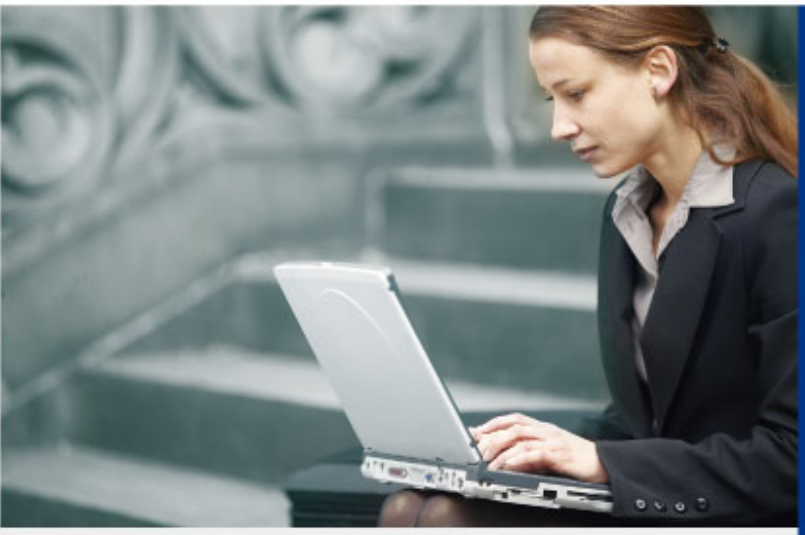
PLANET
Networking & Communication

User's Manual

300Mbps 802.11n Wireless Gigabit Broadband Router

▶ WNRT-633



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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. Plug 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, (for 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

WEEE regulation

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; WEEE should be collected separately.

Revision

User's Manual for PLANET 802.11n Wireless Gigabit Router

Model: WNRT-633

Rev: 1.0 (May, 2013)

Part No: EM-WNRT-633_v1.01 (2081-E50300-000)

CONTENTS

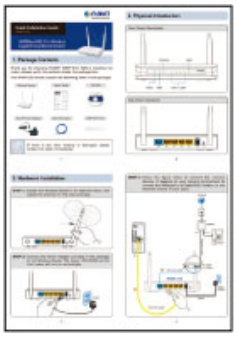
Chapter 1. Product Introduction

1.1 Package Contents

Thank you for choosing PLANET WNRT-633. Before installing the router, please verify the contents inside the package box.

WNRT-633 Wireless Router

Quick Installation Guide



CD-ROM

(User Manual included)

Power Adapter

12V/1A DC output
100~240V AC input

Ethernet Cable

RJ-45 / CAT5E 1 meter UTP

5dBi Antenna x 2

Note

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

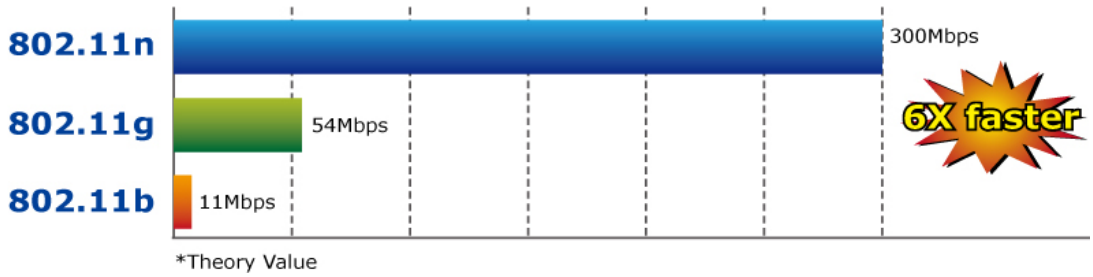
1.2 Product Description

Multiple Wireless Network Technologies for Greater Access

Offering an instant network and flexibility for users to handle network expansion and speed, the PLANET WNRT-633 Wireless Gigabit Router is the total solution for the Home, Hotspot and the SOHO users. It offers 300Mbps wireless speed, multiple operation modes Gigabit LAN and WAN features to increase client mobility and speed within a network. By installing the WNRT-633 as the central connection point of network, the connected computers and mobile devices are able to share the high speed broadband Internet connection and networked server. With the four built-in 10/100/1000Base-T LAN ports, it is easy to integrate the wireless devices with existing wired network.

High Speed 802.11n Wireless

The WNRT-633 features latest IEEE 802.11n radio with 2T2R MIMO antenna technology to provide improved wireless speed and coverage with up to 300Mbps upload and download data rate. The incredible wireless speed makes it ideal for handling multiple HD movies stream, high resolution on-line game, stereo music, VoIP and data streams at the same time stably and smoothly. It is also backward compliant with 802.11g and 802.11b standards; thus, it is no need to change the existing network for convenient maintenance. Just connect to the WNRT-633 and users can immediately enjoy the high-speed wireless sharing.

