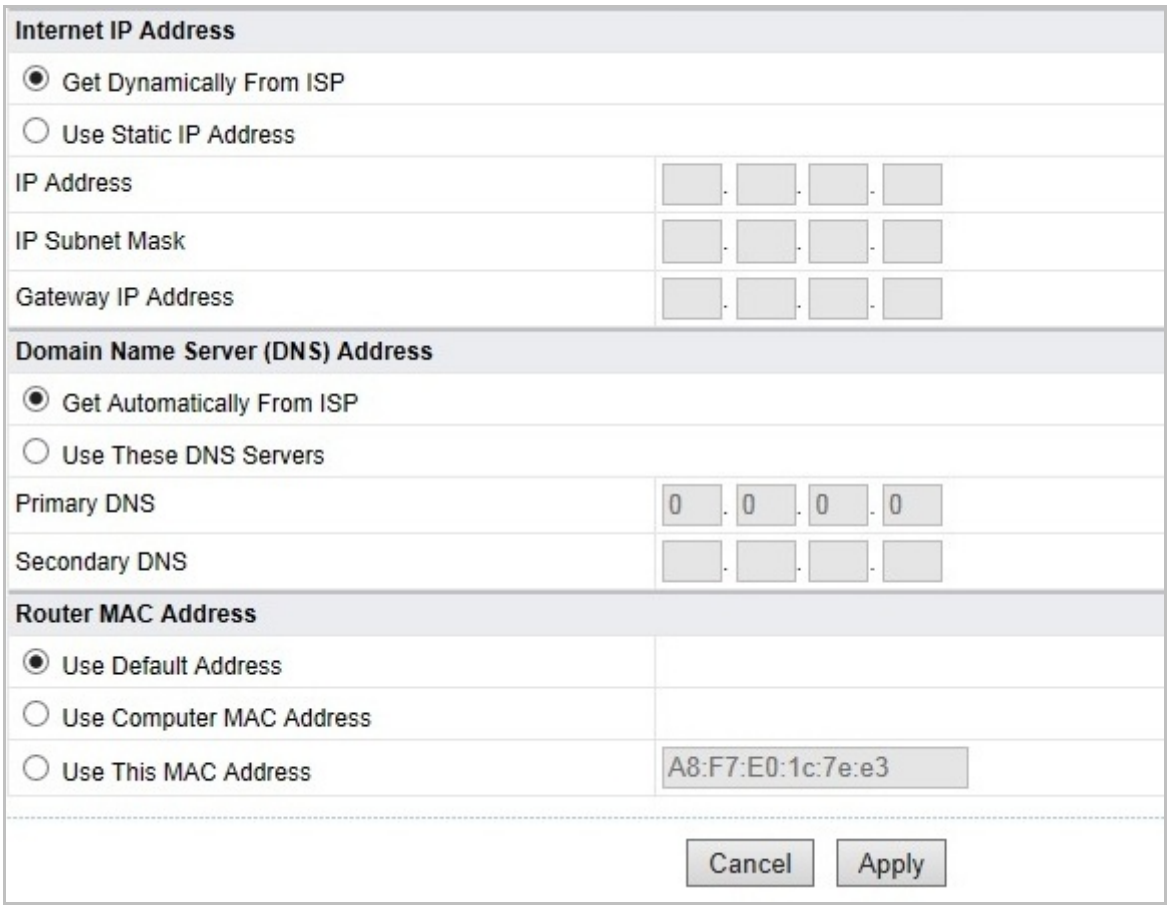


Figure 5-3-3 DHCP

■ Static IP

If your ISP offers you static IP Internet connection type, select “**Use Static IP Address**" and then enter IP address, subnet mask, primary DNS and secondary DNS information provided by your ISP in the corresponding fields.

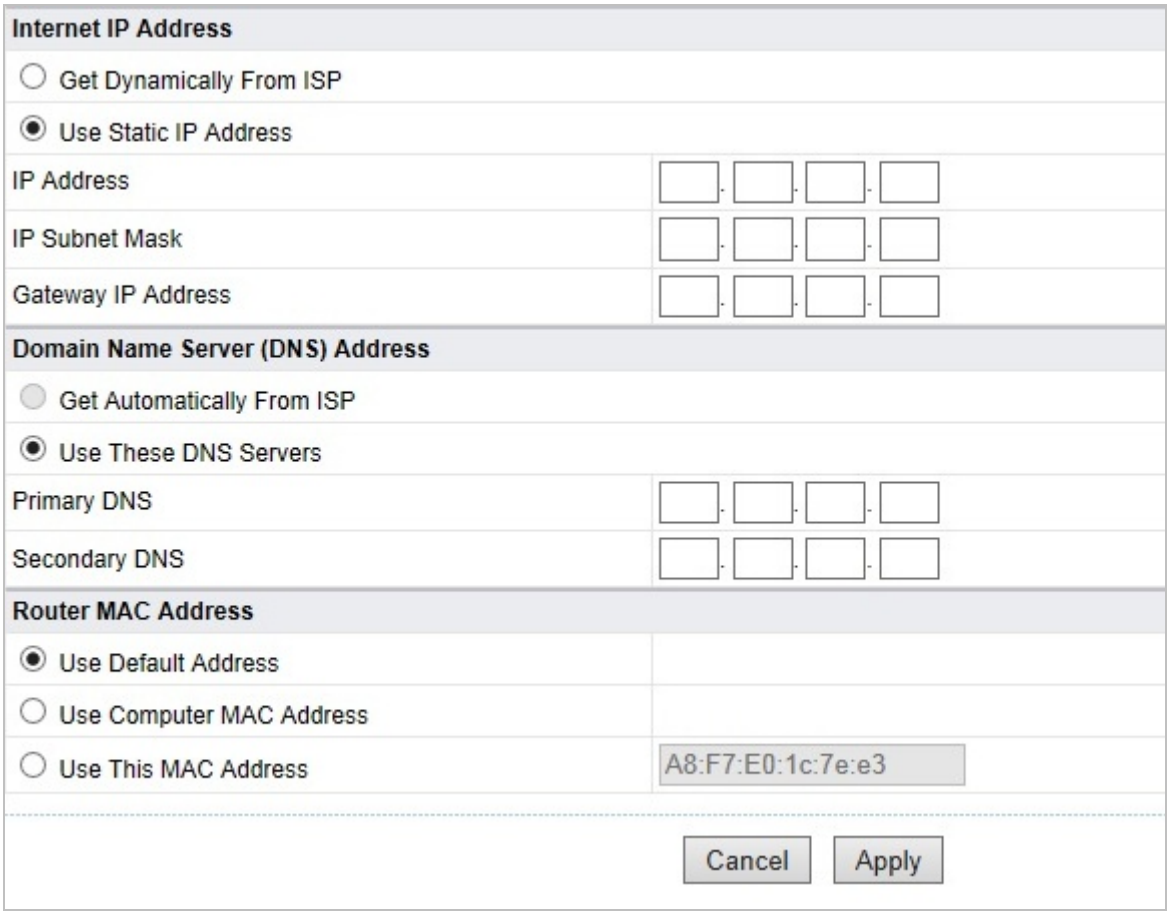


Figure 5-3-4 Static IP

Object	Description
• **IP Address:**	Enter the WAN IP address provided by your ISP. Inquire your ISP if you are not clear.
• **IP Subnet Mask:**	Enter WAN Subnet Mask provided by your ISP.
• **Gateway IP Address:**	Enter the WAN Gateway address provided by your ISP.
• **Primary DNS:**	Enter the necessary DNS address provided by your ISP.
• **Secondary DNS:**	Enter the other DNS address if your ISP provides you with 2 such addresses, and it is optional.

■ PPPoE

Step 1. Select "**Does Your Internet Connection Require A Login?"** the option based on the type of account you have with your ISP. If you need to enter login information every time you connect to the Internet or you have a PPPoE account with your ISP, select Yes. Otherwise, select No.

Step 2. Choose "**Yes**" and you can select PPPoE, PPTP or L2TP.

Step 3. Select **PPPoE**, if your ISP is using a PPPoE connection and provide you with PPPoE user name and password info.

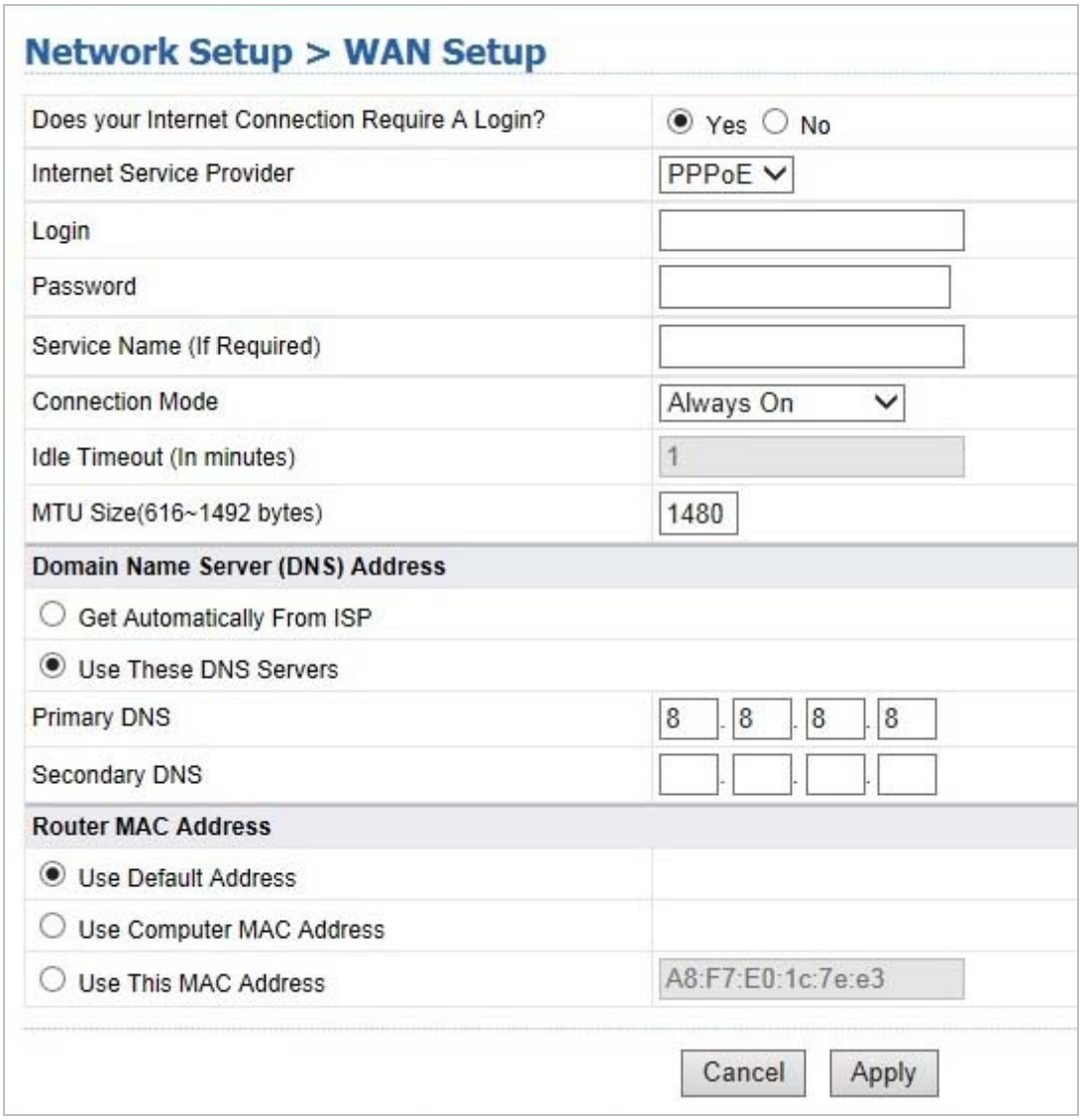


Figure 5-3-5 WAN Setup

Object	Description
• **Login:**	Enter the User Name provided by your ISP.
• **Password:**	Enter the password provided by your ISP.
• **Service Name:**	Type the name of this router.
• **Connection Mode:**	Select “Always On” or “Dial On Demand”.
• **Idle Timeout**	If you select “Dial On Demand”, you can configure the time which is auto disconnecting to ISP.
• **MTU:**	The maximum transmission unit. You can keep it as default.
• **Primary DNS Address:**	Enter the necessary DNS address provided by your ISP.
• **Secondary DNS Address:**	Enter the other DNS address if your ISP provides you with 2 such addresses, and it is optional.

■ PPTP

The **Point-to-Point Tunneling Protocol** (**PPTP**) is a method for implementing virtual private networks (**VPN**).

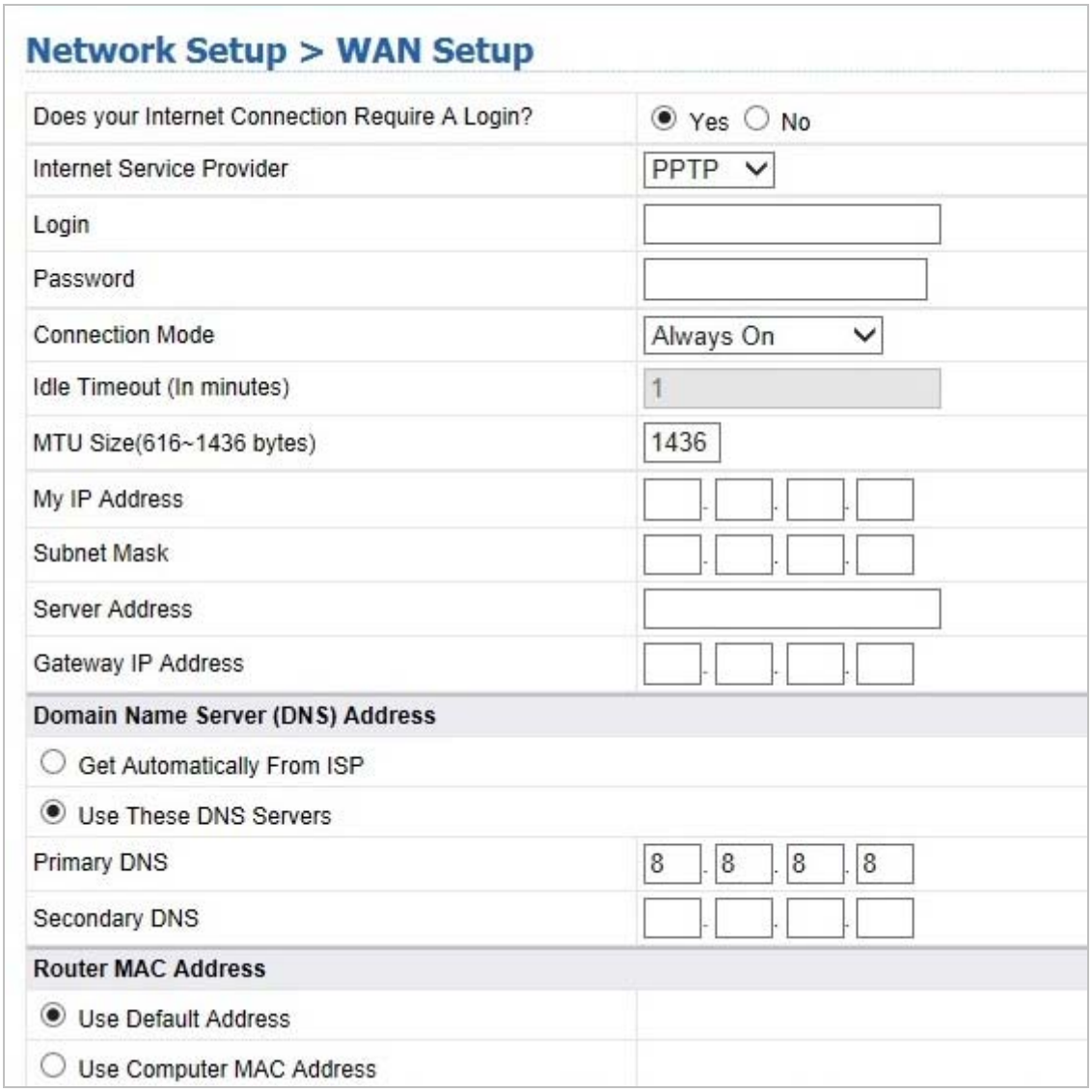


Figure 5-3-6 PPTP

Object	Description
• **Login:**	Enter the user name provided by your ISP.
• **Password:**	Enter the password provided by your ISP.
• **Service Name:**	Type the name of this router.
• **Connection Mode:**	Select “Always On” or “Dial On Demand”.
• **Idle Timeout**	If you select “Dial On Demand”, you can configure the time which is auto disconnecting to ISP.
• **MTU:**	The maximum transmission unit. You can keep it as default.
• **My IP Address:**	Enter the IP Address.

• **Subnet Mask:**	Enter the subnet mask.
• **Server Address:**	Enter the Domain Name Server (DNS) address.
• **Gateway IP Address:**	Enter the gateway address provided by your ISP.
• **Primary DNS Address:**	Enter the necessary DNS address provided by your ISP.
• **Secondary DNS Address:**	Enter the other DNS address if your ISP provides you with 2 such addresses, and it is optional.

■ L2TP

Layer 2 Tunneling Protocol (**L2TP**) is a tunneling protocol used to support virtual private networks (**VPN**) or as part of the delivery of services by ISPs.

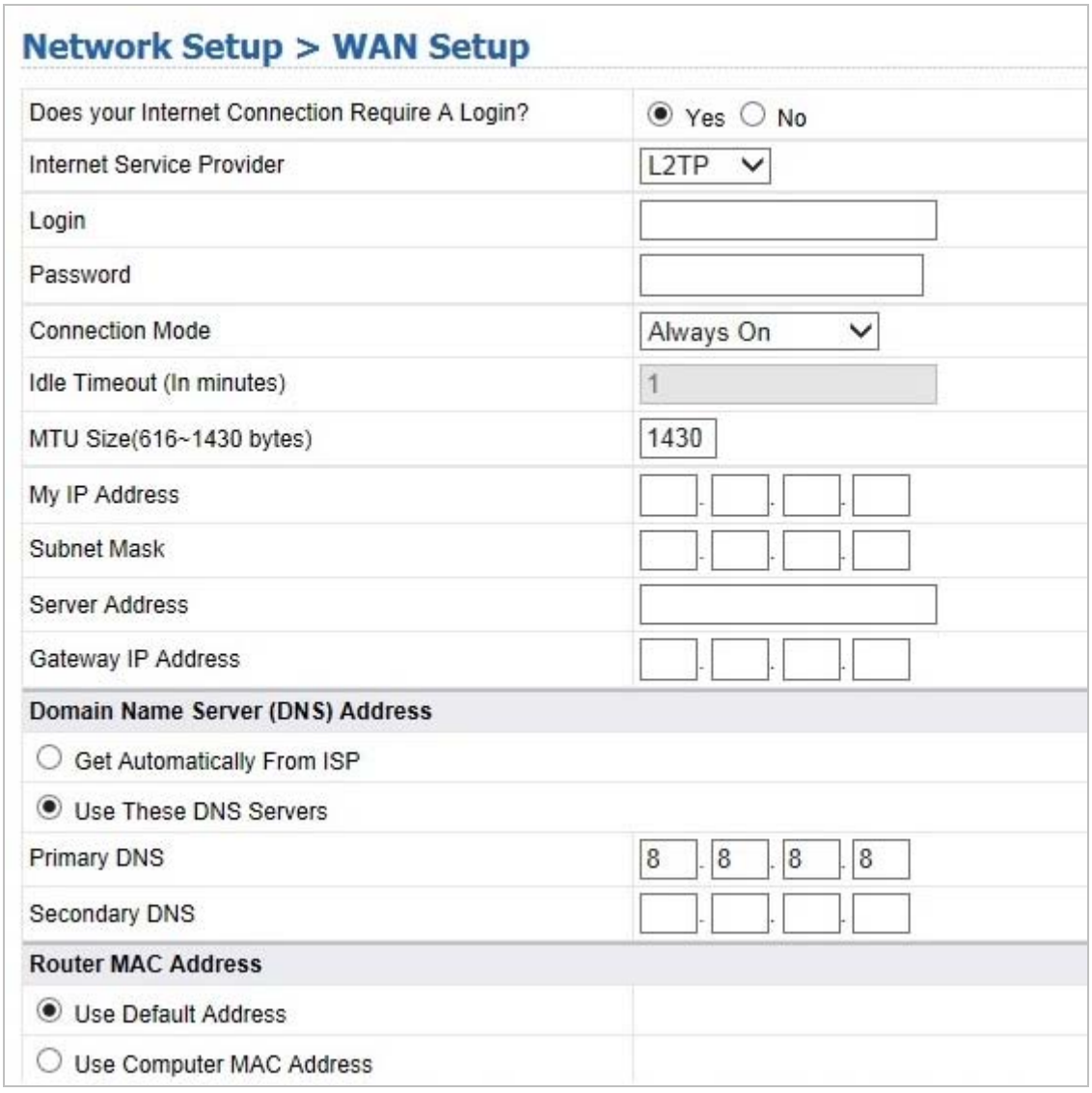


Figure 5-3-8 L2TP

Object	Description
• **Login:**	Enter the user name provided by your ISP.
• **Password:**	Enter the password provided by your ISP.
• **Service Name:**	Type the name of this router.
• **Connection Mode:**	Select “Always On” or “Dial On Demand”.
• **Idle Timeout**	If you select “Dial On Demand”, you can configure the time which is auto disconnecting to ISP.
• **MTU:**	The maximum transmission unit. You can keep it as default.
• **My IP Address:**	Enter the IP Address.
• **Subnet Mask:**	Enter the subnet mask.
• **Server Address:**	Enter the Domain Name Server (DNS) address.
• **Gateway IP Address:**	Enter the gateway address provided by your ISP.
• **Primary DNS Address:**	Enter the necessary DNS address provided by your ISP.
• **Secondary DNS Address:**	Enter the other DNS address if your ISP provides you with 2 such addresses, and it is optional.

5.4 Wireless Setup

Click **Wireless Setup** on the left pane and its submenu comes out. In this section, you can configure the wireless network of 2.4G and 5G.

5.4.1 Basic Setup

On the coming page, you can configure the basic wireless parameters of 2.4G and 5G.

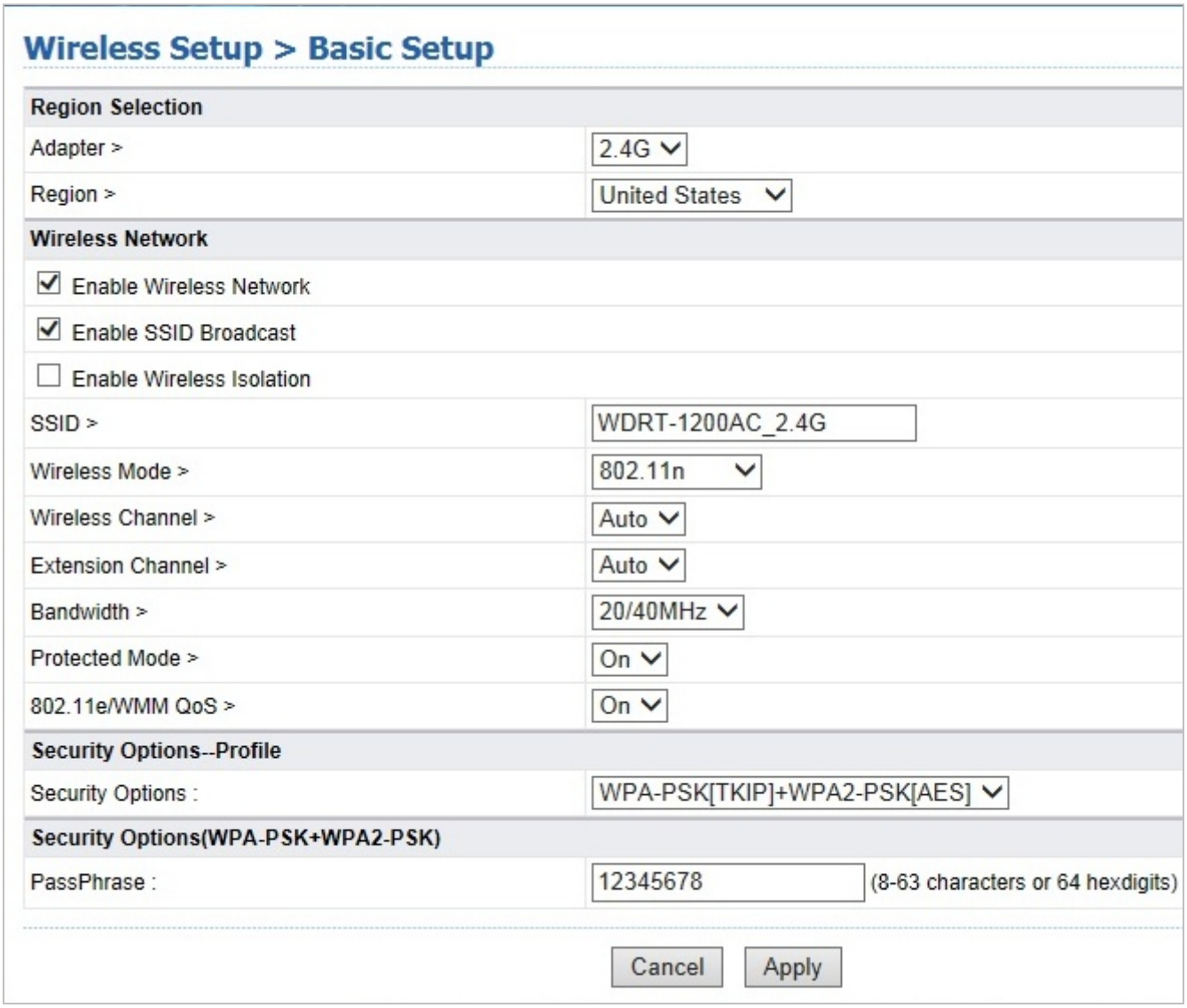


Figure 5-4-1 Basic Setup

The page includes the following fields:

- **2.4GHz Basic Setup**

Object	Description
• **Adapter:**	Choose 2.4G or 5G.
• **Region:**	You may select the country close to you.
• **Enable Wireless**	You may choose to enable or disable Wireless function.

Network:	
• **Enable SSID Broadcast:**	You may choose to enable or disable SSID broadcast. When it is enabled, the router SSID will be broadcast in the wireless network, so that it can be scanned by wireless clients and they can join the wireless network with this SSID.
• **Enable Wireless Isolation:**	Enable or disable Wireless Isolation function.
• **SSID:**	Set a name (SSID) for your wireless network. The ID of the wireless network. User can access the wireless network through it only. However, if you switch to Client Mode, this field becomes the SSID of the AP you want to connect with. Default: **WDRT-1200AC_2.4G**
• **Wireless Mode:**	Set the wireless mode to which you need. Default is "**802.11b/g/n**". It is strongly recommended that you set the Band to "802.11b/g/n", and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the WDRT-1200AC. ■ **802.11b**: 802.11b mode, rate is up to 11Mbps ■ **802.11g**: 802.11g mode, rate is up to 54Mbps ■ **802.11n**: 802.11n mode, rate is up to 300Mbps(2T2R) ■ **802.11b/g/n**: 802.11b/g/n mode, rate is up to 11Mbps, 54Mbps, or 300Mbps
• **Wireless Channel:**	For an optimal wireless performance, you may select the least interferential channel. It is advisable that you select an unused channel or "Auto" to let device detect and select the best possible channel for your wireless network to operate on from the drop-down list.
• **Extension Channel:**	The extension Channel is over or under the primary Channel.
• **Bandwidth:**	Select a proper channel bandwidth to enhance wireless performance. When there are 11b/g and 11n wireless clients, please select the 802.11n mode of 20/40M frequency band.
• **Protected Mode:**	Protected mode is used when lots of 802.11b traffic is nearby.
• **802.11e/WMM QoS:**	Enable or disable QoS features.
• **Security Options:**	Select the security mode from the **Security Options** dropdown list. There are 5 options in the Security Mode dropdown list: ■ **None**, ■ **WEP** ■ **WPA-PSK[TKIP]** ■ **WPA2-PSK[AES]** ■ **WPA-PSK[TKIP] + WPA2-PSK[AES]**

5GHz Basic Setup

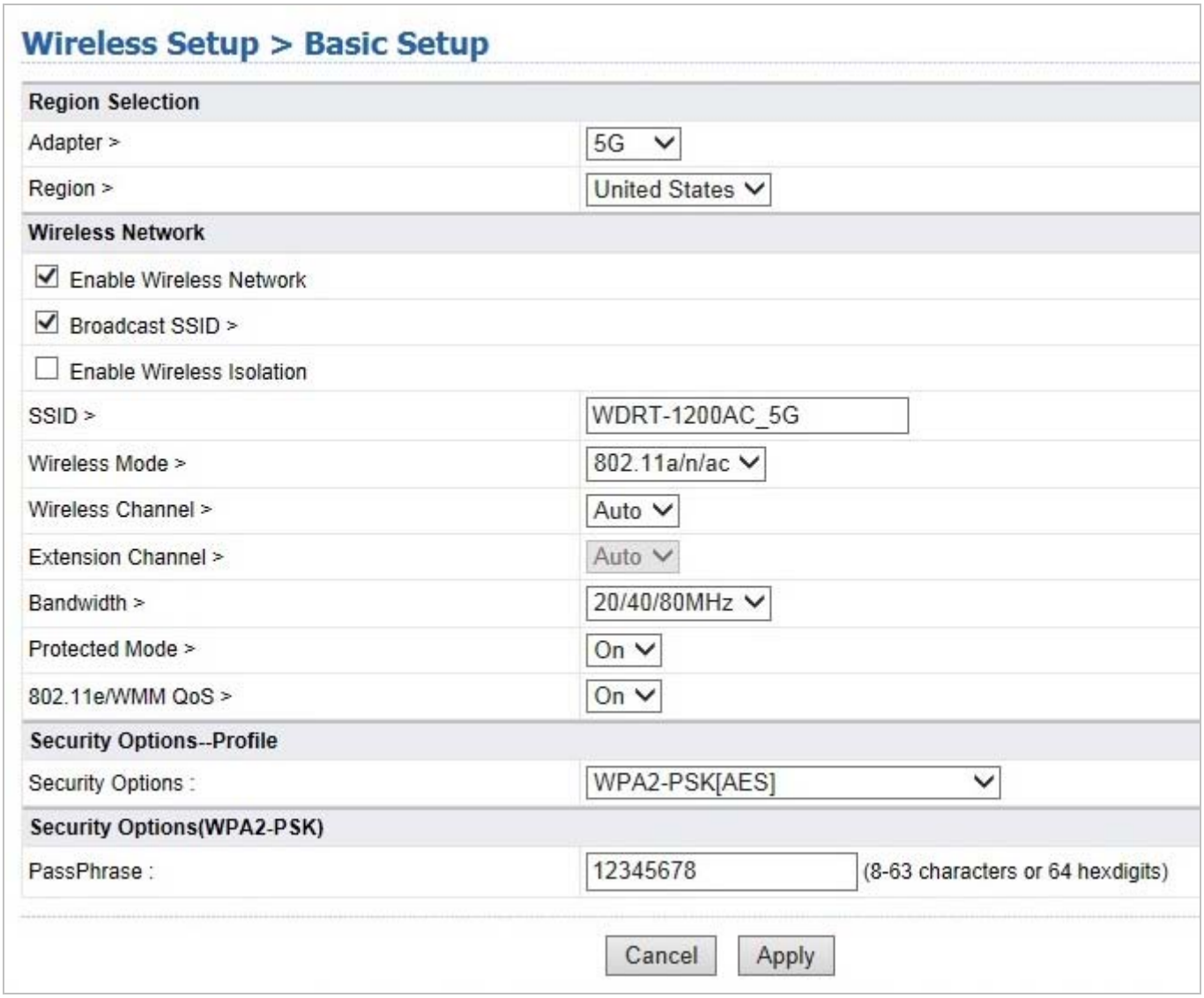


Figure 5-4-2 Basic Setup

The page includes the following fields:

Object	Description
• **Adapter:**	Choose 2.4G or 5G.
• **Region:**	You may select the country close to you.
• **Enable Wireless Network:**	You may choose to enable or disable Wireless function.
• **Enable SSID Broadcast:**	You may choose to enable or disable SSID broadcast. When it is enabled, the router SSID will be broadcast in the wireless network, so that it can be scanned by wireless clients and they can join the wireless network with this SSID.
• **Enable Wireless Isolation:**	Enable or disable Wireless Isolation function.

• **SSID:**	Set a name (SSID) for your wireless network. The ID of the wireless network. User can access the wireless network through it only. However, if you switch to Client Mode, this field becomes the SSID of the AP you want to connect with. Default: WDRT-1200AC_5G
• **Wireless Mode:**	Set the wireless mode to which you need. Default is "**802.11a/n/ac**". It is strongly recommended that you set the Band to "802.11a/n/ac", and all of 802.11a, 802.11n, and 802.11ac wireless stations can connect to the WDRT-1200AC. ■ **802.11a**: 802.11a mode, rate is up to 54Mbps ■ **802.11n**: 802.11n mode, rate is up to 300Mbps(2T2R) ■ **802.11a/n/ac**: 802.11a/n/ac mode, rate is up to 867Mbps
• **Wireless Channel:**	For an optimal wireless performance, you may select the least interferential channel. It is advisable that you select an unused channel or "Auto" to let device detect and select the best possible channel for your wireless network to operate on from the drop-down list.
• **Bandwidth:**	Select a proper channel bandwidth to enhance wireless performance. When there is 11a/n/ac, please select 20/40/80MHz frequency band.
• **Protected Mode:**	Protected mode is used when lots of 802.11b traffic is nearby.
• **802.11e/WMM QoS:**	Enable or disable QoS features.
• **Security Options:**	Select the security mode from the **Security Options** dropdown list. There are 5 options in the Security Mode dropdown list: ■ **None** ■ **WEP** ■ **WPA-PSK[TKIP]** ■ **WPA2-PSK[AES]** ■ **WPA-PSK[TKIP]+WPA2-PSK[AES]**

5.4.2 WPS Setup

WPS (**Wi-Fi Protected Setup**) is designed to ease setup of security Wi-Fi networks and subsequently network management. The WPS enables the PC with WPS function to connect to the wireless network of the AP without setting any parameters, such as SSID, security mode, or password.

Simply enter a PIN code or press the software PBC button or hardware WPS button (if any) and a secure wireless connection is established.

- **PIN**：To use this option, you must know the PIN code from the wireless client and enter it in corresponding field on your device while using the same PIN code on client side for such connection.
- **PBC:** If you press the hardware WPS button on the device, it means that PBC encryption method is successfully enabled. And an authentication will be performed between your router and the WPS/PBC-enabled wireless client device during this time; if it succeeds, the wireless client device connects to your device. Repeat steps mentioned above if you want to connect more wireless client devices to the device.

Choose **Wireless Setup** > **WPS Setup** and the following page appears.

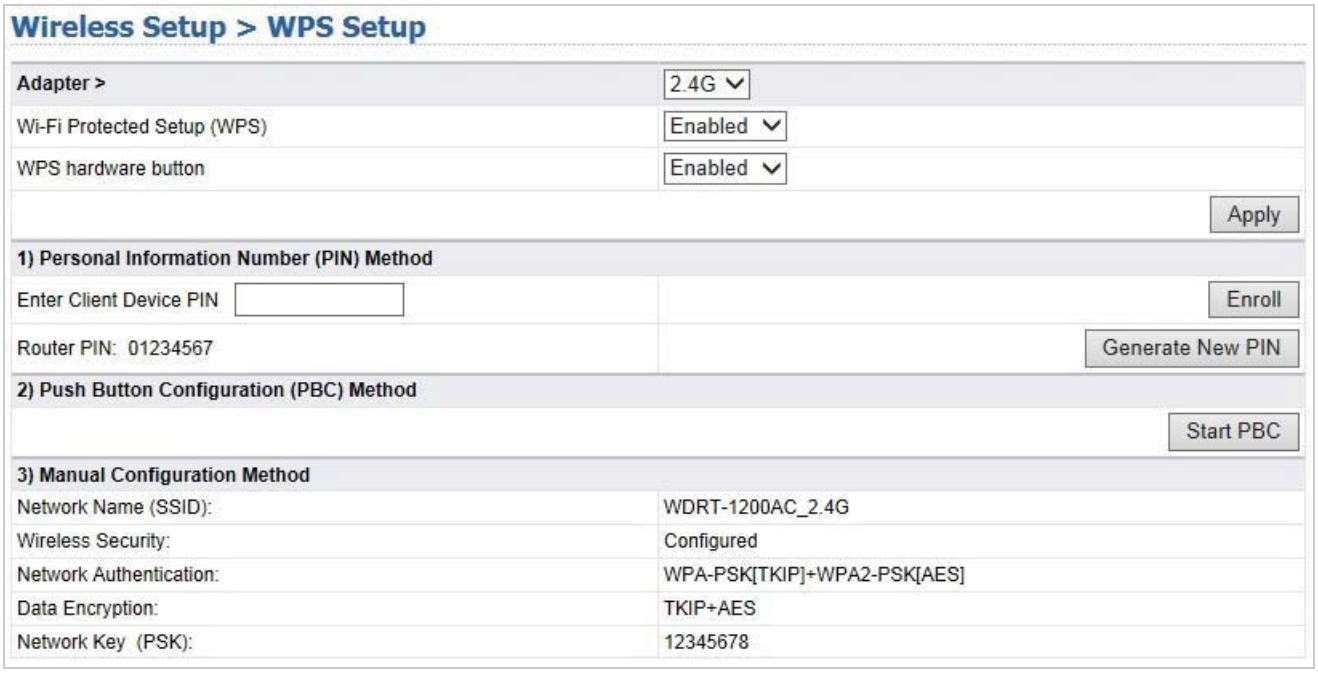


Figure 5-4-3 WPS Setup

The page includes the following fields:

Object	Description
• **Wi-Fi Protected Setup (WPS):**	Enable or disable WPS function.
• **WPS hardware button:**	Enable or disable WPS hardware button.

Note

The WPS encryption can be implemented only between your Router and another WPS-capable device.

5.4.3 Guest Network

By enabling this function, a guest may access the Internet at your home without knowing your wireless password.

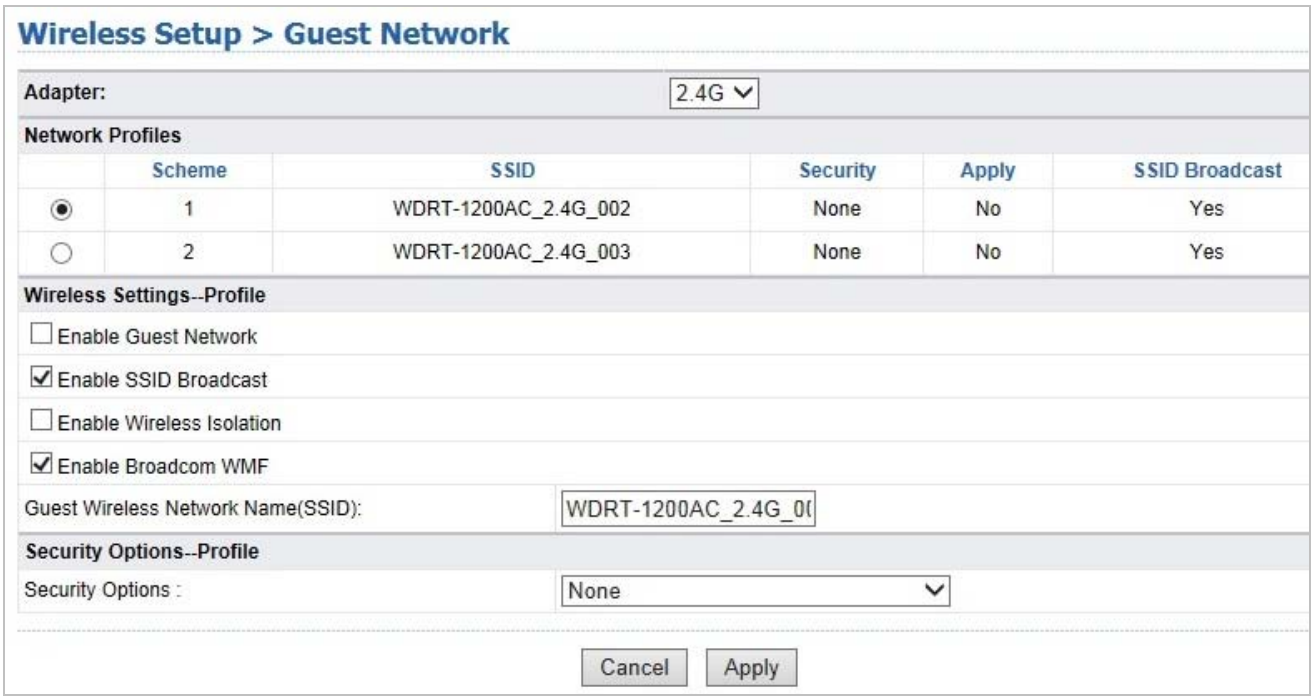


Figure 5-4-4 Guest Network

The page includes the following fields:

Object	Description
• **Enable Guest Network:**	Enable or disable Guest Network.
• **Enable SSID Broadcast:**	You may choose to enable or disable SSID broadcast. When it is enabled, the router SSID will be broadcast in the wireless network, so that it can be scanned by wireless clients and they can join the

	wireless network with this SSID.
• **Enable Wireless Isolation:**	Enable or disable Wireless Isolation function.
• **Enable Broadcom WMF:**	When this function is enabled, wireless multicast will be more fluent.
• **Guest Wireless Network Name (SSID):**	Set a name (SSID) for your wireless network. User can access the wireless network through it only. However, if you switch to Client Mode, this field becomes the SSID of the AP you want to connect with.
• **Security Options:**	Select the security mode from the **Security Options** dropdown list. There are 5 options in the Security Mode dropdown list: ■ **None** ■ **WEP** ■ **WPA-PSK[TKIP]** ■ **WPA2-PSK[AES]** ■ **WPA-PSK[TKIP]+WPA2-PSK[AES]**

5.4.4 Advanced Setup

On this page, you can configure the 2.4G and 5G wireless advanced parameters. It is recommended to use the default parameters.