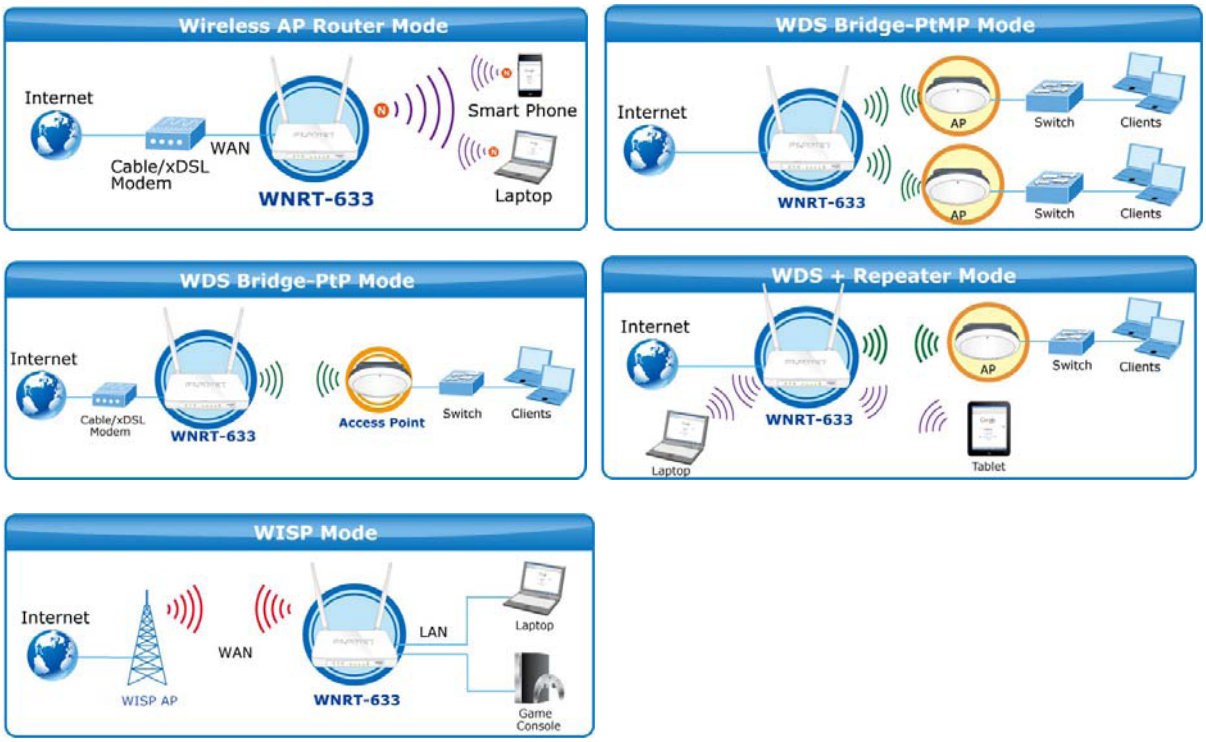


Wireless Coverage Plus !

The WNRT-633 is equipped with **5dBi High-Gain** antennas to provide strong signal and excellent performance even in the long range or bad environment. With detachable RP-SMA connector design in the WNRT-633, it allows users to manually exchange higher gain antenna for farther wireless coverage range.

Easy Setup for Multiple Wireless Modes

The WNRT-633 supports multiple wireless modes including **Gateway**, **Bridge**, **Repeater** and **WISP** (Wireless Internet Service Provider), for different network applications. Furthermore, with the built-in Wizard Setup function, users can configure the WNRT-633 easily and quickly through a couple of simple steps. It is so easy to apply the WNRT-633 to the existing wired network. The WNRT-633 definitely provides a total network solution for the home and the SOHO users.

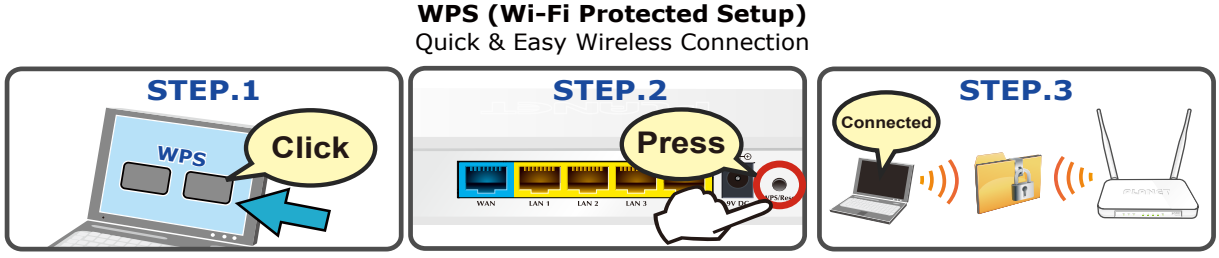


Wide Range of Wireless Security Support

To secure the wireless communication, the WNRT-633 supports most up-to-date encryptions including WPA/WPA2-PSK with TKIP/AES. Made to fulfill enterprise and various applications demand, the WNRT-633 enhances security and management features such as multiple SSID. It can create up to 5 virtual standalone APs with 5 different SSIDs according to individual security levels and encryption scheme of various wireless devices.

One-touch Secure Wireless Connection

In order to simplify security settings for home and SOHO network, the WNRT-633 supports **W**i-Fi **P**rotected **S**etup (**WPS**) with configuration in PBC and PIN type. Just push the WPS button or key in the PIN code, the secure connection between the WNRT-633 and the wireless clients can be built immediately, which offers users a convenient and fast method to construct a secure wireless network.



Powerful Firewall and Complete Access Control Functions

The WNRT-633 supports NAT functions and allows multiple users to access Internet via only one single legal IP. It provides Port Forwarding and DMZ for LAN PC to act as an application server. Furthermore, the advanced firewall by the WNRT-633 can protect your Intranet clients from unauthorized accesses and various DoS attacks from the Internet. In aspect of the firewall, the WNRT-633 provides IP/MAC/URL filtering, and prevents possible hackers attack.

1.3 Product Features

- **IEEE Compliant Wireless LAN & Wired LAN**
  - Compliant with IEEE 802.11n wireless technology capable up to 300Mbps data rate
  - Backward compatible with 802.11b/g standard
  - Equipped with all Gigabit RJ-45 ports (10/100/1000Mbps) of 1 WAN and 4 LAN ports
  - Auto MDI/MDI-X supported

- **Fixed-network Broadband Router**
  - Supported Internet types: Dynamic IP/ Static IP/ PPPoE/ L2TP/ PPTP
  - Supports Static & Dynamic (RIP1 and 2) Routing
  - Supports IP / MAC-Based Bandwidth Control
  - Supports 802.1d STP & IGMP Proxy

- **Secure Network Connection**
  - One-touch Wi-Fi Protected Setup (WPS)
  - Advanced security: 64-/128-bit WEP, WPA/WPA2 and WPA-PSK/WPA2-PSK (TKIP/AES encryption) and 802.1x Authentication
  - Built-in NAT firewall features with Port/ IP/ MAC/ URL Filtering, and DoS protection
  - Supports Multiple-SSID to allow users to access different networks through a single AP

- **Advanced Networking function for Specific Application**
  - Supports multiple sessions IPSec, L2TP, PPTP, and IPv6 VPN pass-through
  - Supports Port Forwarding, DMZ, UPnP and Dynamic DNS for various networking applications
  - Supports DHCP Server

- **Easy Installation & Management**
  - User Friendly Web-Based UI and setup Wizard for easy configuration
  - Remote Management allows configuration from a remote site
  - System status monitoring includes DHCP Client List and System Log