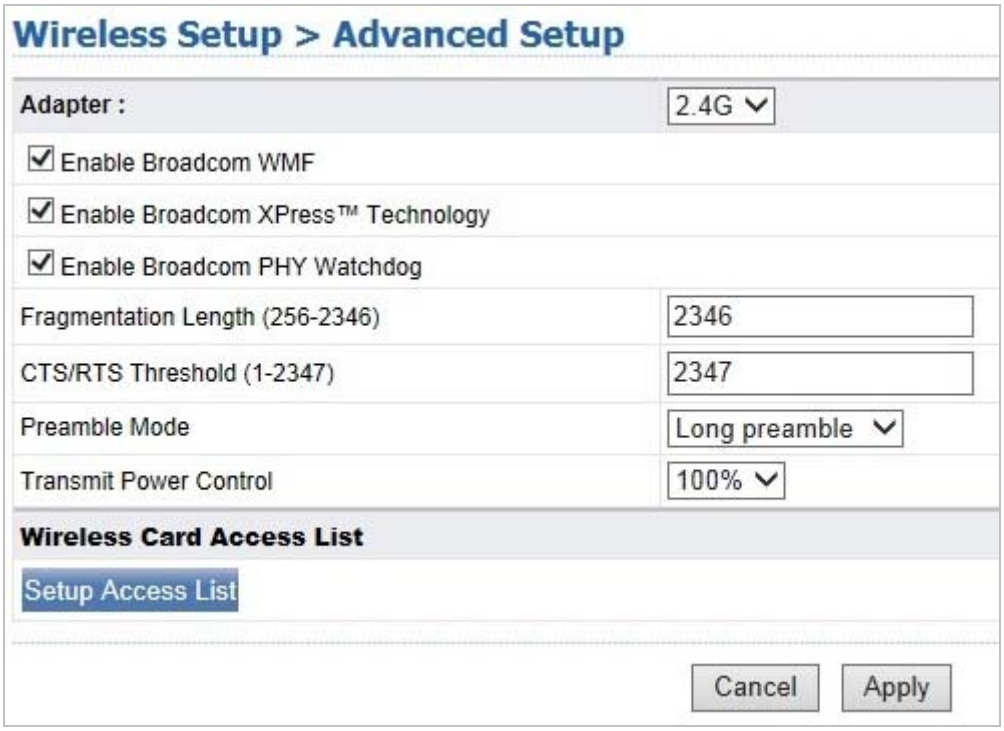


Figure 5-4-5 Advanced Setup

The page includes the following fields:

Object	Description
• **Adapter:**	Choose 2.4G or 5G.
• **Enable Broadcom WMF:**	When this function is enabled, wireless multicast will be more fluent.
• **Enable Broadcom Xpress Technology:**	Xpress Technology is a proprietary frame bursting technology that improves throughput by repackaging data so that more data can be sent in each frame.
• **Enable PHY Watchdog:**	The output power will be more precise if it is enabled.
• **Fragmentation Length (256-2346):**	A data packet that exceeds this value in length will be divided into multiple packets. The number of packets influences wireless network performance. Avoid setting this value low. Default at 2346.
• **CTS/RTS Threshold (1-2347)**	When the length of a data packet exceeds this value, the router will send an RTS frame to the destination wireless node, and the latter will reply with a CTS frame, and thus they are ready to communicate. The default value is 2347.
• **Preamble Mode:**	The preamble defines the length of CRC in wireless device communication. It is defined by the 802.11b High Rate/DSSS PHY. A short preamble adopts a 56-bit synchronization field, and is suitable for a high-traffic network. A long preamble is mainly for improving the efficiency of a wireless network on real-time applications like streaming video and VoIP telephone.
• **Transmit Power Control:**	Set the transmit power of router. The default is 100%.

Click **Setup Access List** and the following page will be displayed.

Figure 5-4-6 Access List Setup

The page includes the following fields:

Object	Description
• **Turn Access Control On:**	After enabling this function, you can limit wireless NIC from accessing the router based on their MAC addresses.
• **Add:**	Click it to add a wireless NIC.
• **Edit:**	Select a wireless NIC and click this button to edit its name or MAC address.
• **Delete:**	Select a wireless NIC and click this button to delete it.

Click **Add** and the following page will be displayed.

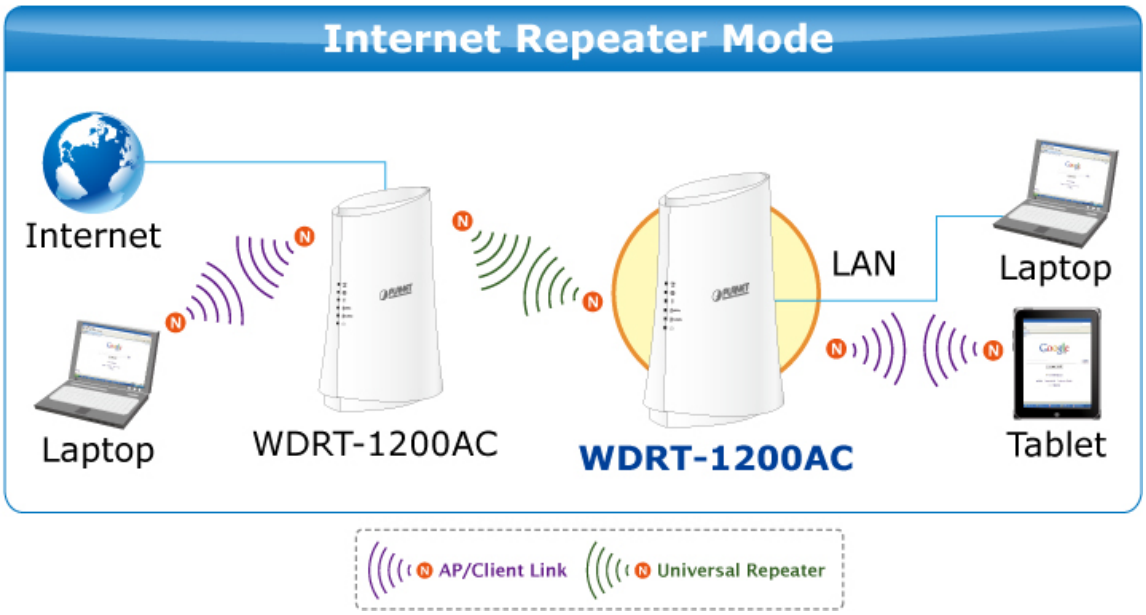
Figure 5-4-7 Wireless Card Access Setup

The page includes the following fields:

Object	Description
• **Available Wireless Cards:**	All available wireless NICs and their MAC addresses are listed here.
• **Device Name:**	You can define a name for the wireless NIC.
• **MAC Address:**	Input the physical address of a wireless NIC. A MAC address is a 12-character string.

5.4.5 Repeater Function

To do this, you must set these APs in the **same channel** and **set MAC address of other APs** which you want to communicate with in the table and then enable the WDS.



Click **Wireless Setup** → **Repeater Function** and the following page will be displayed.

Figure 5-4-8 Wireless Repeater

The page includes the following fields:

Object	Description
• **Adapter:**	Choose 2.4G or 5G.
• **Enable Wireless Repeating Function:**	While enabling this function, the wireless channel **cannot** be set to **Auto**
• **Disable Wireless Clients Association:**	When this function is enabled, clients cannot access the LAN
• **Wireless Repeater:**	In this mode, the router communicates with the central base station as a repeater.
• **Repeater IP Address:**	Input an IP address for the repeater. It should be in the same network segment as the central base station.
• **Basic Station MAC Address:**	Input the physical address of the central base station.
• **Wireless Basic Station:**	In this mode, the router communicates with a repeater as the central base station. Maximum of 4 repeaters can be added.
• **Repeater MAC Address 1~4:**	Input the physical addresses of repeaters.

5.5 Media Features

The WDRT-1200AC has one built-in USB port which can be connected to a USB printer or external USB storage devices for file sharing. Moreover, the DLNA (Digital Living Network Alliance) compliant media server feature allows multimedia contents, such as stream videos, music and photos, to be easily shared among Smart TVs, tablets, mobile phones and laptops on a home network. Thus, all clients on the network can share mass storage through the WDRT-1200AC without complicated network configuration.

5.5.1 Samba Setup

Click **Media Features** → **Samba Setup** and the following page will be displayed. You can upload and download files.

.

Figure 5-5-1 Samba Setup

The page includes the following fields:

Object	Description
• **Samba Mode:**	**Disabled:** When this option is selected, the function is disabled.
	User: When this option is selected, you need to input a password in the field.

	Share: When this option is selected, no password is required to access the storage device.

Connect a USB device to the USB port of the router. Click **Run** in the **Start Menu** of your PC and input the address of the router 192.168.1.1.

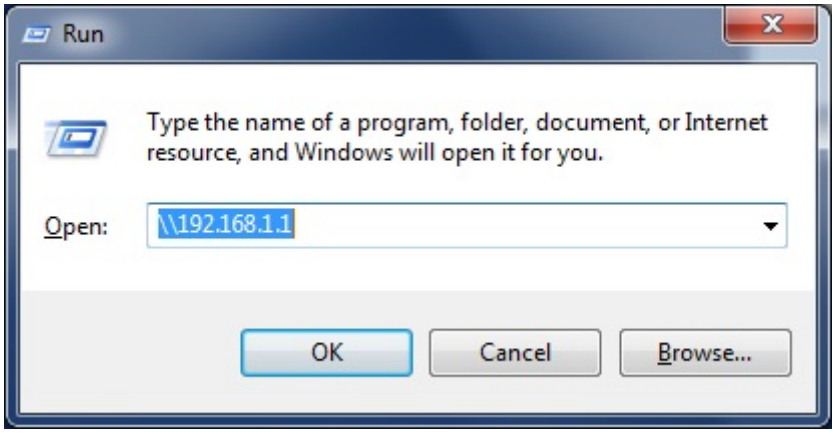


Figure 5-5-2 Run

Click **OK** to enter the following page. If you login under user mode, you need to enter the user name and password.

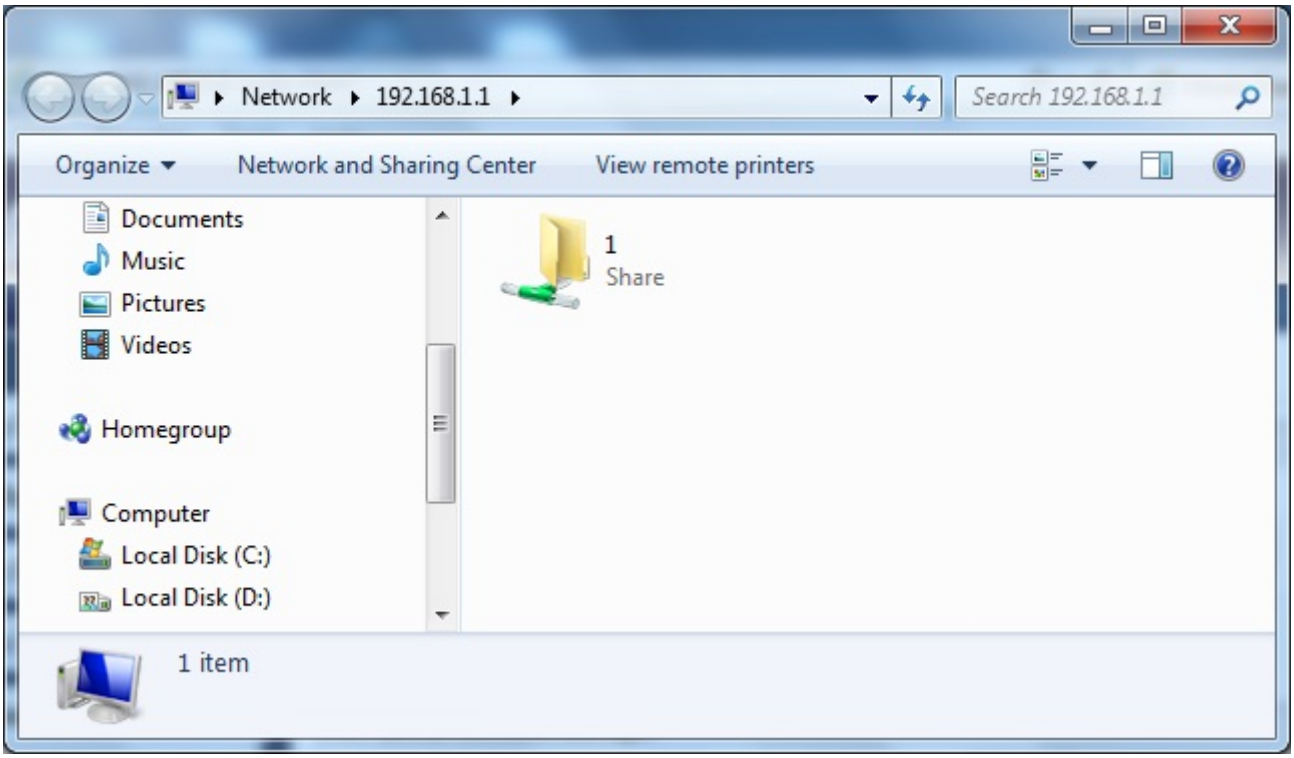


Figure 5-5-3

Find your storage device, and upload or download files.

5.5.2 FTP Setup

Click **Media Features → FTP Setup** and the following page will be displayed. You can upload and download files after plugging a USB storage device into the router.

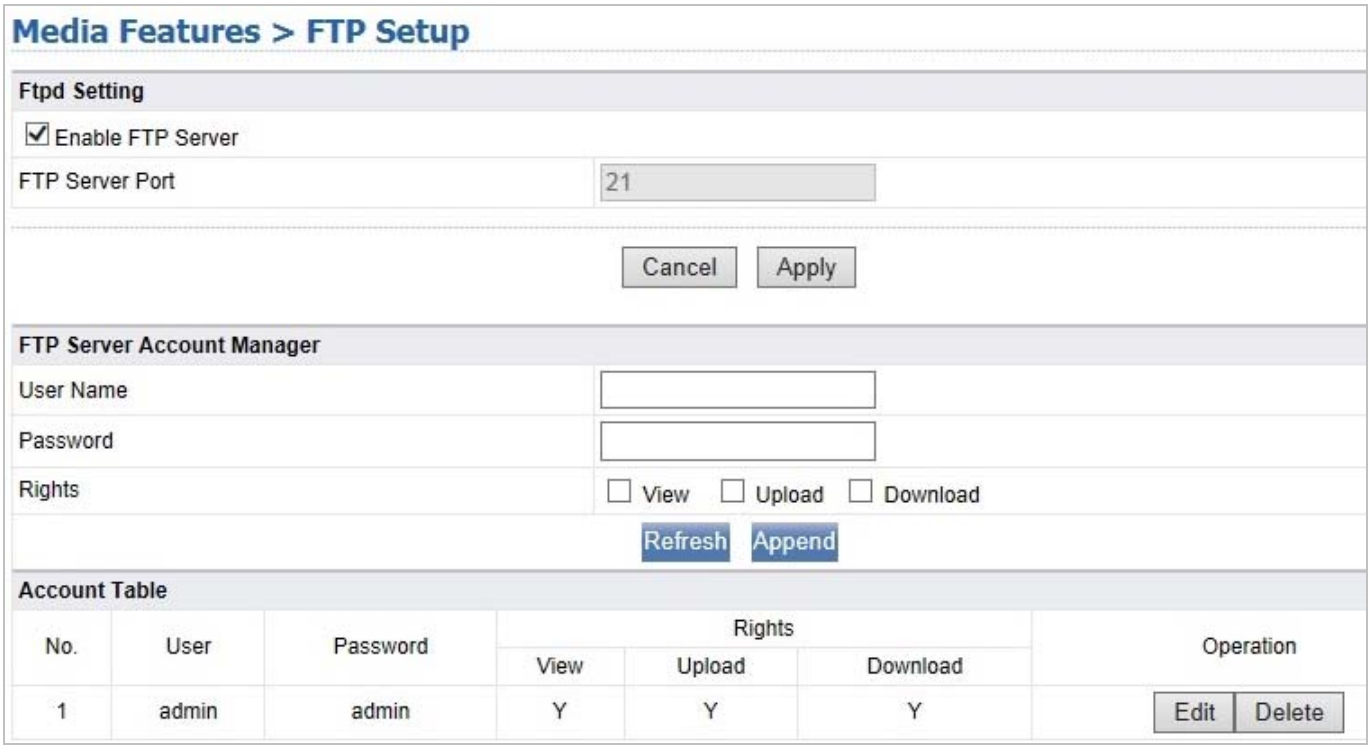


Figure 5-5-4 FTP Setup

The page includes the following fields:

Object	Description
• **Enable FTP Server:**	Enable or disable FTP service.
• **FTP Server Port:**	Set an FTP service port.
• **FTP Server Account Manager:**	You can configure a username, password and assign rights (upload, download and view) for all users.

Right-click **Computer**, and select **Open** in the prompt menu to go to the following page. Type ftp://192.168.1.1 in the address bar.

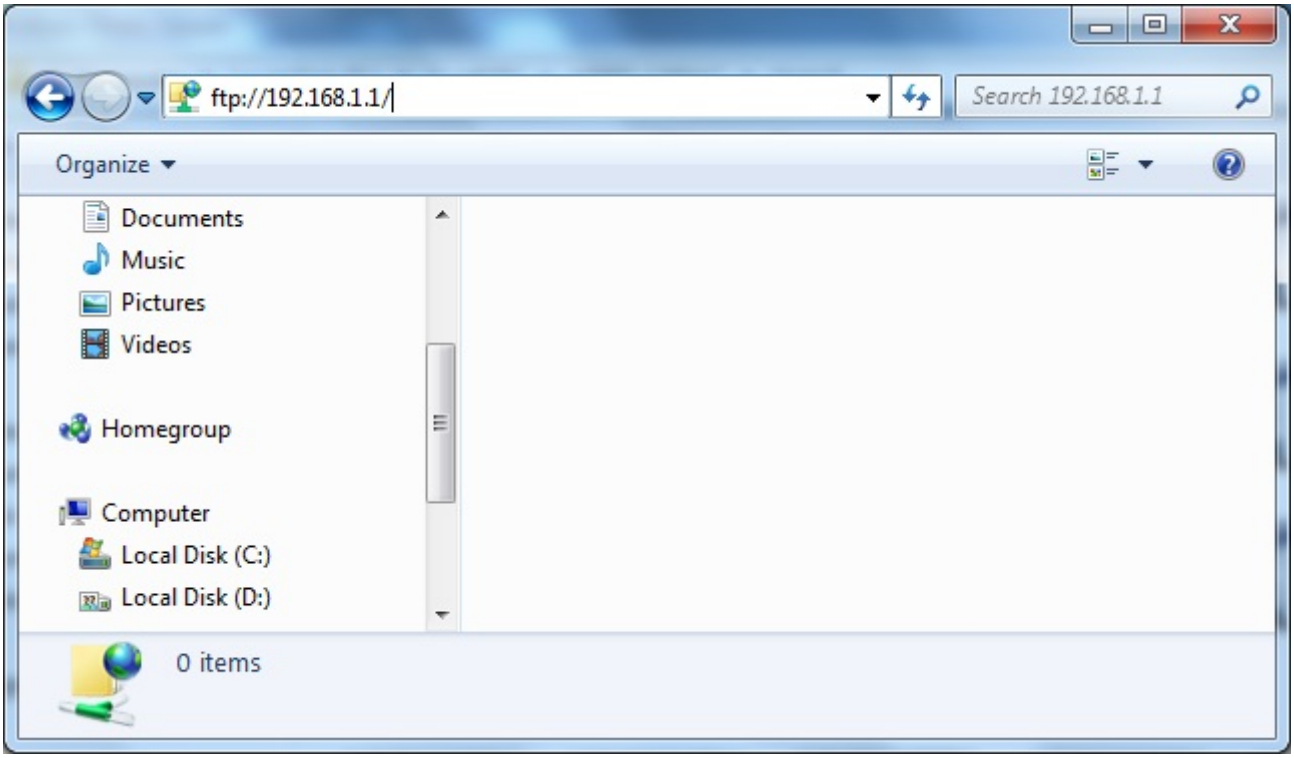


Figure 5-5-5

Enter the username and password and then Click **Log On** to access the files in the USB device.

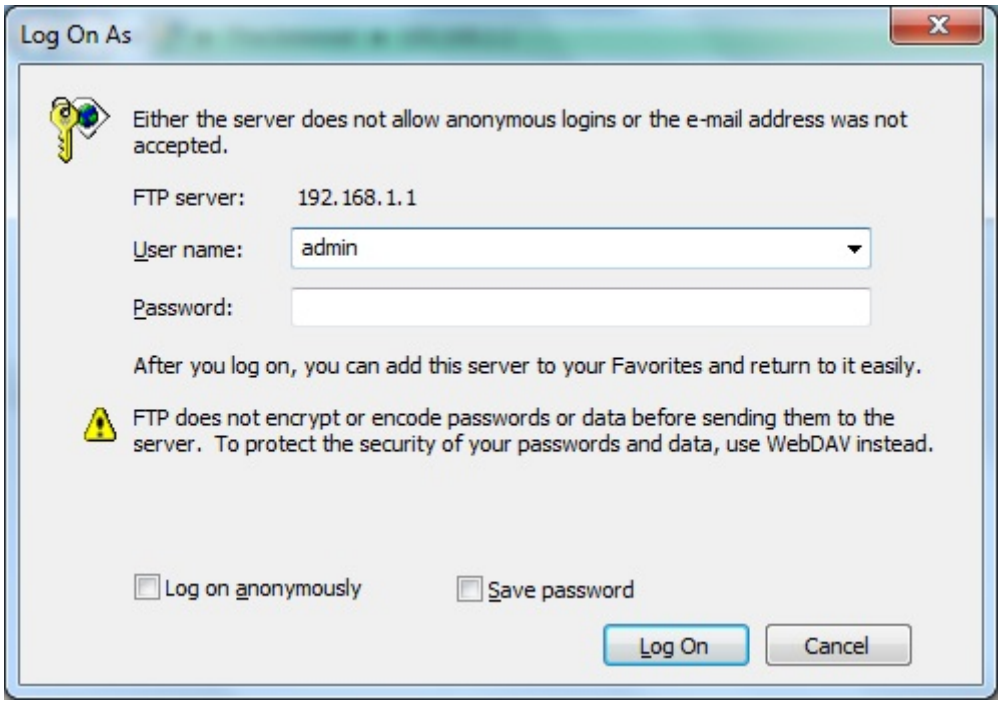


Figure 5-5-6

5.5.3 HTTP Access Storage

Click **Media Features** → **HTTP Access Storage** and the following page will be displayed. You can upload and download files after connecting a USB storage device to the router.

Figure 5-5-7 HTTP Access Storage

Plug the USB device into the USB port of the WDRT-1200AC and click on http://readyshare.routerlogin.net/shares to view and download files via your USB device.

The page includes the following fields:

Object	Description
• **Enable:**	Enable or disable HTTP Access Storage.
• **Link:**	It shows the domain name of HTTP access storage server. You can appoint one name and add it to the Favorites of your browser.

5.5.4 DLNA

Click **Media Features** → **DLNA** and the following page will be displayed. After enabling this function, media files in the USB device connected to the router can be found by a player supporting DLNA protocol.

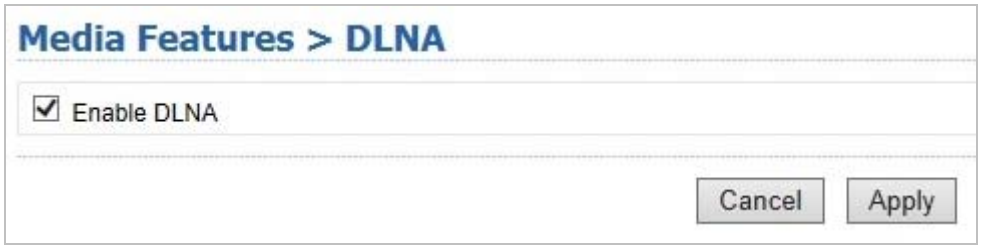


Figure 5-5-8 DLNA

5.5.5 QoS Setup

Click **Media Features** → **QoS Setup** and the following page will be displayed. After enabling this function, you can optimize network traffic according to the set QoS priority rule.

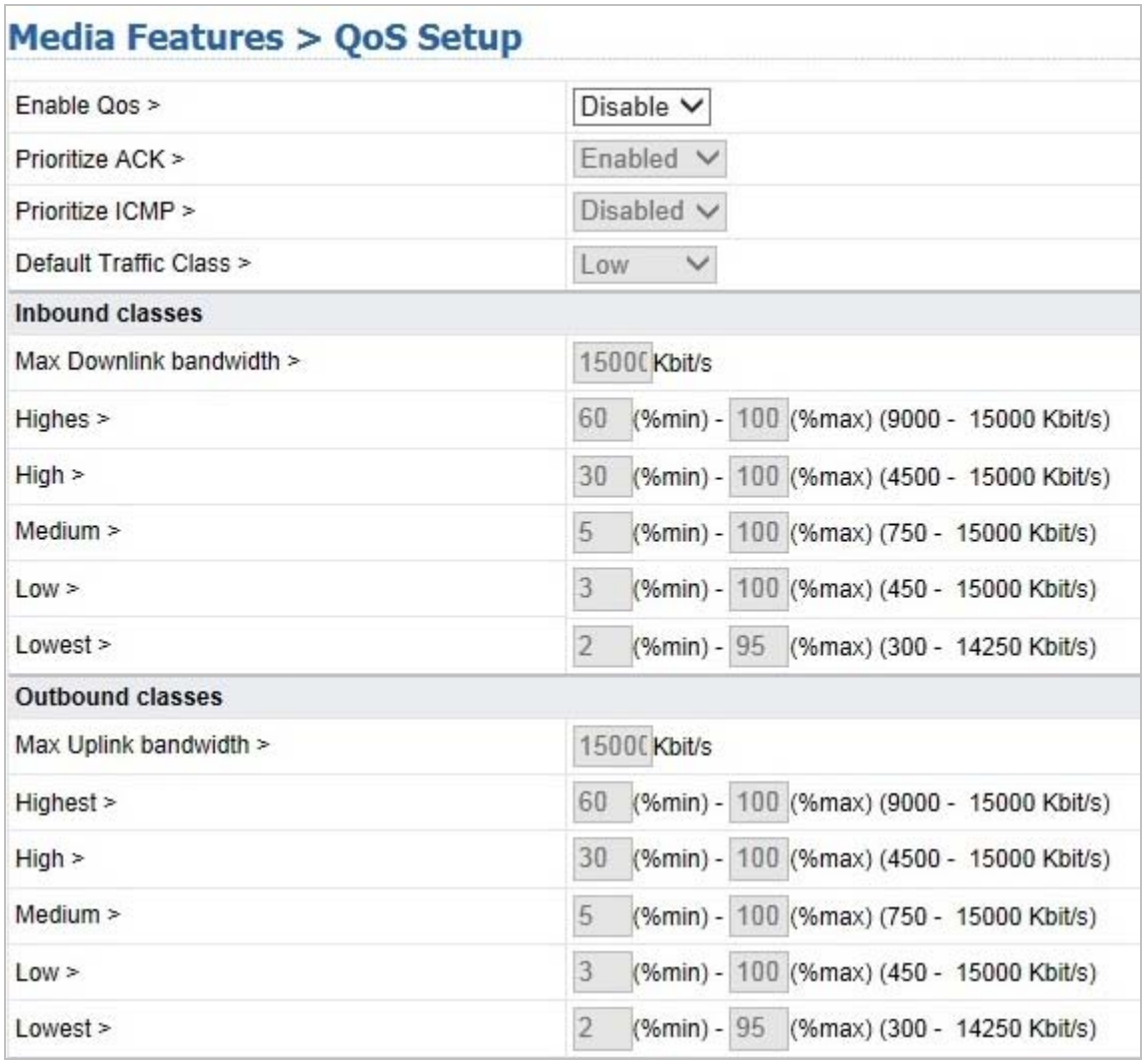


Figure 5-5-9 QoS Setup

The page includes the following fields:

Object	Description
• **Enable:**	Enable or disable QoS function.
• **Prioritize ACK:**	Accelerate TCP ACK message. You are suggested to enable it.
• **Prioritize ICMP:**	Accelerate ICMP message. You are suggested to enable it.
• **Default Traffic Class:**	Choose a default queue for matching QoS rules.
• **Max Downlink / Uplink Bandwidth:**	Set the maximum downlink/ uplink bandwidth permitted by the QoS priority rule.
• **Set up QoS rule:**	Click this button to set up a QoS rule.

Click **Setup QoS Rule** and the following page will be displayed. You can edit, add or delete a priority rule.

Figure 5-5-10 QoS List

The page includes the following fields:

Object	Description
• **Edit:**	Select a rule from the QoS priority rule list, and click this button to edit it.
• **Add Priority Rule:**	Click this button to open the page **QoS Priority Rules** to customize your priority strategy.
• **Delete:**	Click this button to delete a rule from the QoS priority rule list.

Click **Add Priority Rule** and the following page will be displayed.

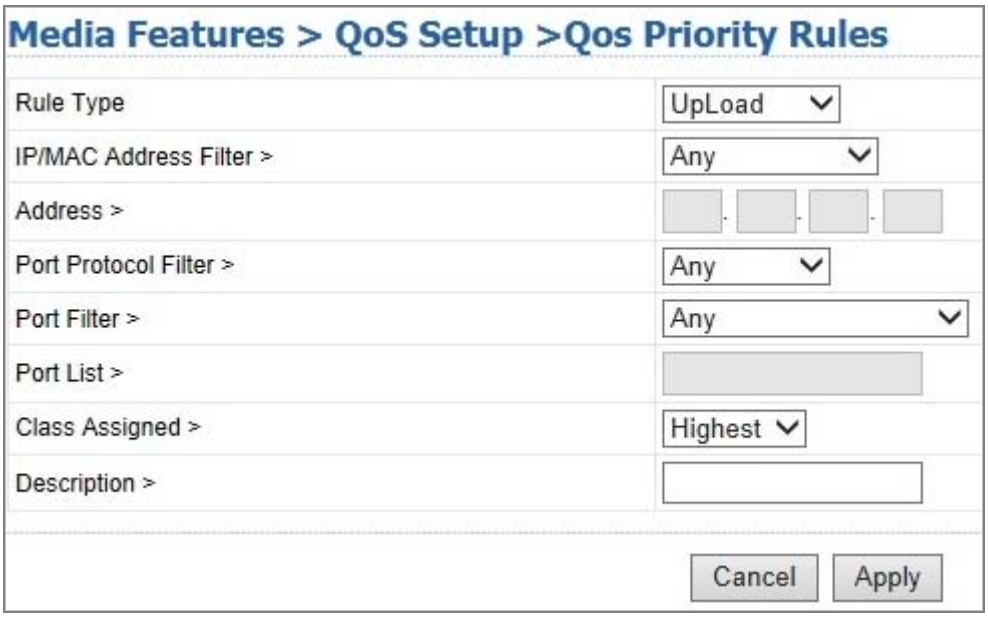


Figure 5-5-11 QoS Priority Rules

The page includes the following fields:

Object	Description
• **Rule Type:**	Select **Upload** or **Download**.
• **IP/MAC Address Filter:**	You may choose **Any**, **Destination IP**, **Source IP** or **Source MAC**.

• **Address:**	When you choose the address filter to be **Any**, you may leave this field blank.
• **Port Protocol Filter:**	Choose a protocol applied at the port. You may choose **TCP/UDP**, **TCP** or **UDP**.
• **Port Filter:**	Choose a type of action port. You may choose **Any**, **Destination Port**, **Source Port**, or **Source or Destination**.
• **Class Assigned:**	Choose a priority. You may choose **Highest**, **High**, **Medium**, **Low** or **Lowest**.
• **Description:**	Enter the description of the QoS rule.

5.6 Advanced Setup

5.6.1 UPnP Setup

With the UPnP (Universal Plug and Play) protocol, a host on the LAN side may request the router of port conversion, so that a host outside the LAN may access the resources on the hosts in the LAN.

Click **Advanced Setup → UPnP Setup** and the following page will be displayed.

Figure 5-6-1 UPnP Setup

The page includes the following fields:

Object	Description
• **Turn UPnP On:**	Enable or Disable UPnP function. UPnP can be enabled or disabled for automatic device configuration. The default setting for UPnP is enabled. If disabled, the router will not allow any device to automatically control the resources, such as port forwarding (mapping), of the router.
• **Advertisement Period(in minutes):**	It is the period the router broadcasts its UPnP information. The Advertisement Period is how often the router will advertise (broadcast) its UPnP information. This value can range from 1 to 1440 minutes. The default period is for 30 minutes. Shorter durations will ensure that control points have current device status at the expense of additional network traffic. Longer durations may compromise the freshness of the device status but can significantly reduce network traffic.
• **Advertisement Time To Live(in hops):**	It is the hop count of an UPnP data packet sent. The time to live for the advertisement is measured in hops (steps) for each UPnP packet sent. A hop is the number of steps allowed to propagate for each UPnP advertisement before it disappears. The number of hops can range from 1 to 255.

	The default value for the advertisement time to live is 4 hops, which should be fine for most home networks. If you notice that some devices are not being updated or reached correctly, then it may be necessary to increase this value a little.
• **UPnP Portmap Table:**	The table shows the IP addresses of all current UPnP devices accessing the router, and the opened ports (internal and external) of such devices. The UPnP Port Mapping Table displays the IP address of each UPnP device that is currently accessing the router and which ports (Internal and External) that device has opened. The UPnP Port Mapping Table also displays what type of port is opened and if that port is still active for each IP address.

Only applications supporting the UPnP protocol may use this function.
Your operating systems and application software should support UPnP, such as Windows XP, Windows Vista and Windows 7.

5.6.2 Virtual Servers

Click **Advanced Setup** → **Virtual Servers** and the following page will be displayed.

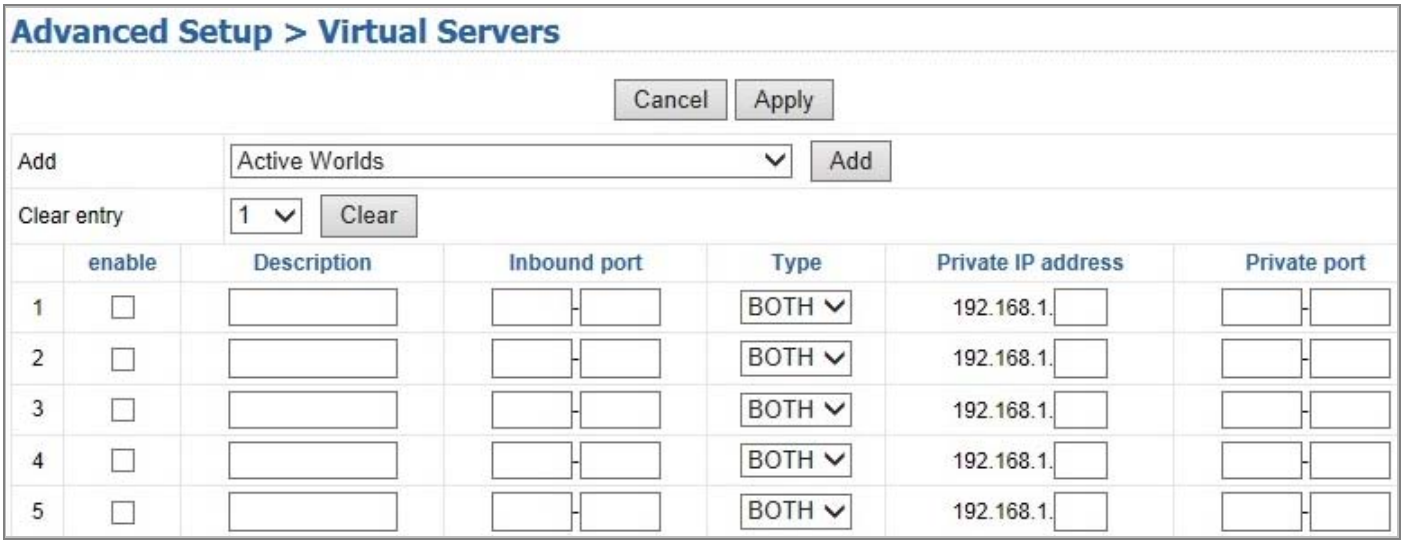


Figure 5-6-2 Virtual Servers

To add a virtual server, select a service from the **Add** dropdown list, click **Add** to add it to the list below, and input private IP addresses manually.

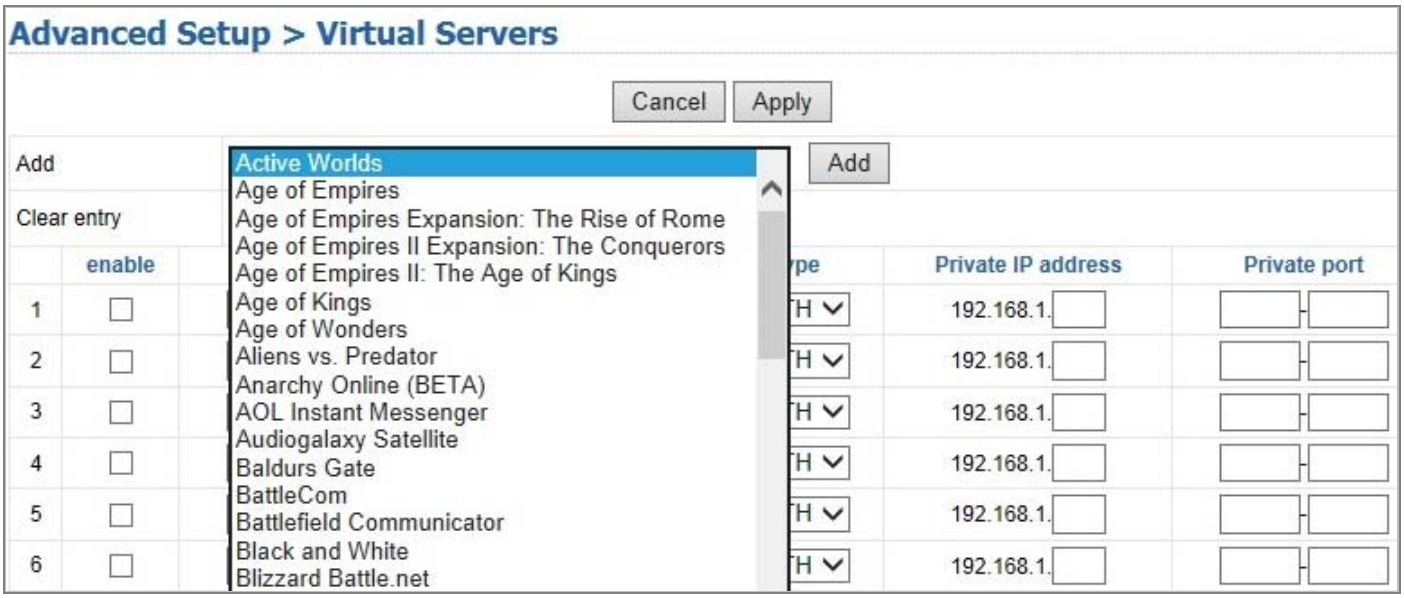


Figure 5-6-3

To delete an entry, you may select an entry from the **Clear entry** dropdown list. After setting, click **Apply**.