1.4 Product Specifications

Product	**WNRT-633** 300Mbps 802.11n Wireless Gigabit Router	
Hardware Specifications		
Interface	WAN	1 x 10/100/1000Mbps Auto MDI/MDI-X RJ45 port
	LAN	4 x 10/100/1000Mbps Auto MDI/MDI-X RJ45 ports
	Wireless	2 x detachable RP-SMA Connectors
Antenna	Gain:	2 x 5dBi antennas
	Orientation:	Omni-directional
WPS / Reset Button	Reset / WPS button at rear panel ■ Press for about 7 seconds to reset the device to factory default. ■ Press for 1 second to activate WPS function.	
LED Indicators	PWR, WPS, WLAN, WAN/LAN with green light	
Material	Plastic	
Dimensions (W x D x H)	154 x 106 x 27 mm (without antenna) 154 x 136 x 27 mm (with antenna)	
Weight	212g	
Power Adapter	AC Input: 100~240V AC (50/60Hz) DC Output: 12V, 1A	
Wireless Interface Specifications		
Standard	Compliance with IEEE 802.11b/g/n	
Frequency Band	2.4~2.4835GHz	
Extend Frequency	DSSS	
Modulation Type	DBPSK, DQPSK, QPSK, CCK and OFDM (BPSK/QPSK/16-QAM/ 64-QAM)	
Data Transmission Rates	802.11n(40MHz):270/243/216/162/108/81/54/27Mbps 135/121.5/108/81/54/40.5/27/13.5Mbps (Dynamic) 802.11n(20MHz):130/117/104/78/52/39/26/13Mbps 65/58.5/52/39/26/19.5/13/6.5Mbps (Dynamic) 802.11g:54/48/36/24/18/12/9/6Mbps (Dynamic) 802.11b:11/5.5/2/1Mbps (Dynamic)	
Transmission Distance	Indoor up to 100m outdoor up to 300m (it is limited to the environment)	
Channel	America/ FCC: 2.412~2.462GHz (11 Channels) Europe/ ETSI: 2.412~2.472GHz (13 Channels) Japan/ TELEC: 2.412~2.484GHz (14 Channels)	
Max. RF Power	20 dBm max. (EIRP)	
Receive Sensitivity	270M: -68dBm@10% PER 130M: -68dBm@10% PER 54M: -68dBm@10% PER 11M: -85dBm@8% PER	
Operation Mode	■ Gateway(default) ■ Bridge ■ WSP	
Wireless Mode	■ AP ■ WDS	■ Repeater (WDS+AP) ■ Universal Repeater (AP+Client)

Encryption Security	■ WEP (64/128-bit) encryption security ■ WPA-Enterprise / WPA2-Enterprise (TKIP/AES) ■ WPA-Personal / WPA2-Personal (TKIP/AES) ■ 802.1x Authentication
Wireless Security	Provides wireless LAN ACL (Access Control List) filtering
	Wireless MAC address filtering
	Supports WPS (Wi-Fi Protected Setup)
	Enables/Disables SSID Broadcast
Wireless Advanced	WMM(Wi-Fi Multimedia): 802.11e Wireless QoS
	IAPP(Inter Access Point Protocol): 802.11f Wireless Roaming
	Provides Wireless Statistics
Router Features	
Internet Connection Type	Shares data and Internet access for users, supporting the following internet accesses: ■ PPPoE ■ Dynamic IP ■ Static IP ■ PPTP ■ L2TP
Firewall	NAT firewall with SPI (Stateful Packet Inspection)
	Built-in NAT server supporting Port Forwarding, and DMZ
	Built-in firewall with IP address/ MAC address/ Port/ URL filtering
	Supports ICMP-FLOOD, UDP-FLOOD, TCP-SYN-FLOOD filter, DoS protection
Routing Protocol	Static / Dynamic (RIP1 and 2) Routing
VPN Pass-through	PPTP, L2TP, IPSec, IPv6
LAN	Built-in DHCP server supporting static IP address distributing
	Supports UPnP, Dynamic DNS
	Supports IGMP Proxy
	Supports 802.1d STP (Spanning Tree)
	IP / MAC-based Bandwidth Control
System Management	Web-based (HTTP) management interface
	SNTP time synchronize
	Easy firmware upgrade
	System Log supports Remote Log
Standards Conformance	
IEEE Standards	IEEE 802.11n (2T2R, up to 300Mbps) IEEE 802.11g IEEE 802.11b IEEE 802.11i IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3x Flow Control
Other Protocols and Standards	CSMA/CA, CSMA/CD, TCP/IP, DHCP, ICMP, NAT, PPPoE, SNTP
Environment	
Temperature	Operating: 0 ~ 40 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 WNRT-633 to the existing network devices and your computers.

2.1 Hardware Description

- **Dimensions**: 154 x 136 x 27mm (W x D x H)
- **Weight :** 212g

2.1.1 The Front Panel

The front panel provides a simple interface monitoring of the router. Figure 2-1 shows the front panel of WNRT-633.

Front Panel

Figure 2-1 WNRT-633 Front Panel

2.1.2 LED Indications

The LEDs on the top panel indicate the instant status of system power, wireless data activity, WPS, and port links, and help monitor and troubleshoot when needed. Figure 2-2 and Table 2-1 show the LED indications of the WNRT-633.