5.6.3 DDNS

The Wireless Router 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

Click **Advanced Setup → DDNS** and the following page will be displayed.

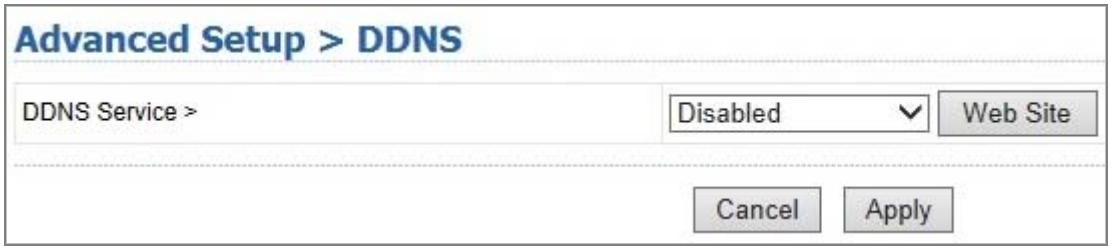


Figure 5-6-4 DDNS

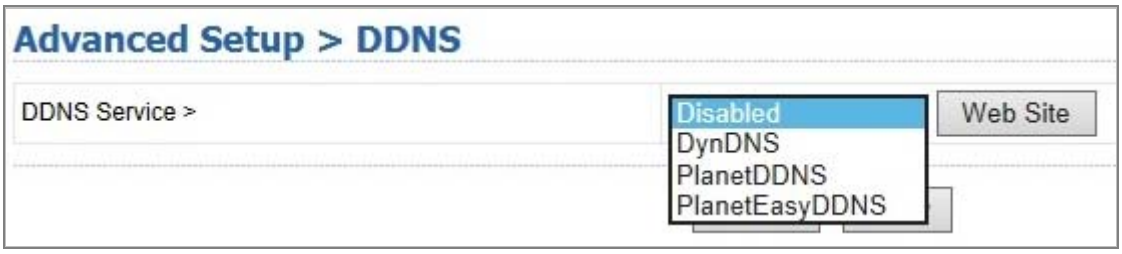


Figure 5-6-5 DDNS

On this page, you are allowed to modify the DDNS settings.

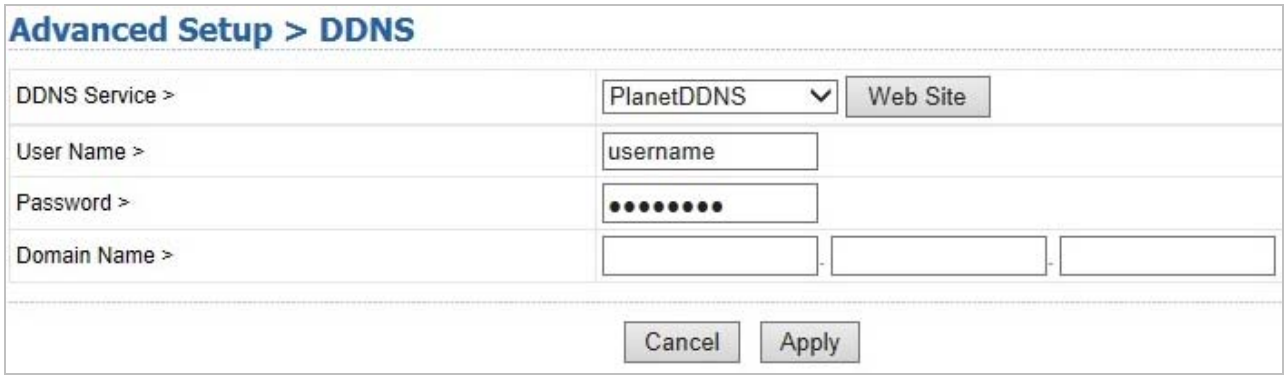


Figure 5-6-6 DDNS

The page includes the following fields:

Object	Description
• **DDNS Service :**	Select a server provider or disable the existing server.
• **User Name:**	Enter the DDNS user name of the DDNS account.

• **Password:**	Enter the DDNS password of the DDNS account.
• **Domain Name:**	Enter the host name or domain name provided by DDNS provider.

5.6.4 Static Routes

Static Route reduces route selection problems and corresponding data overload and accelerates data packet forwarding.

Click **Advanced Setup** → **Static Routes** and the following page will be displayed. On this page, you can add, edit or delete static route rules, and view the current static routing table of the router.

Figure 5-6-7 Static Routes

To add a routing rule, click **Add** and the following page will display.

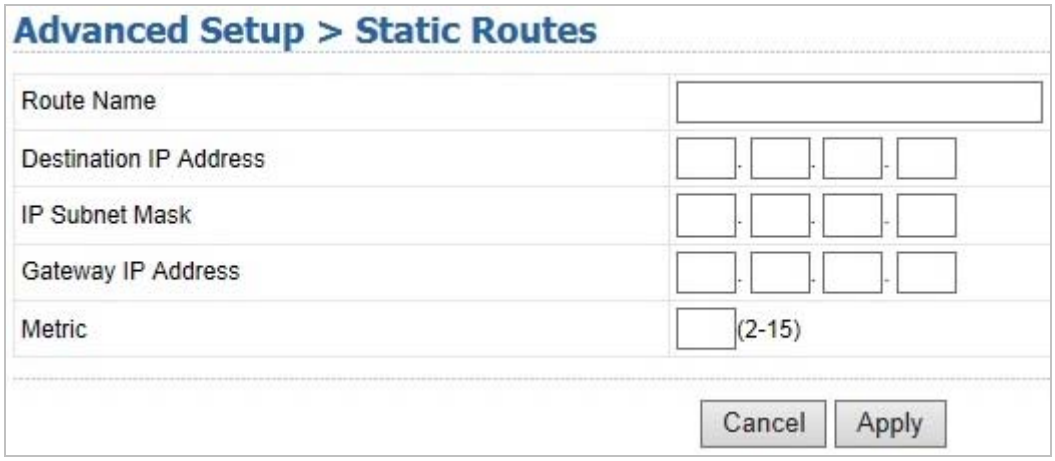


Figure 5-6-8

The page includes the following fields:

Object	Description
• **Route Name :**	Enter a name for the current static route.
• **Destination IP Address:**	Enter the destination IP address or destination network.
• **IP Subnet Mask:**	Enter the subnet mask of the destination IP address.
• **Gateway IP Address:**	Enter an IP address of the router or host to which data packets are sent.
• **Metric:**	It is the number of other routers on the user network. Set a value between 2 and 15. If the router is connected directly, set the value to 2

5.6.5 Port Triggering

Some applications need multiple connections, for example, WAN, online games, video conferences and VoIP. With firewall, such applications cannot work under a simple NAT router, while a special application enables them to do so. When an application program initiates connection to a trigger port, all corresponding ports will be opened.

Click **Advanced Setup → Port Triggering** and the following page will be displayed.

Figure 5-6-9 Port Triggering

The page includes the following fields:

Object	Description
• **Enable Port Triggering:**	Enable or disable Port Triggering function.
• **Port Triggering Timeout(in minutes):**	Input a value between 1 and 9999. This value controls the inactivity timer of inbound port.
• **Add Service:**	Click this button to add a new rule.
• **Edit Service:**	Click this button to edit a selected rule.
• **Delete Service:**	Click this button to delete a selected rule.

Click **Add Service** and the following page will be displayed.

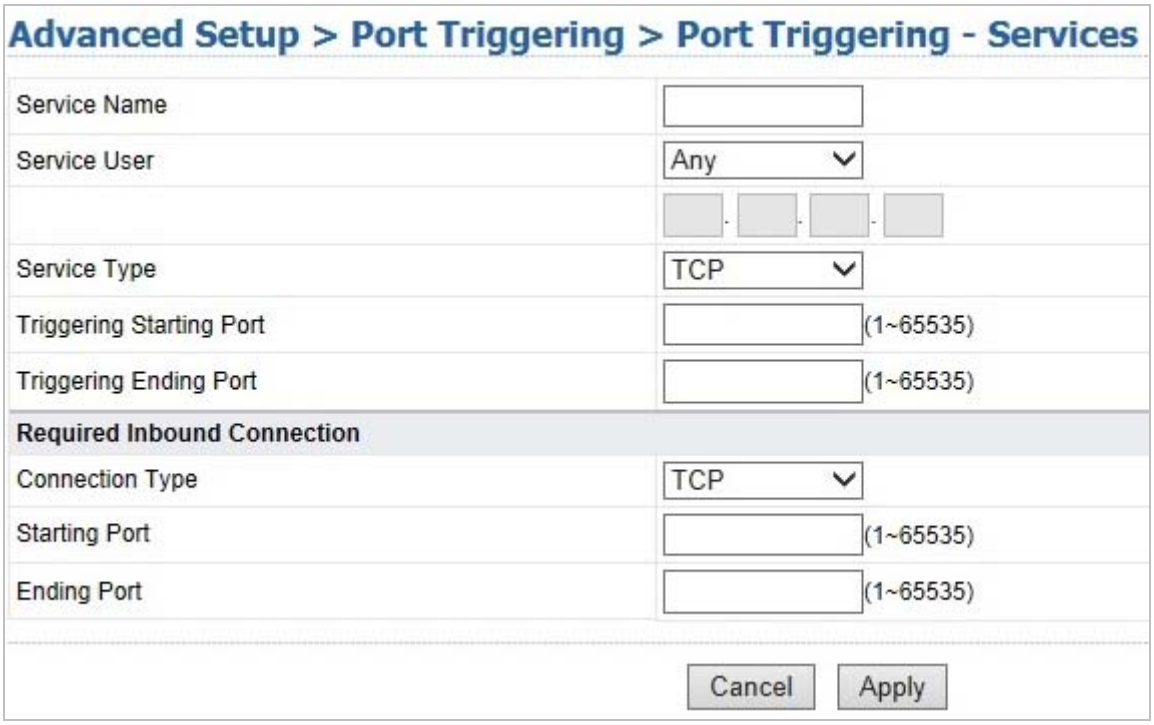


Figure 5-6-10

The page includes the following fields:

Object	Description
• **Service Name:**	Enable or disable Port Triggering function.
• **Service User:**	You may select **Any** or **Single Address**. **Any**: All users in the network are allowed to use the service. **Single Address**: Input the NIC IP address of the PC to limit the service to this NIC.
• **Service Type:**	Choose a protocol used on the triggering port. You may choose **TCP/UDP**, **TCP** or **UDP**.
• **Triggering Starting Port:**	Set a port on which connection is initiated.
• **Triggering Ending Port:**	Set an ending trigger port.
• **Connection Type:**	Choose a trigger protocol from **TCP&UDP**, **TCP** and **UDP**.
• **Starting Port:**	When an open port is opened after connection is initiated at the trigger port, connection can be initiated at the open port.
• **Ending Port:**	Set an ending triggered port.

5.7 Security Options

5.7.1 Parental Control

The router provides convenient parental controls to control children's online behavior, so that the children can only access certain sites, and at the same time limit Internet time

Click **Security Options** → **Parental Controls** and the following page will be displayed.

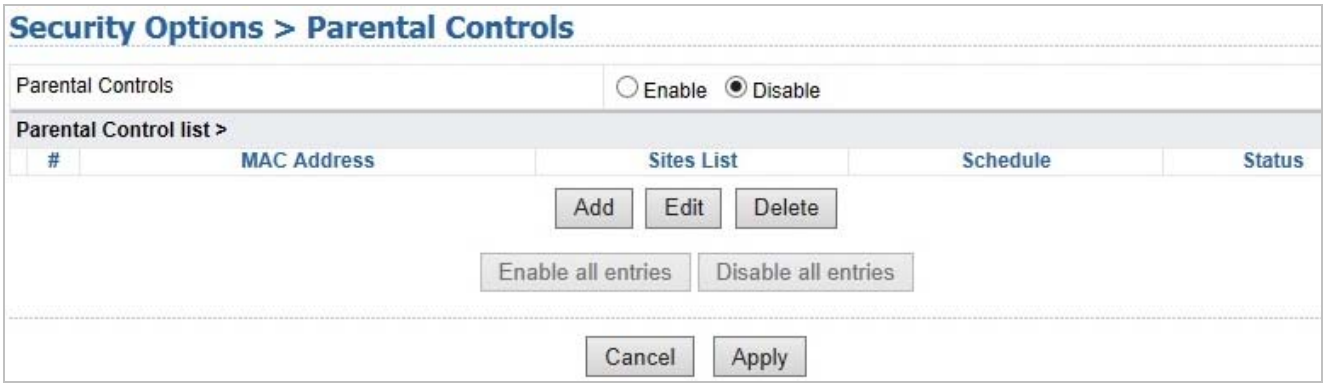


Figure 5-7-1 Parental Controls

Choose **Enable** to run parental controls. Click **Add** to display the following page.

Figure 5-7-2

The page includes the following fields:

Object	Description
• **The child's PC's MAC address:**	Set the wireless mode to which you need.
• **Description of the refused sites:**	Enter a description name for convenient future management.
• **Domain Name:**	Enter domain names for children not to access.
• **Effect at which time:**	Set the effective time for the restrictions set above.

5.7.2 WAN Setup

Using this page, you can set up a Default DMZ Server and allow the router to respond to a `ping` from the Internet. Both of these options have security issues, so use them carefully.

Click **Security Options → WAN Setup** and the following page will be displayed.

On this page, you can set a default DMZ server, and enable the router to respond to Ping commands from the Internet.

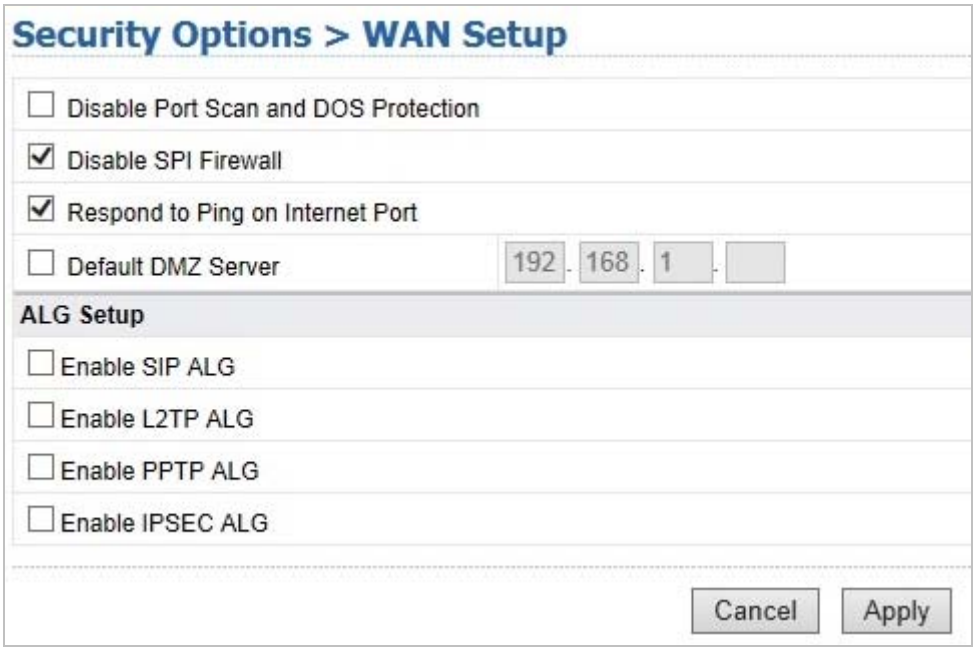


Figure 5-7-3 WAN Setup

The page includes the following fields:

Object	Description
• **Disable Port Scan and DOS**	When this function is enabled, your LAN will be protected from DOS attack. Please keep this function enabled.

Protection:	
• **Disable SPI Firewall:**	Enable or disable SPI Firewall.
• **Domain Name:**	Enter domain names for children not to access.
• **Respond to Ping on Internet Port:**	Ping commands can be used as a diagnosis tool, you can disable it.
• **Default DMZ Server:**	Enter the IP address of a PC or server to be the DMZ server.
• **Enable SIP ALG:**	Some SIP applications have specific schemes for firewall penetration, which may conflict with the SIP ALG. In most cases, keep SIP ALG enabled.
• **Enable L2TP ALG:**	Enable or disable L2TP ALG to pass through L2TP communication data.
• **Enable PPTP ALG:**	Enable or disable PPTP ALG to pass through PPTP communication data.
• **Enable IPSEC ALG:**	Enable or disable IPSEC ALG to pass through IPSEC communication data.

5.7.3 Block Sites

Click **Security Options** → **Block Sites** and the following page will be displayed.

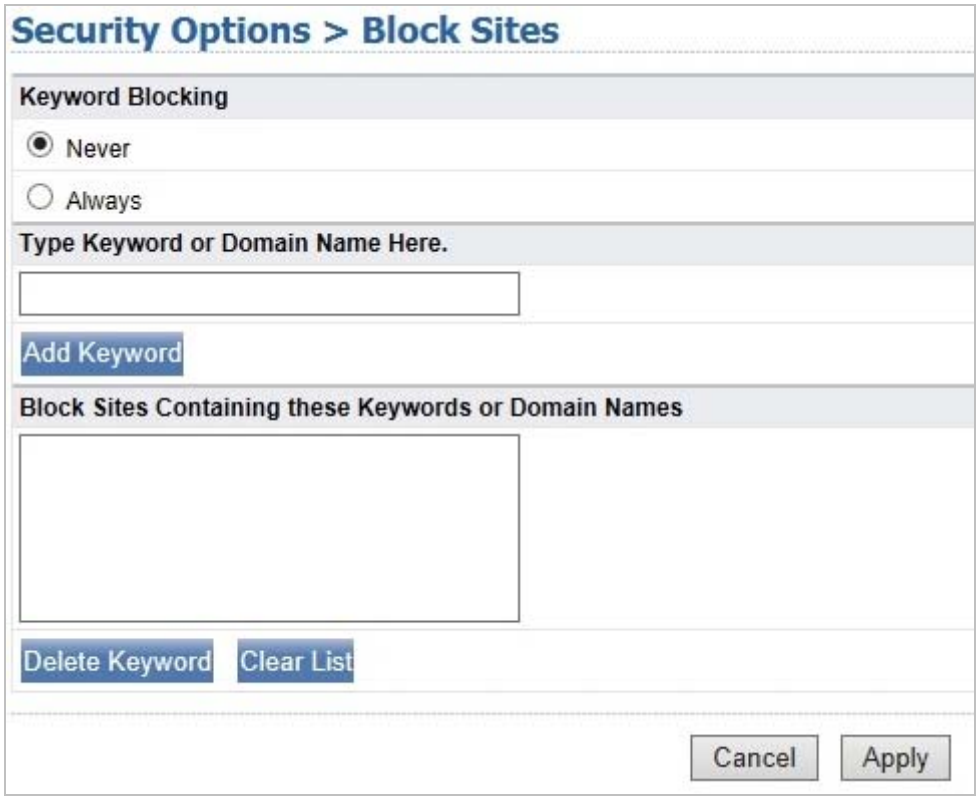


Figure 5-7-4 Block Sites

On this page, you can add or delete rules of keyword or domain name blocking to restrict LAN users from visiting some websites.

The page includes the following fields:

Object	Description
• **Keyword Blocking:**	Choose **Never** to disable site blocking, or choose **Always** to enable site blocking.
• **Type Keyword or Domain Name Here:**	Input keyword or domain name you want to block.
• **Add Keyword:**	Press this button to add the input keywords or domain names to the list.
• **Block Sites Containing these Keywords or Domain Names**	You may input 32 items at most.
• **Delete Keyword:**	Select an item from the blocking list, and click this button to delete it.
• **Clear List:**	Press this button to clear all the items in the above list.

5.7.4 MAC Address Filtering

Click **Security Options** → **MAC Address Filtering** and the following page will be displayed.

Figure 5-7-5 MAC Address Filtering

To enable this function, you need to input the MAC addresses of all the users in your network, so that they can access the information in the network.

5.8 Utilities

This section focuses on how to maintain Router, including Reboot, Backup/Restore, Restore to Factory Default Setting, Firmware Upgrade, System log and Password Change,

5.8.1 Router Reboot

Sometimes it may be necessary to Restart or Reboot the Router if it begins working improperly. Restarting or Rebooting the Router will not delete any of your configuration settings. Click the "**Restart Router**" button below to restart the Router.

Click **Utilities** → **Router Reboot** and the following page will be displayed.

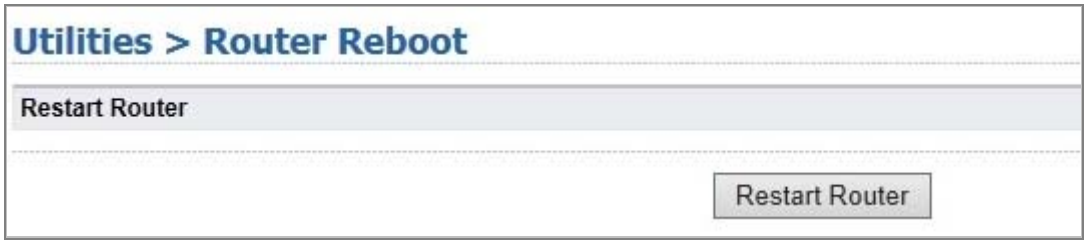


Figure 5-8-1 Router Reboot

Click **Restart Router** to reboot the router.

5.8.2 Backup Setup

This screen allows you to back up, restore, and erase the router's current settings. Once you have the router working correctly, you should back up the information to have it available if something goes wrong. When you back up the settings, they are saved as a file on your computer. You can restore the router's settings from this file.

Click **Utilities** → **Backup Setup** and the following page will be displayed.

Figure 5-8-2 Backup Setup

To restore the router to the factory defaults, click **Restore Defaults**. This is identical with pressing down the Reset button on the back panel and holding for 3 seconds. To export the current settings of router to the local PC for future use, click **Save**, select an address and save the settings.

To load a file to the router, click **Browse** to choose a configuration file on your PC and click **Restore**.

Note

When you load new configuration, the original configuration will be lost. Please back up the current configuration before loading a new one. In this way, if the new configuration file has an error, you can load the backup file.

Note

DO NOT shut down your router when loading a configuration file. Otherwise, the router may be damaged.

5.8.3 Firmware Update

You install new versions of the router's software using this page. From time to time, we may release new versions of the Router's firmware. Firmware updates contain improvements and fixes to problems that may have existed. Click the link below to see if there is a new firmware update available for this Router.

Click **Utilities** → **Firmware Update** and the following page will be displayed.

Figure 5-8-3 Firmware Update

On this page, you can update the router software. To update the software, click **Browse** to choose a software file, and then click **Update**.

DO NOT turn off the power or press the Reset button when updating the firmware. Otherwise, the router may be damaged.

5.8.4 System Log

Click **Utilities** → **System Log** and the following page will be displayed.

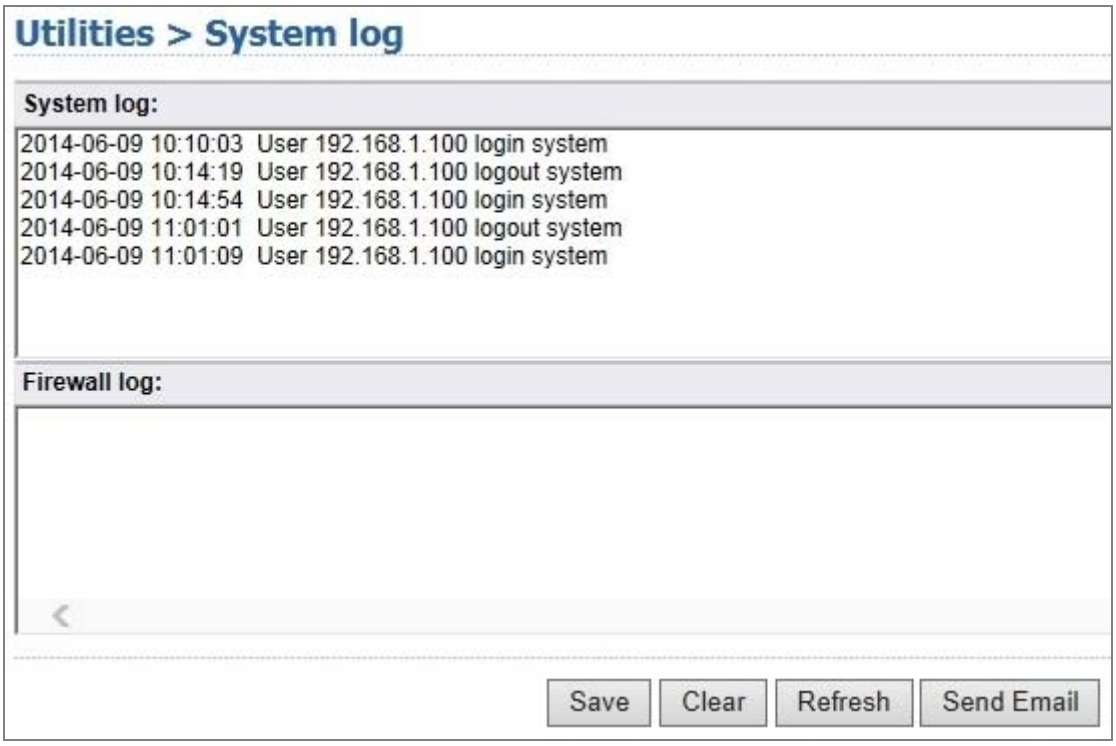


Figure 5-8-4 System Log

On this page, you can view the system log. Click **Save** to save the system log to the local device. Click **Clear** to clear the system log. Click **Refresh** to refresh the system log.

5.8.5 E-mail

Alerts can be sent when someone on your LAN (Local Area Network) tries to visit a blocked site. Logs are lists of all the URLs that have been visited. If you'd like to have alerts and logs sent to you by e-mail, fill out the settings on this form. You can always check the logs manually by viewing the Logs page. If you don't want to receive e-mails, leave the boxes blank.

Click **Utilities** → **E-mail** and the following page will be displayed.

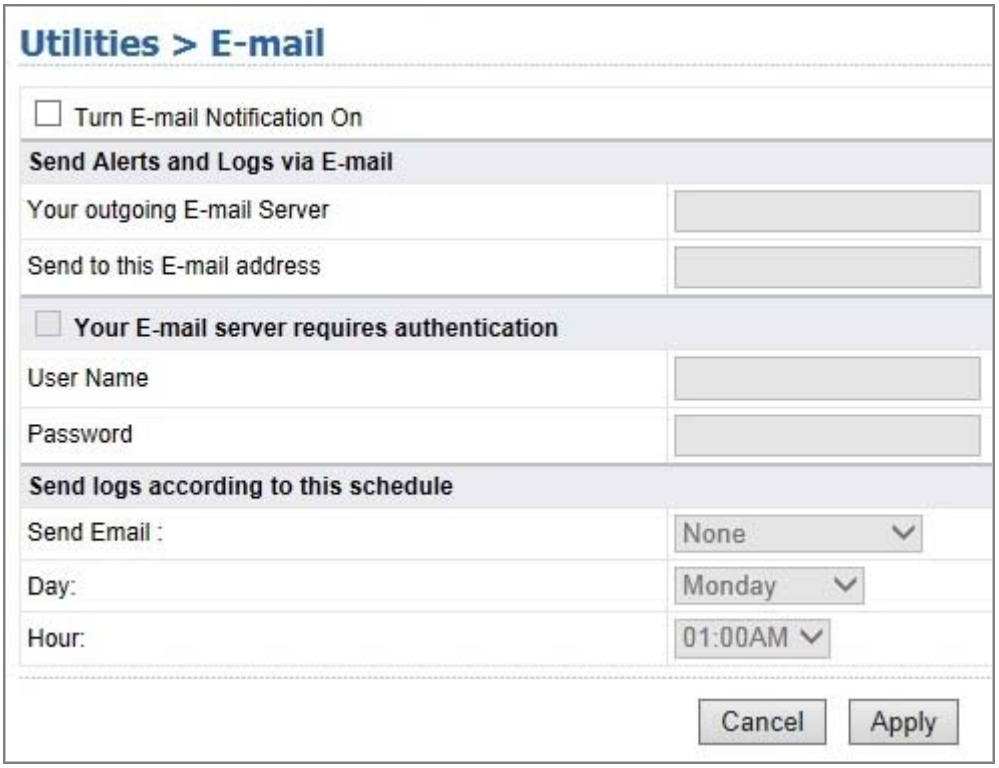


Figure 5-8-5 E-mail

The page includes the following fields:

Object	Description
• **Turn E-mail Notification On:**	Enable or disable this function.
• **Your outgoing E-mail Server:**	Define a server to send emails.
• **Send to this E-mail address:**	Define an E-mail address to which log messages are sent.
• **User Name:**	Enter your mailbox username.
• **Password:**	Enter your mailbox password.
• **Send logs according to this schedule:**	Set a time to send logs to the email address.

■ **To receive alerts and logs by e-mail:**

Step 1. Select the **Turn E-mail Notification On** check box.

Step 2. In the **Outgoing Mail Server** box, type the outgoing SMTP mail server of your ISP (for example, smtp.myISP.com).

If you leave this box blank, no alerts or logs will be sent to you.

Tip: You use this information when you set up your e-mail program. If you can't remember it, check the settings in your e-mail program.

Step 3. In the **Send To This E-mail Address** box, type an e-mail address to have alerts and logs sent to you or someone else.

Use a full e-mail address (for example, Jackie@myISP.com).

Step 4. In the **Your E-mail Address box**, type an e-mail address you want to use to send the alerts and logs.

Use a full e-mail address (for example, Jackie@myISP.com).

Step 5. If you want an e-mail alert sent whenever someone on your network tries to connect to a blocked URL, select the **Send Alert Immediately** check box.

Step 6. If you don't want logs sent, select **None** from the first list in the **Send Logs According To This Schedule** area.

Or

If you want logs sent, select one of the other options.

If you selected **Weekly**, then select which day of the week.

If you selected **Weekly** or **Daily**, select the time of day for the e-mail to be sent.

Step 7. Click Apply to have your changes take effect.

5.8.6 System Settings

Click **Utilities** → **System Settings** and the following page will be displayed.

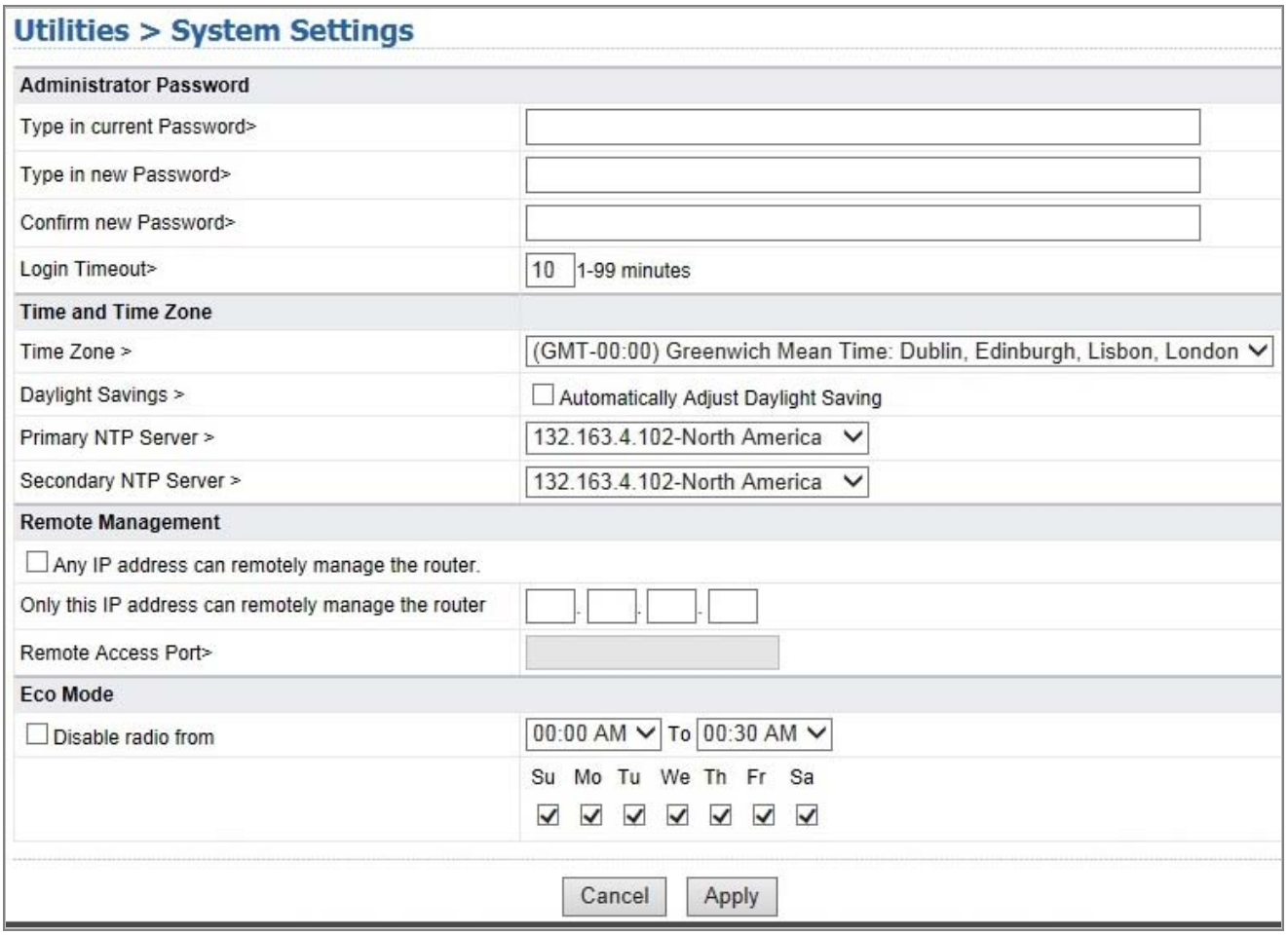


Figure 5-8-6 System Settings

■ Administrator Password

The Router is shipped with a default password. If you wish to change the password for more security, you can set a password here. Keep your password in a safe place, as you will need this password if you need to log into the router in the future. It is also recommended that you set a password if you plan to use the remote management feature of this Router.

The page includes the following fields:

Object	Description
• **Type in current Password:**	Type in the password to login the router.
• **Type in new Password:**	Type in a new password.
• **Confirm new Password:**	Type in a new password again.
• **Login Timeout:**	Set the login timeout duration.

	The login timeout option allows you to set the period of time that you can be logged into the Router's advanced setup interface. The timer starts when there has been no activity. For example, you have made some changes in the advanced setup interface, then leave your computer alone without clicking "Logout". Assuming the timeout is set to 10 minutes, then 10 minutes is the timeout after you leave, meaning the login session will expire. You will have to login to the router again to make any more changes. The login timeout option is for security purposes and the default is set to 10 minutes. As a note, only one computer can be logged into the Routers advanced setup interface at one time.

Note

For security, you are suggested to change the initial username and password for the administrator. If you forget the password, please reset the router. The default username and password are both **admin**.

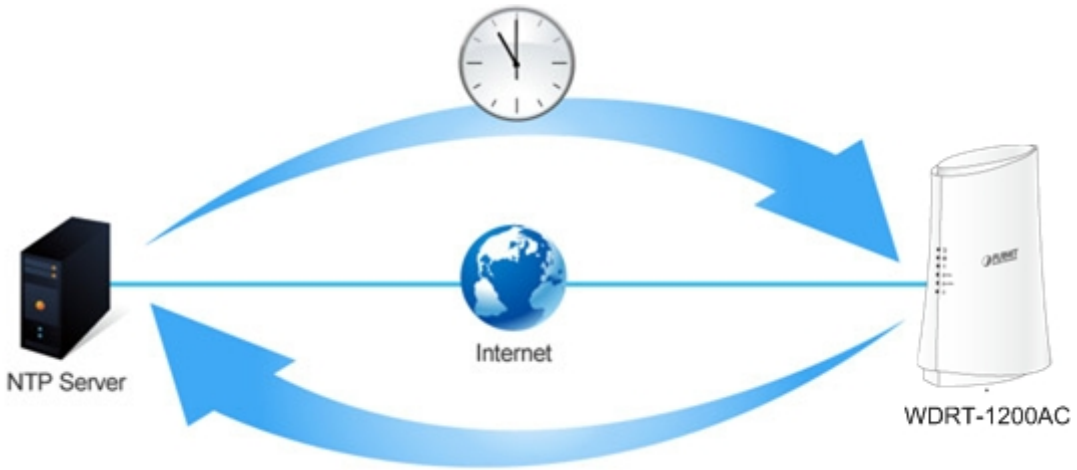
■ Time and Time Zone

The Router keeps time by connecting to a **Simple Network Time Protocol (SNTP)** server. This allows the Router to synchronize the system clock to the global Internet. The synchronized clock in the Router is used to record the security log and control client filtering.

Step 1. Select the time zone that you reside in.

Step 2. If you reside in an area that observes Daylight Saving, then place a checkmark in the box next to "**Automatically Adjust Daylight Savings**".

Allow at least 15 minutes for the router to contact the time servers on the Internet and get a response.



Note

1. The system clock may not update immediately.
2. You cannot set the clock yourself.

■ Remote Management

Remote management enables the user to configure the router on a remote host in WAN via Web browser. The page includes the following fields:

Object	Description
• **Any IP address can remotely manage the router:**	All IP addresses on the Internet can manage the router.
• **Only this IP address can remotely manage the router:**	Define a specific IP address to manage the router.
• **Remote Access Port:**	Set a web port number for router management.

While both **Any IP address can remotely manage the router** and **Only this IP address can remotely manage the router** are not configured, remote management is disabled.

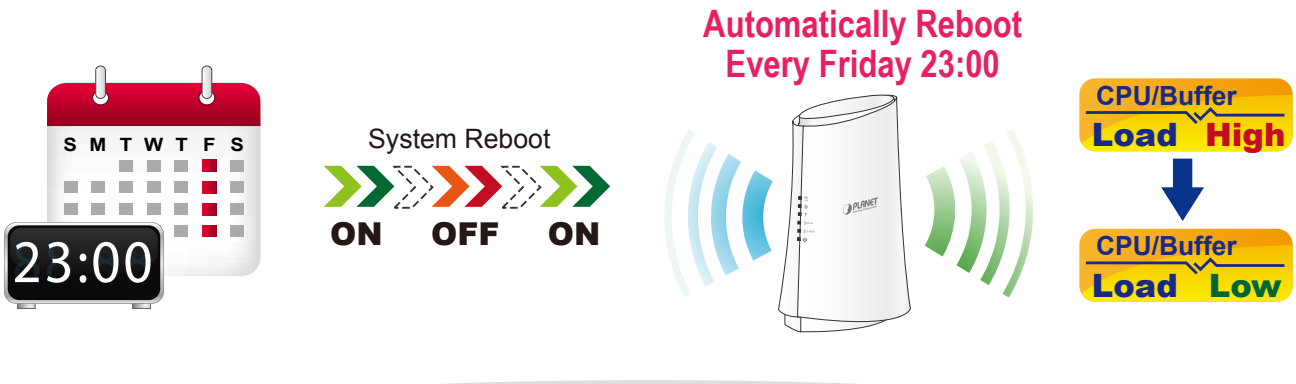
■ ECO Mode

Wireless ECO (Energy Companies Obligation) Mode will enable or disable your wireless access at a set time based on your predefined schedule. This feature is often used for restricting access to all users, such as children, employees and guests, during specific times of the day for parental control or security reasons.

When this function is enabled, wireless function is disabled during the setting time.

5.8.7 Self Healing

This Self Healing function allows you to enable and configure system reboot schedule. The device can regularly reboot according to the reserved time when connecting to the Internet.



Click **Utilities** → **Self Healing** and the following page will be displayed.

Figure 5-8-7 Self Healing

When the function is enabled, the router will be restarted at the fixed time. This is helpful to maintain the router performance.

5.9 Downloader

With offline download, the user may access the router, and download Internet resources to a USB storage device, using only a computer or other terminal (for example, a cell phone). During download, the computer or terminal can be powered down.

Downloader supports HTTP, FTP, BT download protocols. With Downloader function, user can use Router to download Internet files and save them to a USB storage device without keeping a computer switched on.

Take the following steps to download.

Step 1. Plug a USB storage device into the USB port of the router, for example, a USB disk or mobile hard disk.

Step 2. On the navigation bar, click **Downloader** and the following page will be displayed.