LED Definition

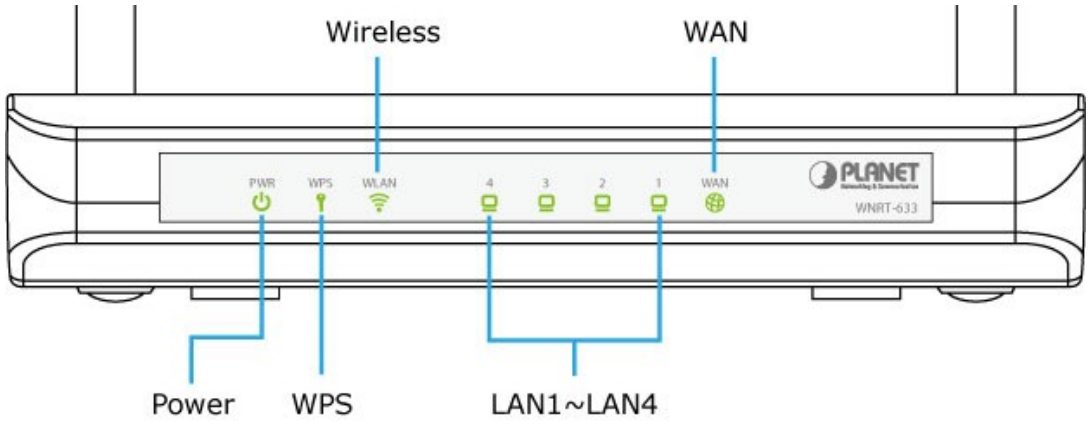


Figure 2-2 WNRT-633 LED Panel

LED (Left to Right)	STATUS	FUNCTION
PWR	On	Device power on
	Flash	The system is working properly
	Off	Device power off
WPS	Flash	The system is performing WPS authentication on a client device.
WLAN	On	The 2.4G WiFi is activated
	Flash	Device is transmitting data wirelessly over 2.4GHz
LAN 1~4	On	Link is established
	Flash	Packets are transmitting or receiving
	Off	LAN port is not connected
WAN	On	Link is established
	Flash	Packets are transmitting or receiving
	Off	WAN port is not connected

Table 2-1 The LED indication

2.1.3 The Rear Panel

The rear panel provides the physical connectors connected to the power adapter and any other network device. Figure 2-3 shows the rear panel of WNRT-633.

Rear Panel

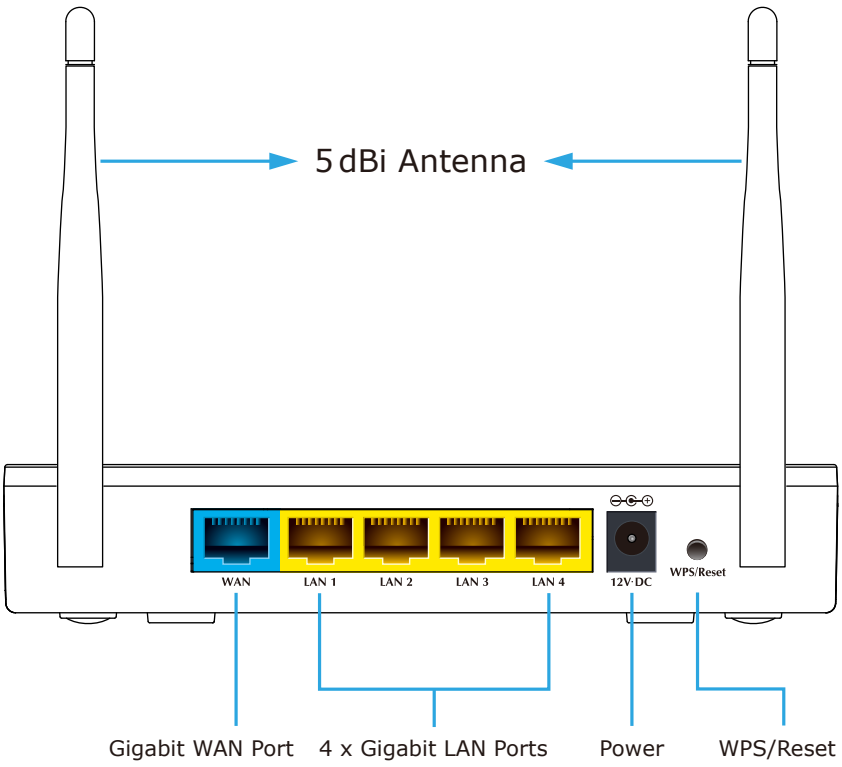


Figure 2-3 Rear Panel of WNRT-633

Interface	Description
Antenna x 2	Fixed 5dBi Omni Dipole Antennas
WPS/Reset	■ Press the Reset button gently for **1 second** and then release it. The system starts to WPS connection. ■ Press the Reset button gently for **7 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 The Interface indication

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 RJ-45 connector (not necessary if the Router is connected directly to the Ethernet.)
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ-45 connectors
- PC of subscribers running Windows 98/ME, NT4.0, 2000/XP, Windows Vista / Win 7, MAC OS 9 or later, Linux, UNIX or other platform compatible with **TCP/IP** protocols
- The above PC installed with WEB Browser

Note

1. The Router in the following instructions is named as PLANET WNRT-633.
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 Wireless Router.

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

Step 3. Adjust the direction of the antenna. Normally, upright is a good direction.

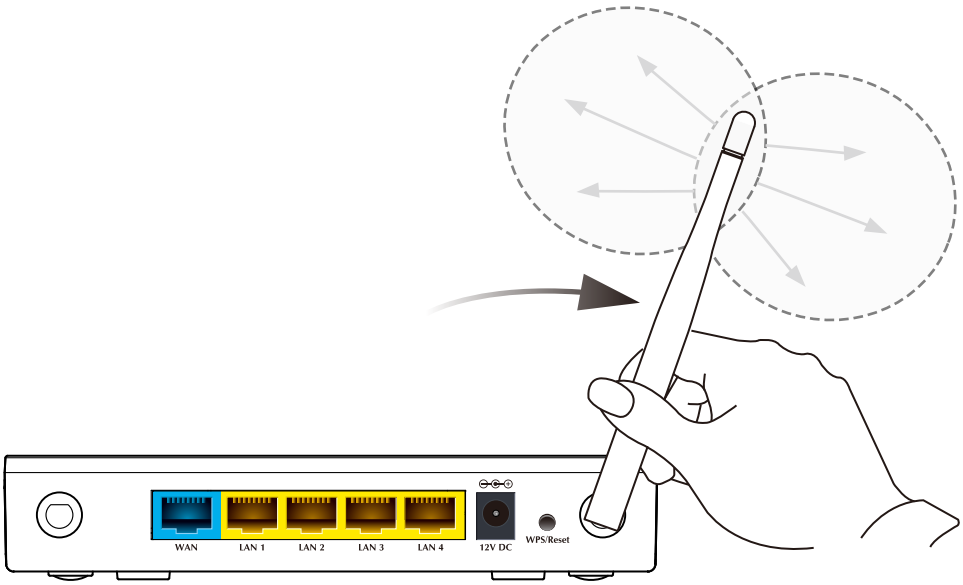


Figure 3-1 Adjust the direction of the antenna

Step 4. Connect the PC or Switch/Hub in your LAN to the LAN Ports (Yellow ports) of the Router with Ethernet cable as shown in Figure 3-2.