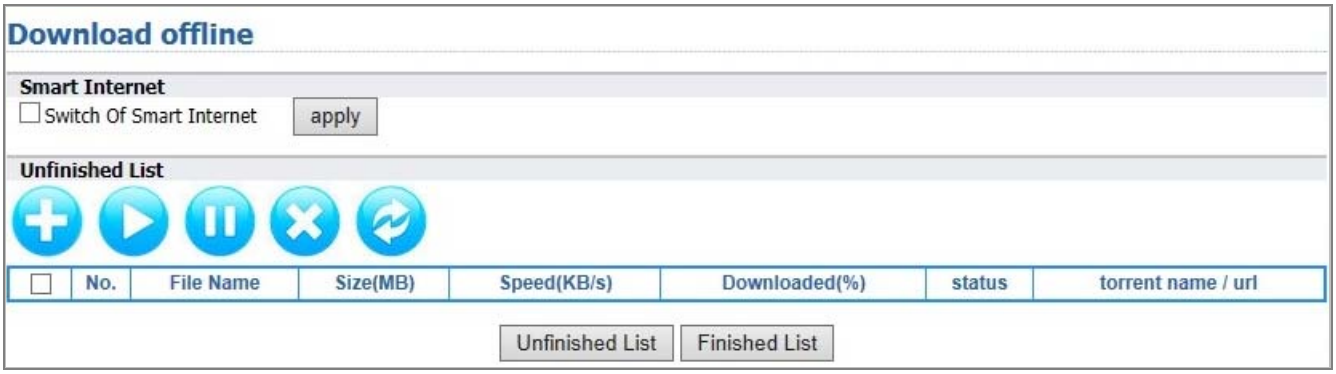


Figure 5-9-1 Downloader

The page includes the following fields:

Object	Description
	Click it to create a download task.
	Click it and the selected task will begin, or wait for download.
	Click it to pause the selected task.
	The chosen task will be deleted, but the resources stored in the USB device will not be deleted. Please clear resources on the USB device regularly to leave space.
	Click it to refresh the status of all the tasks.

Step 3. Click  to create a download task and then select a download type.

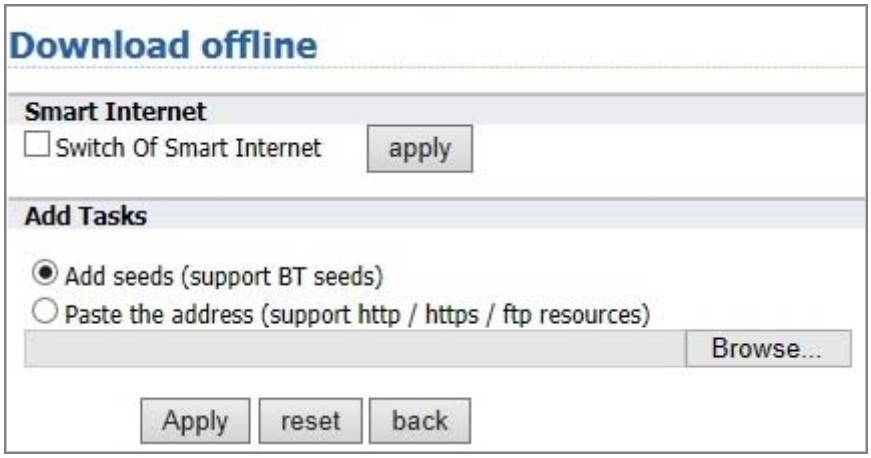


Figure 5-9-2 Download Offline

The page includes the following fields:

Object	Description
• **Switch of Smart Internet:**	When this function is enabled, you can control dynamically offline download speed to save bandwidth.
• **Add seeds:**	Add a BT seed and originate a task of BT resources download.
• **Paste the address:**	Paste an http, https or ftp address and originate a download task.

Step 4. Click  and the selected task will begin, or wait for download.

Step 5. After download, unplug the USB device.

Chapter 6. Quick Connection to a Wireless Network

6.1 Windows XP (Wireless Zero Configuration)

Step 1: Right-click on the **wireless network icon** displayed in the system tray

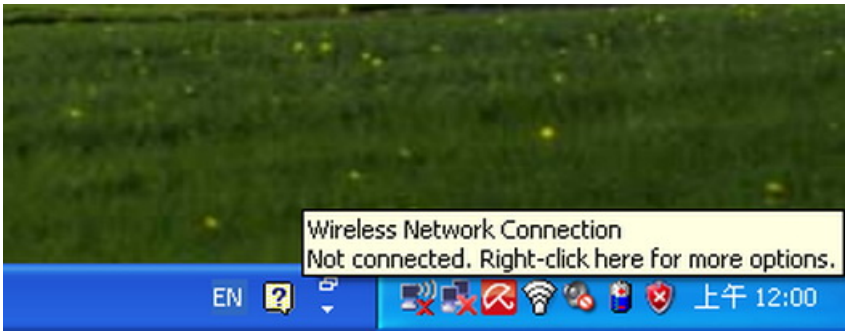


Figure 6-1

Step 2: Select [**View Available Wireless Networks**]

Step 3: Highlight and select the wireless network (SSID) to connect

(1) Select SSID (Here is taking PLANET for example)

(2) Click the [**Connect**] button

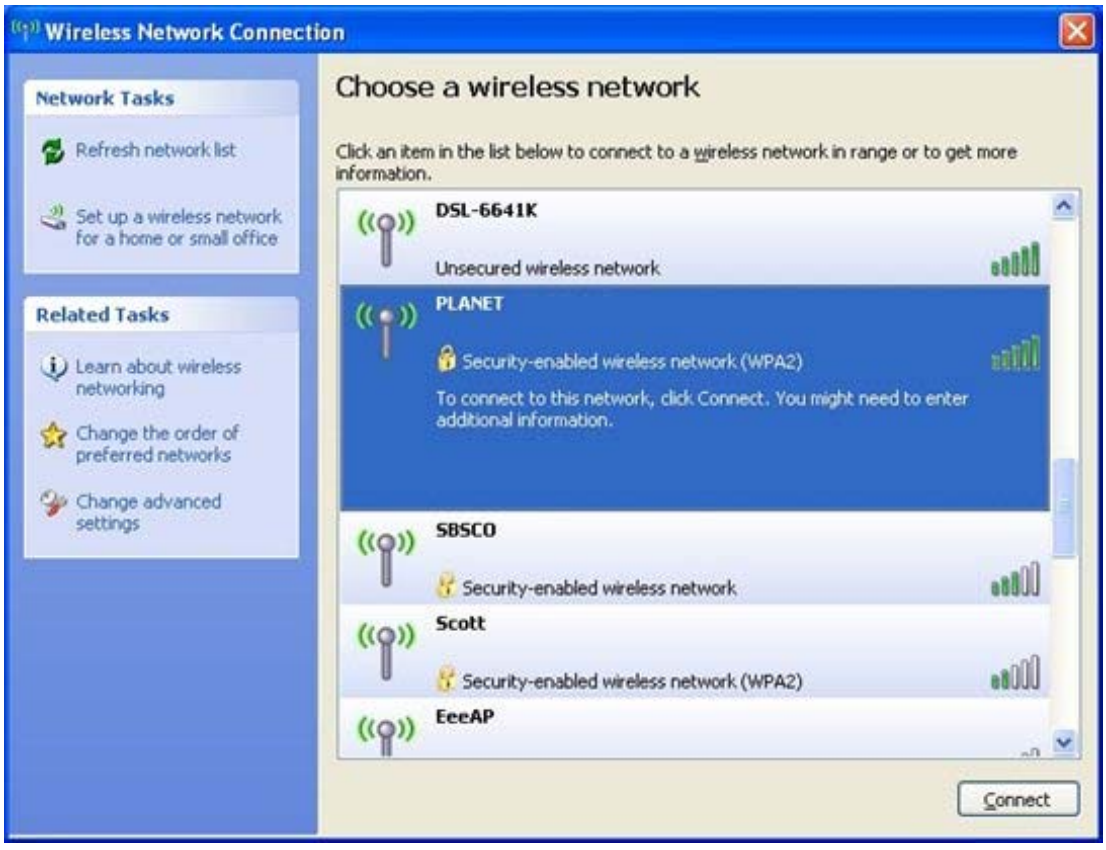


Figure 6-2 Wireless Network Connection

Step 4: Enter the **encryption key** of the Wireless Router

(1) The Wireless Network Connection box will appear

(2) Enter the encryption key that is configured in section 5.7.3

(3) Click the [Connect] button

Figure 6-3

Step 5: Check if "**Connected**" is displayed

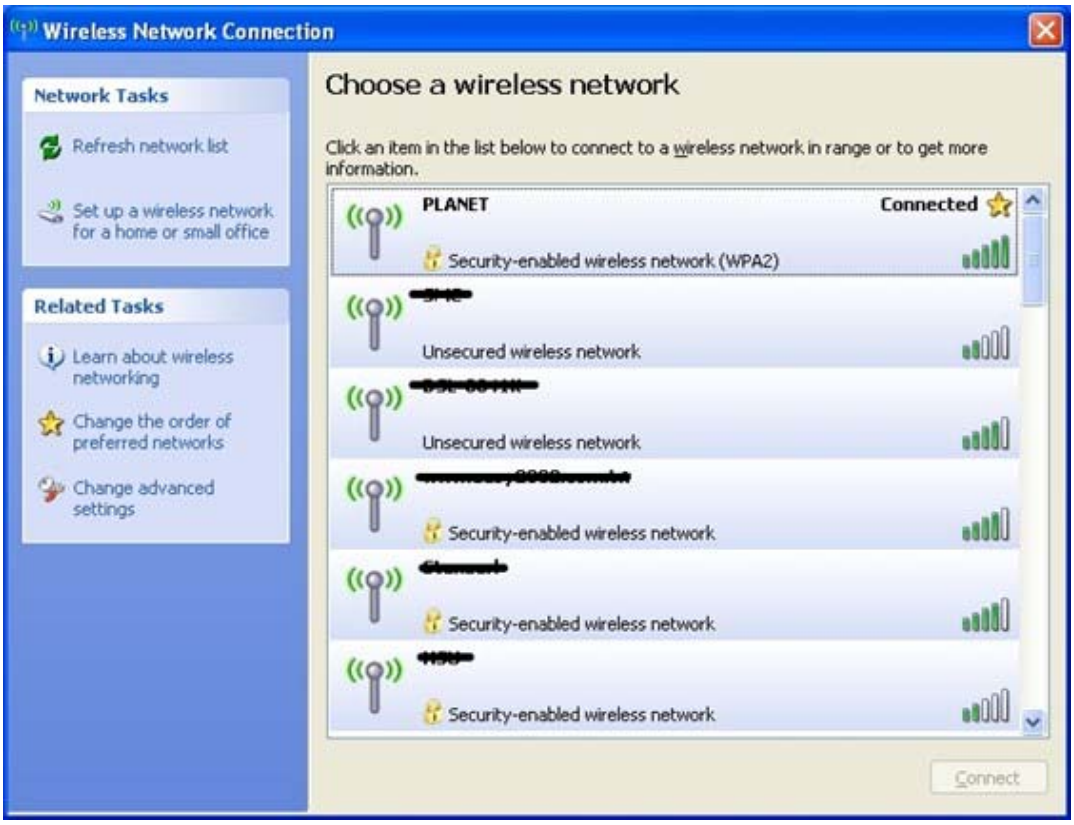


Figure 6-4

Note

Some laptops are equipped with a "Wireless ON/OFF" switch for the internal wireless LAN. Make sure the hardware wireless switch is switched to "ON" position.

6.2 Windows 7 (WLAN AutoConfig)

WLAN AutoConfig service is built-in in Windows 7 that can be used to detect and connect to wireless network. This built-in wireless network connection tool is similar to wireless zero configuration tool in Windows XP.

Step 1: Right-click on the **network icon** displayed in the system tray

Figure 6-5

Step 2: Highlight and select the wireless network (SSID) to connect

(1) Select SSID (Here is taking default_2.4G for example)

(2) Click the [**Connect**] button

Figure 6-6

Note

If you will be connecting to this Wireless Router in the future, check [**Connect automatically**].

Step 4: Enter the **encryption key** of the Wireless Router

(1) **Connect to a Network** box will appear

(2) Enter the encryption key that is configured in section 5.7.3

(3) Click the [OK] button

Figure 6-7 Connect to a Network

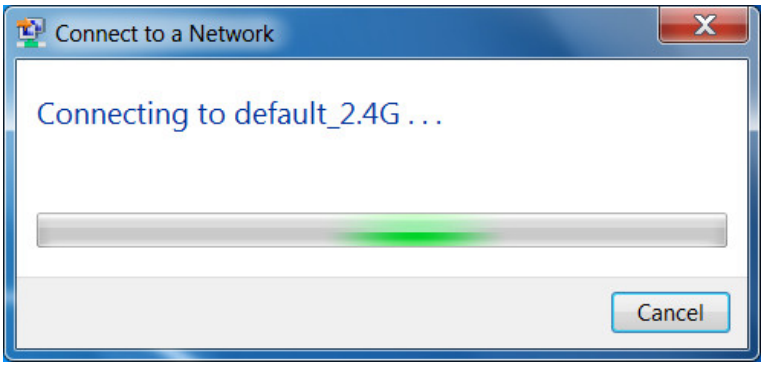


Figure 6-8 Connecting

Step 5: Check if "**Connected**" is displayed

Figure 6-9

6.3 Mac OS X 10.x

Step 1: Right-click on the **network icon** displayed in the system tray

The AirPort Network Connection menu will appear

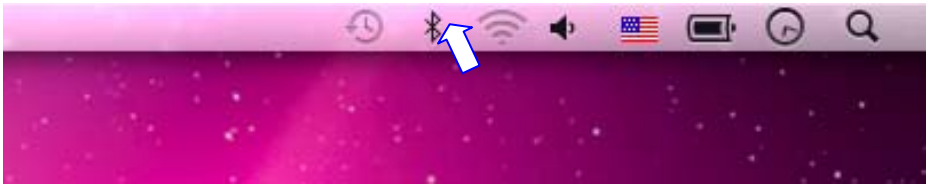


Figure 6-10

Step 2: Highlight and select the wireless network (SSID) to connect

(1) Select and SSID (Here is taking PLANET for example)

(2) Double-click on the selected SSID

Figure 6-11

Step 4: Enter the **encryption key** of the Wireless Router

(1) Enter the encryption key that is configured in section 5.7.3

(2) Click the [OK] button

Figure 6-12

Note

If you want to connect this Wireless Router in the future, check [**Remember this network**].

Step 5: Check if the AirPort is connected to the selected wireless network.

If “Yes”, then there will be a “check” symbol in the front of the SSID.

Figure 6-13

6.4 iPhone / iPod Touch / iPad

Step 1: Tap the [**Settings**] icon displayed in the home screen

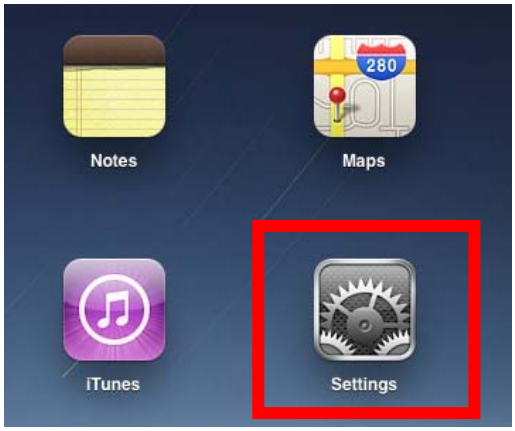


Figure 6-14

Step 2: Check Wi-Fi setting and select the available wireless network

(1) Tap [**General**] \ [**Network**]

(2) Tap [**Wi-Fi**]

If this is the first time to connect to the Wireless Router, it should show “Not Connected”.

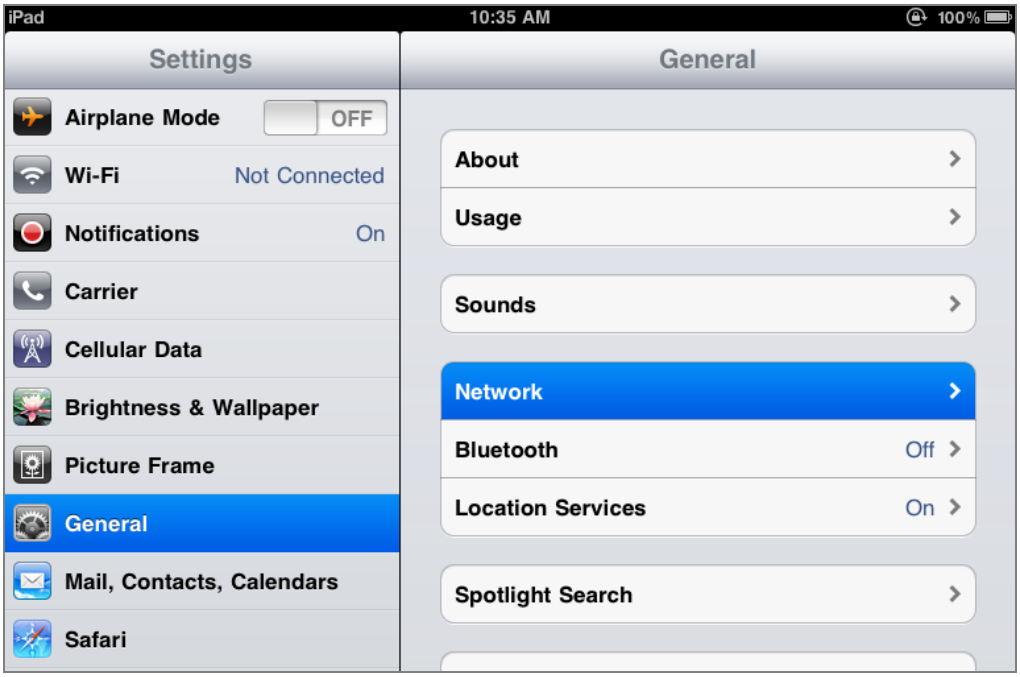


Figure 6-15

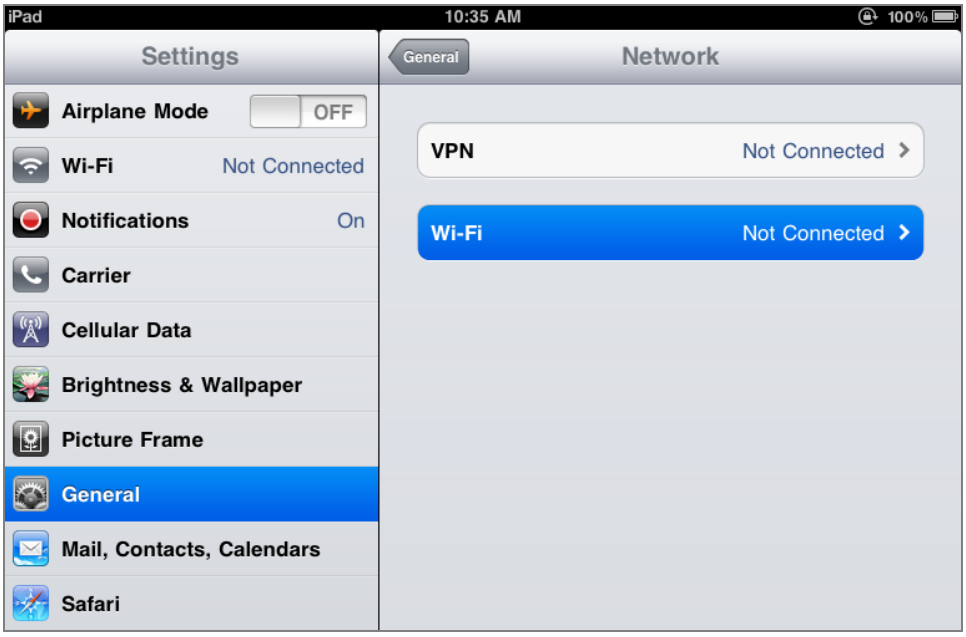


Figure 6-16

Step 3: Tap the target wireless network (SSID) in "**Choose a Network…**"

(1) Turn on Wi-Fi by tapping "**Wi-Fi**"

(2) Select SSID (Here is taking PLANET for example)

Figure 6-17

Step 4: Enter the **encryption key** of the Wireless Router

(1) The password input screen will be displayed

(2) Enter the encryption key that is configured in section 5.7.3

(3) Tap the [**Join**] button

Figure 6-18

Step 5: Check if the iDevice is connected to the selected wireless network.

If “Yes”, then there will be a “check” symbol in the front of the SSID.

Figure 6-19

Appendix A: Troubleshooting

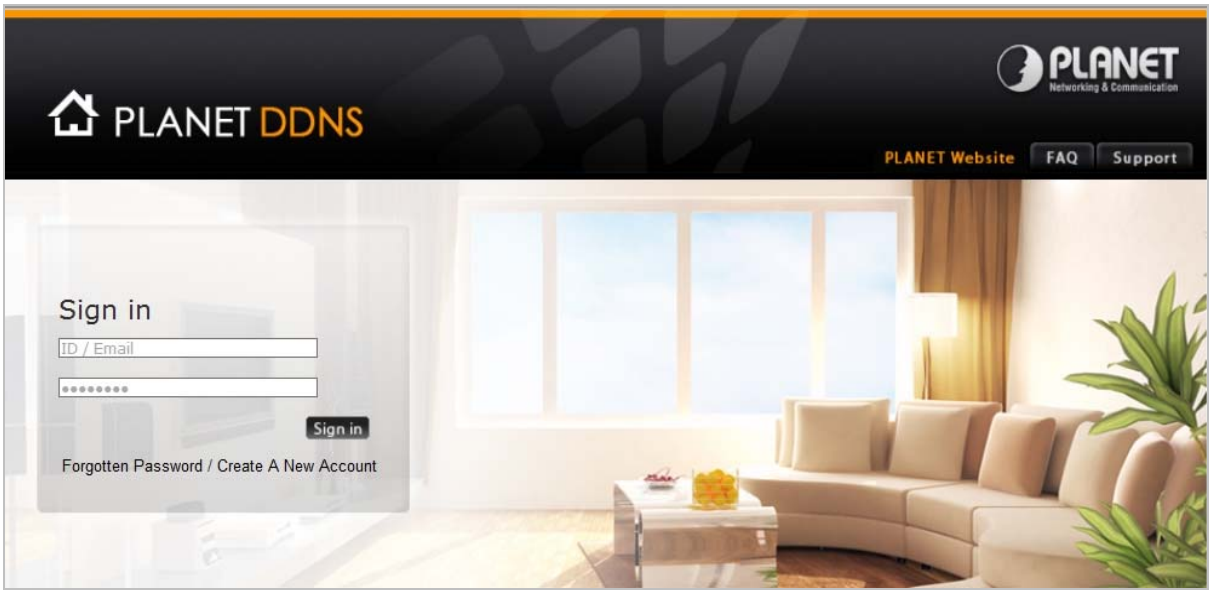
If you found the router is working improperly or stop responding to you, please read this troubleshooting first before contacting the dealer for help. Some problems can be solved by yourself within a very short time.

Scenario	Solution
The router is not responding to me when I want to access it via web browser.	a. Please check the connection of the power cord and the Ethernet cable of this router. All cords and cables should be correctly and firmly inserted to the router. b. If all LEDs on this router are off, please check the status of power adapter, and make sure it is correctly powered. c. You must use the same IP address section as the router uses. d. Are you using MAC or IP address filter? Try to connect the router by another computer and see if it works; if not, please reset the router to the factory default settings (pressing 'reset' button for over 10 seconds). e. Set your computer to obtain an IP address automatically (DHCP), and see if your computer can get an IP address. f. If you did a firmware upgrade and this happens, contact your dealer of purchase for help. g. If all the solutions above don't work, contact the dealer for help.
I can't get connected to the Internet.	a. Go to 'Status' -> 'Internet Connection' menu, and check Internet connection status. b. Please be patient, sometimes Internet is just that slow. c. If you connect a computer to Internet directly before, try to do that again, and check if you can get connected to Internet with your computer directly attached to the device provided by your Internet service provider. d. Check PPPoE / L2TP / PPTP user ID and password again. e. Call your Internet service provide and check if there's something wrong with their service. f. If you just can't connect to one or more website, but you can still use other internet services, please check URL/Keyword filter. g. Try to reset the router and try again later. h. Reset the device provided by your Internet service provider too. i. Try to use IP address instead of host name. If you can use IP address to communicate with a remote server, but can't use host name, please check DNS setting.

I can't locate my router by my wireless device.	a. 'Broadcast ESSID' set to off? b. All two antennas are properly secured. c. Are you too far from your router? Try to get closer. d. Please remember that you have to input ESSID on your wireless client manually, if ESSID broadcast is disabled.
File download is very slow or breaks frequently.	a. Are you using QoS function? Try to disable it and try again. b. Internet is slow sometimes, so be patient. c. Try to reset the router and see if it's better after that. d. Try to know what computers do on your local network. If someone's transferring big files, other people will think Internet is really slow. e. If this never happens before, call you Internet service provider to know if there is something wrong with their network.
I can't log into the web management interface; the password is wrong.	a. Make sure you're connecting to the correct IP address of the router! b. Password is case-sensitive. Make sure the 'Caps Lock' light is not illuminated. c. If you really forget the password, do a hard reset.
The router becomes hot.	a. This is not a malfunction, if you can keep your hand on the router's case. b. If you smell something wrong or see the smoke coming out from router or A/C power adapter, please disconnect the router and A/C power adapter from utility power (make sure it's safe before you're doing this!), and call your dealer of purchase for help.

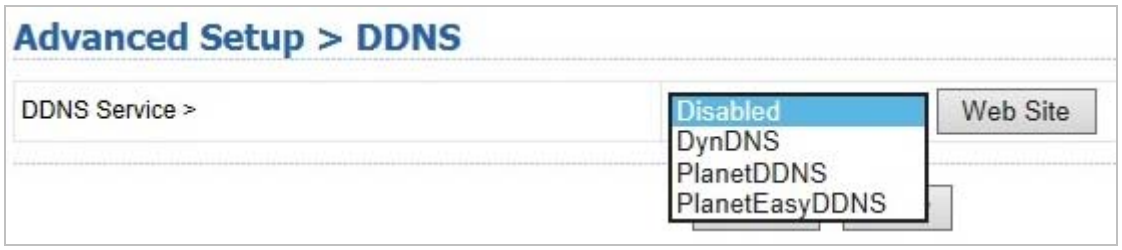
Appendix B: PLANET DDNS

First of all, please go to http://www.planetddns.com to register a Planet DDNS account, and refer to the FAQ (http://www.planetddns.com/index.php/faq) for how to register a free account.



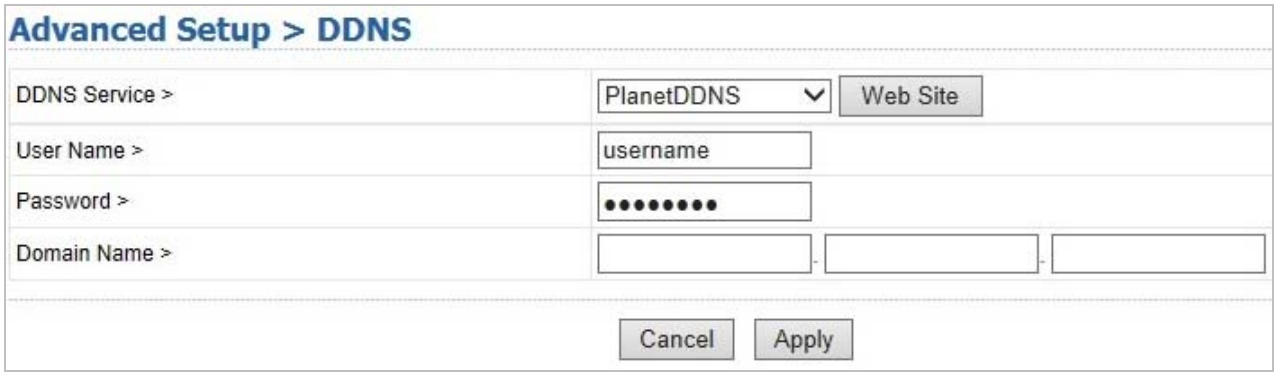
To select **Advanced Setup > DDNS**

Step 1. Select **Planet DDNS**



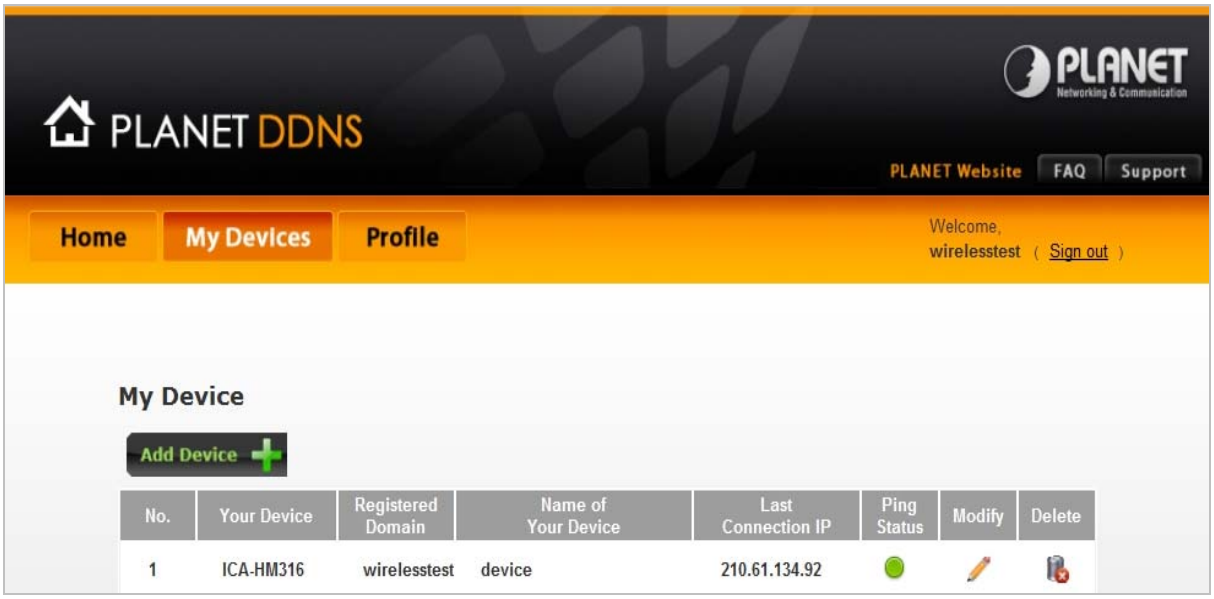
Step 2. Type the User Name for your DDNS account.

Step 3. Type the Password for your DDNS account.



Apply the settings and ensure you have connected the WAN port to the Internet. In a remote device, enter the Domain Name to the internet browser's address bar.

You can go to My Devices page of Planet DDNS website to check if the "Last Connection IP" is displayed. This indicates your DDNS service is working properly.



Appendix C: Specifications

Product	**WDRT-1200AC** 1200Mbps 802.11ac Dual-Band Wireless Gigabit Router	
Hardware Specifications		
Interface	WAN Port:	1 x 10/100/1000 Mbps Auto MDI/MDI-X RJ45 port
	LAN Port:	4 x 10/100/1000 Mbps Auto MDI/MDI-X RJ45 ports (LAN1~4)
	USB Port:	1 x USB 3.0, Type A, 5V 900mA
Antenna	Gain:	2.4GHz : 2 x 1.8dBi Internal Antenna 5GHz: 2 x 3.8dBi Internal Antenna
Button	1 x Reset button (Press for about 10 seconds to reset the device to factory default.) 1 x WPS button (Press for 1 second to activate WPS function.)	
LED Indicators	PWR x 1 WLAN (2.4GHz & 5GHz) x 2 WAN x 1 WPS x 1	
Material	Plastic	
Dimensions (H x W x D)	192 x 115 x 90mm (H x W x D)	
Weight	308g	
Power Requirements	12V DC, 2A	
Power Consumption	12W maximum	
Wireless interface Specifications		
Standard	Compliance with IEEE 802.11a/b/g/n/ac	
Frequency Band	Simultaneous 2.4 GHz and 5 GHz	
Modulation Type	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM) MIMO	
Data Rates	2.4GHz up to 300Mbps 5GHz up to 867Mbps	
Channel	2.4GHz America / FCC: 2.412~2.462GHz (11 Channels) Europe / ETSI: 2.412~2.472GHz (13 Channels) Japan / TELEC: 2.412~2.484GHz (14 Channels)	
	5GHz 5.180-5.240GHz, 5.745-5.825GHz (Up to 9 channels) The actual channels in application will vary depending on the regulation in different regions and countries.	
Channel Width	20/40/80MHz	
RF Power / EIRP	2.4GHz: 11b: 17±1.5dBm	5GHz: 11a: 14±1.5dBm

	11g: 14±1.5dBm 11n: 14±1.5dBm	11n: 14±1.5dBm 11ac: 13±1.5dBm
Receive Sensitivity	2.4GHz 11b (11Mbps): -79dBm 11g (54Mbps): -70dBm 11n (20M)mode: -67dBm 11n (40M)mode: -64dBm	5GHz 11a: -70dBm 11n (20M)mode: -67dBm 11n (40M)mode: -64dBm 11ac (20M)mode: -57dBm 11ac(40M)mode: -54dBm 11ac(80M)mode: -51dBm
Wireless Management Features		
Wireless Modes	AP/ Router WDS Repeater	
Encryption Security	WEP (64/128-bit) WPA / WPA2 WPA-PSK/ WPA2-PSK encryption	
Wireless Security	Provide Wireless LAN ACL (Access Control List) filtering	
	Wireless MAC address filtering	
	Support WPS (WiFi Protected Setup)	
Wireless Advanced	Support Dual-SSID (2.4G & 5G)	
Max. Supported Clients	Wire: 64 Wireless: 32	
Router Features		
Internet Connection Type	Shares data and Internet access for users, supporting the following Internet accesses: ■ DHCP ■ Static IP ■ PPPoE ■ PPTP ■ L2TP	
Firewall	NAT firewall, SPI firewall	
	Built-in NAT server which supports Virtual Server, and DMZ	
	Built-in firewall with URL filtering, and MAC address filtering	
LAN	Built-in DHCP server supporting static IP address distribution	
	Support UPnP, Dynamic DNS	
	Support Packets Statistics	
	Session Number: Max. 7776	
USB Sharing	Samba FTP Server DLNA Media Server	
System Management	Web-based (HTTP) management interface	
	Remote management (WAN Access Control)	
	SNTP time synchronization	
	System Log	

OS Compatibility	Windows 7 Windows Vista Windows XP Mac OS X 10.4 and higher
Standards Conformance	
IEEE Standards	IEEE 802.11ac IEEE 802.11n IEEE 802.11a IEEE 802.11g IEEE 802.11b IEEE 802.11i IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3ab 1000Base-T
Others Protocols and Standards	CSMA/CA, CSMA/CD, TCP/IP, DHCP, ICMP, NAT, PPPoE, SNTP
Regulatory	CE, RoHS, WEEE
Environments	
Temperature	Operating: 0 ~ 45 degrees C Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing) Storage: 5 ~ 90% (non-condensing)

Appendix D: Glossary

- **802.11ac** - 802.11ac is a wireless networking standard in the 802.11 family (which is marketed under the brand name Wi-Fi), developed in the IEEE Standards Association process, providing high-throughput wireless local area networks (WLANs) on the 5 GHz band.
- **802.11n** - 802.11n builds upon previous 802.11 standards by adding MIMO (multiple-input multiple-output). MIMO uses multiple transmitter and receiver antennas to allow for increased data throughput via spatial multiplexing and increased range by exploiting the spatial diversity, perhaps through coding schemes like Alamouti coding. The Enhanced Wireless Consortium (EWC) [3] was formed to help accelerate the IEEE 802.11n development process and promote a technology specification for interoperability of next-generation wireless local area networking (WLAN) products.
- **802.11a** - 802.11a was an amendment to the IEEE 802.11 wireless local network specifications that defined requirements for an orthogonal frequency division multiplexing (OFDM) communication system. It was originally designed to support wireless communication in the unlicensed national information infrastructure (U-NII) bands (in the 5–6 GHz frequency range) as regulated in the United States by the Code of Federal Regulations, Title 47, Section 15.407.
- **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** (**D**ynamic **D**omain **N**ame **S**ystem) **-** The capability of assigning a fixed host and domain name to a dynamic Internet IP Address.
- **DHCP** (**D**ynamic **H**ost **C**onfiguration **P**rotocol) **-** A protocol that automatically configure the TCP/IP parameters for the all the PC(s) that are connected to a DHCP server.
- **DMZ** (**Dem**ilitarized **Z**one) **-** 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** (**D**omain **N**ame **S**ystem) **-** 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** (**D**igital **S**ubscriber **L**ine) **-** A technology that allows data to be sent or received over existing traditional phone lines.

- **ISP** (**I**nternet **S**ervice **P**rovider) **-** A company that provides access to the Internet.
- **MTU** (**Maximum Transmission Unit**) **-** The size in bytes of the largest packet that can be transmitted.
- **NAT** (**N**etwork **A**ddress **T**ranslation) **-** NAT technology translates IP addresses of a local area network to a different IP address for the Internet.
- **PPPoE** (**P**oint to **P**oint **P**rotocol **o**ver **E**thernet) **-** PPPoE is a protocol for connecting remote hosts to the Internet over an always-on connection by simulating a dial-up connection.
- **SSID -** A **S**ervice **S**et **Id**entification 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** (**W**ired **E**quivalent **P**rivacy) **-** 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** (**W**ireless **L**ocal **A**rea **N**etwork) **-** A group of computers and associated devices communicate with each other wirelessly, which network serving users are limited in a local area.

EC Declaration of Conformity

English	Hereby, **PLANET Technology Corporation,** declares that this **802.11ac Wireless Broadband Router** is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.	**Lietuviškai**	Šiuo **PLANET Technology Corporation,**, skelbia, kad **802.11ac Wireless Broadband Router** tenkina visus svarbiausius 1999/5/EC direktyvos reikalavimus ir kitas svarbias nuostatas.
Česky	Společnost **PLANET Technology Corporation,** tímto prohlašuje, že tato **802.11ac Wireless Broadband Router** splňuje základní požadavky a další příslušná ustanovení směrnice 1999/5/EC.	**Magyar**	A gyártó **PLANET Technology Corporation**, kijelenti, hogy ez a **802.11ac Wireless Broadband Router** megfelel az 1999/5/EK irányelv alapkövetelményeinek és a kapcsolódó rendelkezéseknek.
Dansk	**PLANET Technology Corporation,** erklærer herved, at følgende udstyr **802.11ac Wireless Broadband Router** overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF	**Malti**	Hawnhekk, **PLANET Technology Corporation,** jiddikjara li dan **802.11ac Wireless Broadband Router** jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC
Deutsch	Hiermit erklärt **PLANET Technology Corporation,** dass sich dieses Gerät **802.11ac Wireless Broadband Router** in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet". (BMWi)	**Nederlands**	Hierbij verklaart , **PLANET Technology orporation,** dat **802.11ac Wireless Broadband Router** in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG
Eestikeeles	Käesolevaga kinnitab **PLANET Technology Corporation,** et see **802.11ac Wireless Broadband Router** vastab Euroopa Nõukogu direktiivi 1999/5/EC põhinõuetele ja muudele olulistele tingimustele.	**Polski**	Niniejszym firma **PLANET Technology Corporation,** oświadcza, że **802.11ac Wireless Broadband Router** spełnia wszystkie istotne wymogi i klauzule zawarte w dokumencie „Directive 1999/5/EC”.
Ελληνικά	*ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ* , **PLANET Technology Corporation,** *ΔΗΛΩΝΕΙ ΟΤΙ ΑΥΤΟ***802.11ac Wireless Broadband Router** *ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ* ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ	**Português**	**PLANET Technology Corporation**, declara que este **802.11ac Wireless Broadband Router** está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Español	Por medio de la presente, **PLANET Technology Corporation,** declara que **802.11ac Wireless Broadband Router** cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE	**Slovensky**	Výrobca **PLANET Technology Corporation,** týmto deklaruje, že táto **802.11ac Wireless Broadband Router** je v súlade so základnými požiadavkami a ďalšími relevantnými predpismi smernice 1999/5/EC.
Français	Par la présente, **PLANET Technology Corporation,** déclare que les appareils du **802.11ac Wireless Broadband Router** sont conformes aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE	**Slovensko**	**PLANET Technology Corporation**, **s tem potrjuje,** da je ta **802.11ac Wireless Broadband Router** skladen/a z osnovnimi zahtevami in ustreznimi določili Direktive 1999/5/EC.
Italiano	Con la presente , **PLANET Technology Corporation,** dichiara che questo **802.11ac Wireless Broadband Router** conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.	**Suomi**	**PLANET Technology Corporation,** vakuuttaa täten että **802.11ac Wireless Broadband Router** tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Latviski	Ar šo **PLANET Technology Corporation,** apliecina, ka šī **802.11ac Wireless Broadband Router** atbilst Direktīvas 1999/5/EK pamatprasībām un citiem atbilstošiem noteikumiem.	**Svenska**	Härmed intygar, **PLANET Technology Corporation,** att denna **802.11ac Wireless Broadband Router** står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.