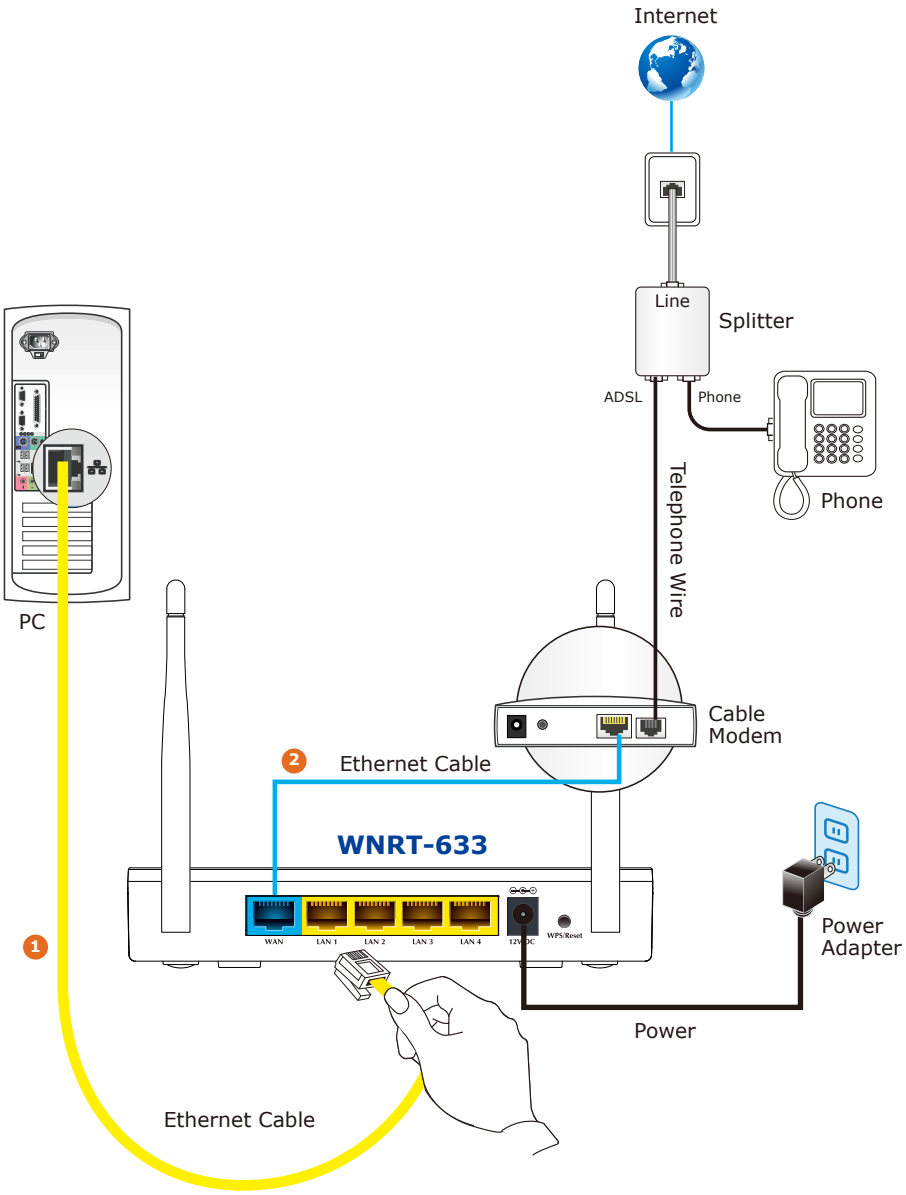


Figure 3-2 Hardware Installation of the WNRT-633 Wireless Router

Step 5. Connect the power adapter to the power socket on the Wireless Router, and the other end into an electrical outlet. Then power on the Wireless Router.

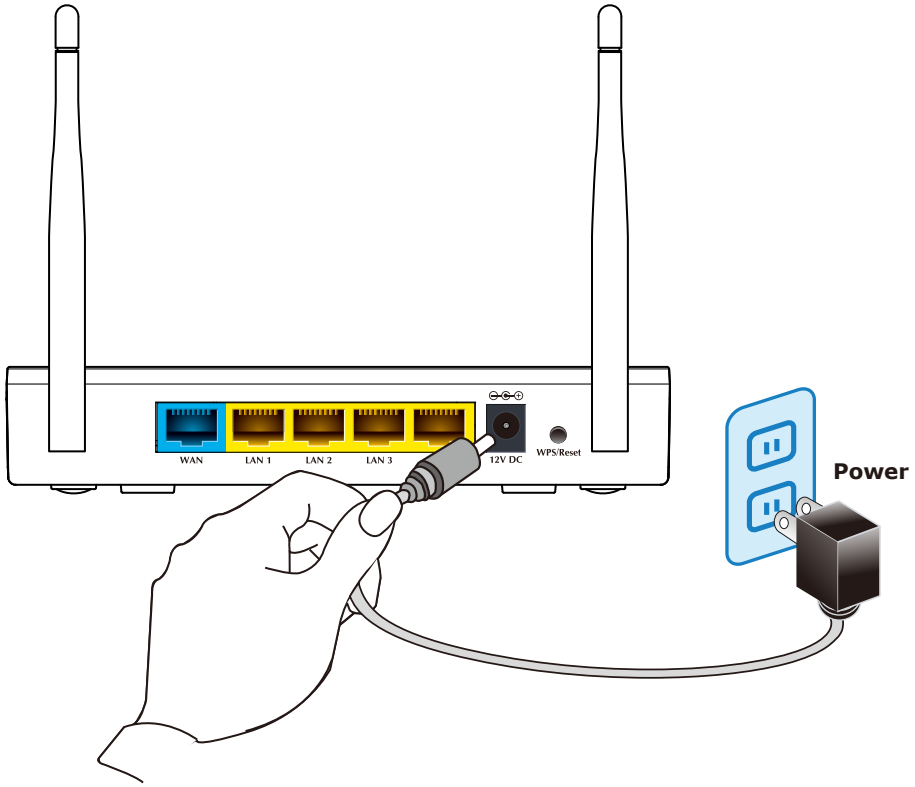


Figure 3-3 Power on the Wireless Router

Step 6. Power on your PC and Cable/xDSL Modem.

Chapter 4. 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 WNRT-633 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 WNRT-633. In this section, we use all the default values for description.

Whether the WNRT-633 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 WNRT-633 via wired or wireless connection, please configure the IP address for your PC in the following two ways first.

- **Obtain an IP address automatically**
- **Configure 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 Obtain 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 WNRT-633 built-in DHCP server will assign IP address to the PC automatically.

If you are sure the DHCP server of WNRT-633 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 WNRT-633 built-in DHCP server will assign an IP address to the PC automatically.

1. Install 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**.

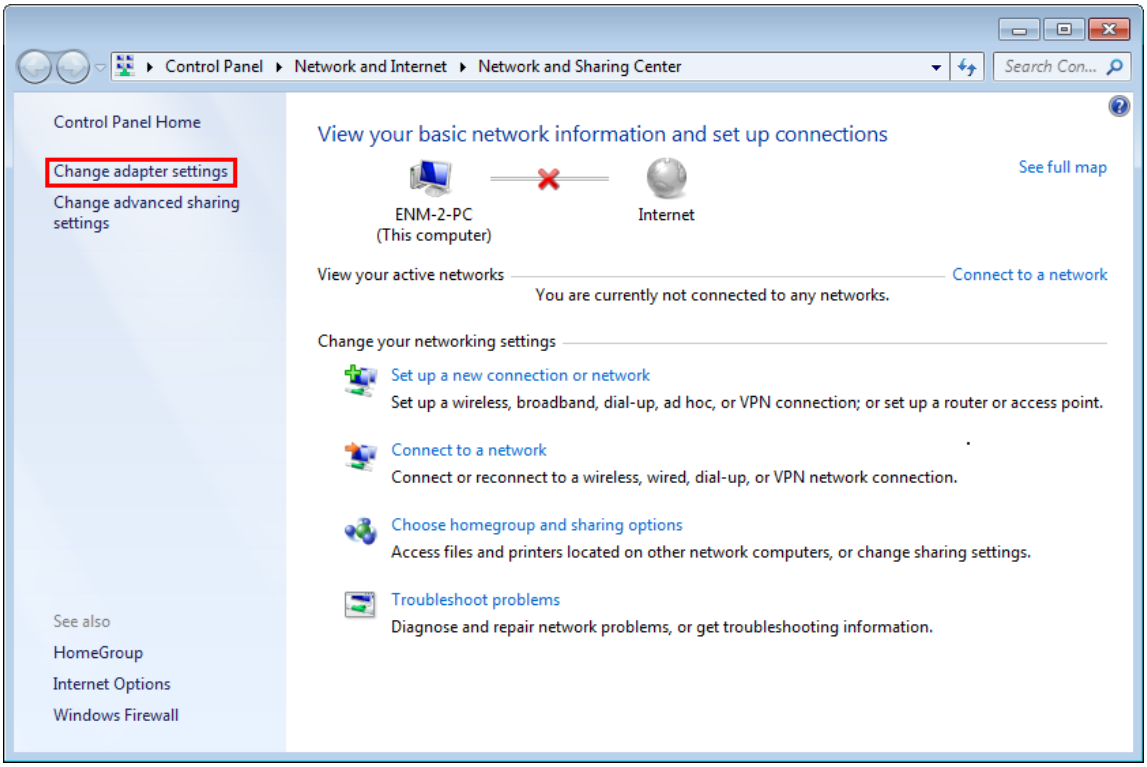


Figure 4-1-1 Change adapter settings

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

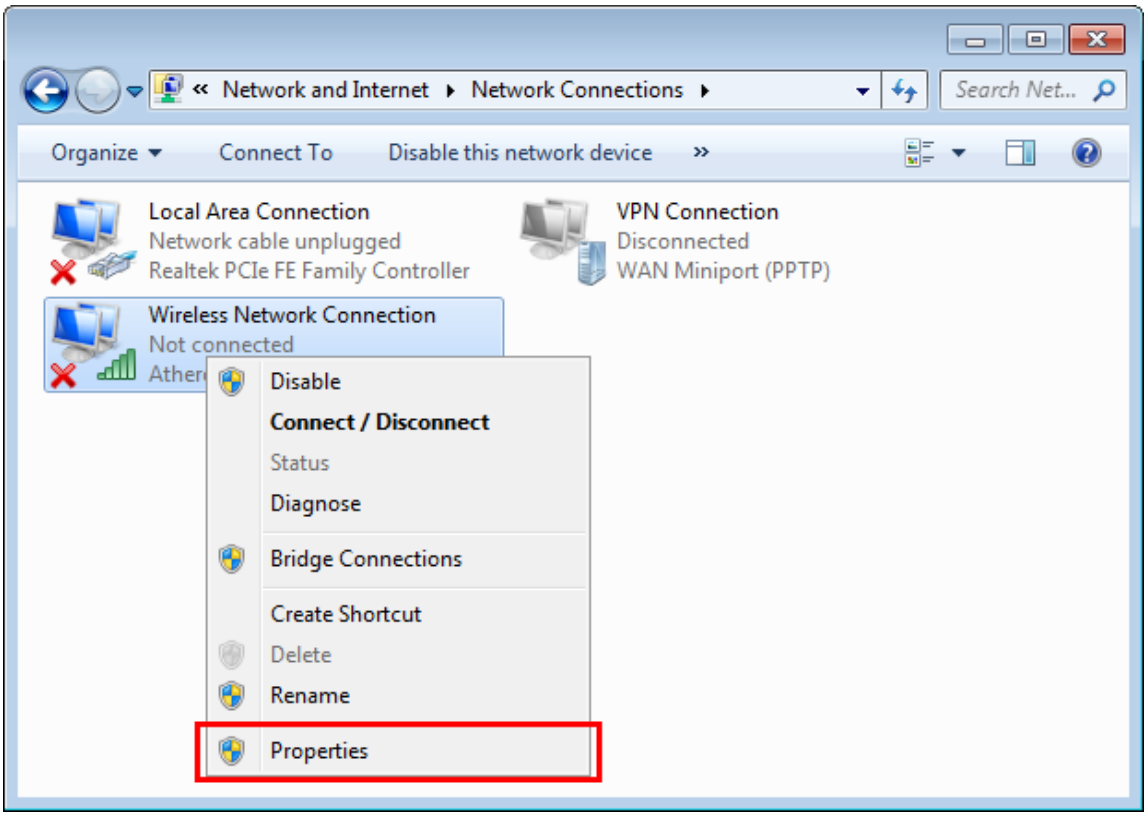


Figure 4-1-2 Network Connection Properties

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

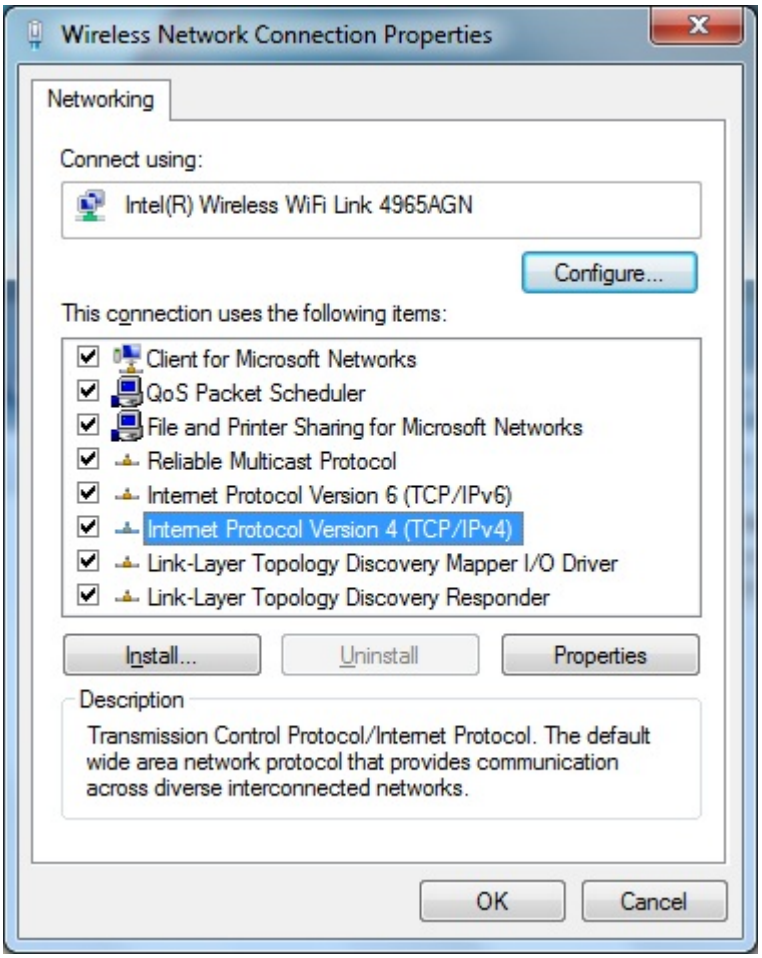


Figure 4-1-3 TCP/IP Setting

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.

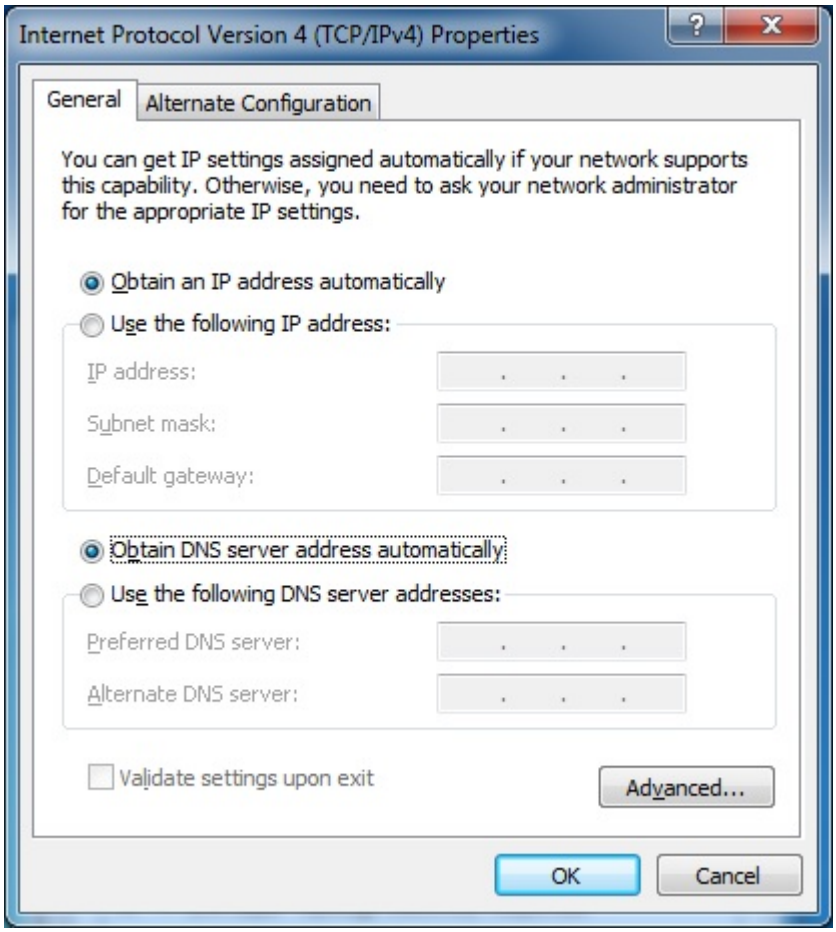


Figure 4-1-4 Obtain an IP address automatically

4.1.2 Configure 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 WNRT-633 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 WNRT-633, 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 WNRT-633)

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

2) If the LAN IP address of the WNRT-633 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 WNRT-633 (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.

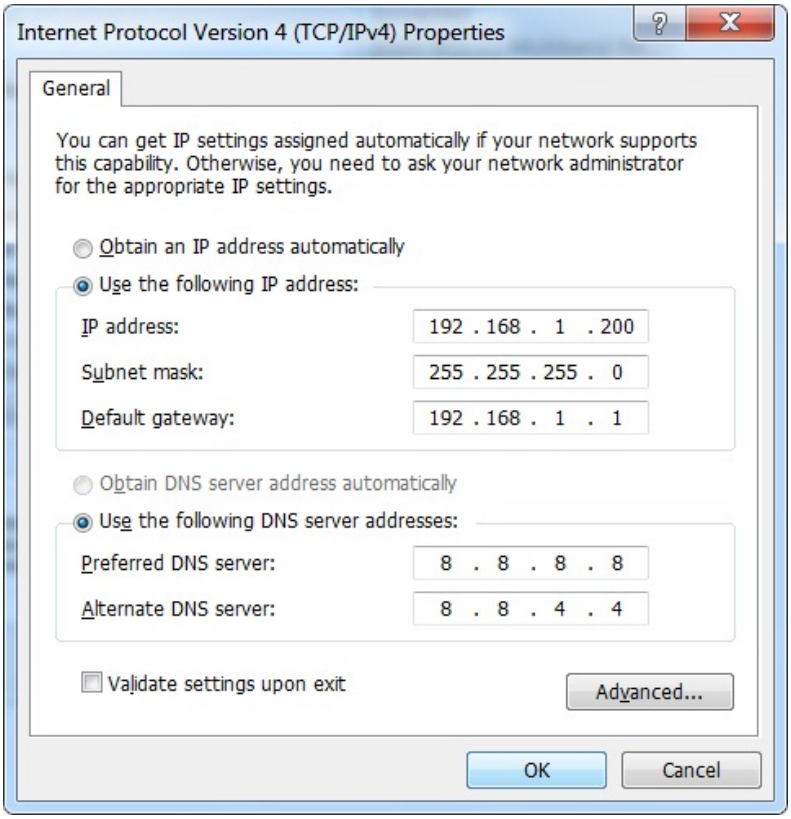


Figure 4-1-5

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.

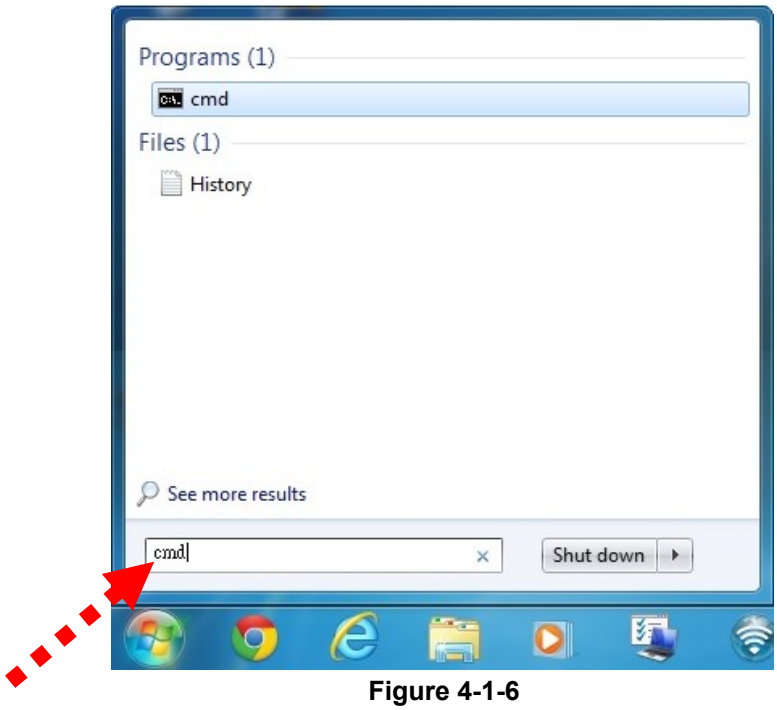


Figure 4-1-6

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

- If the result displayed is similar to Figure 4-1-7, it means the connection between your PC and the Router has been established well.

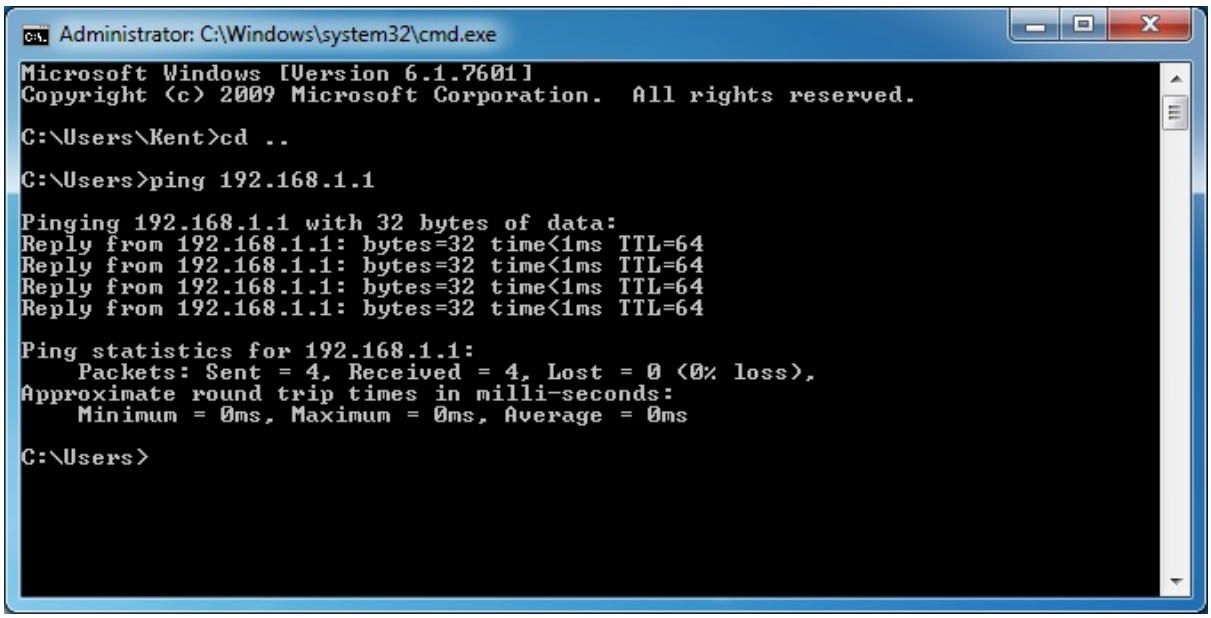


Figure 4-1-7 Success result of Ping command

- If the result displayed is similar to Figure 4-1-8, it means the connection between your PC and the Router has failed.

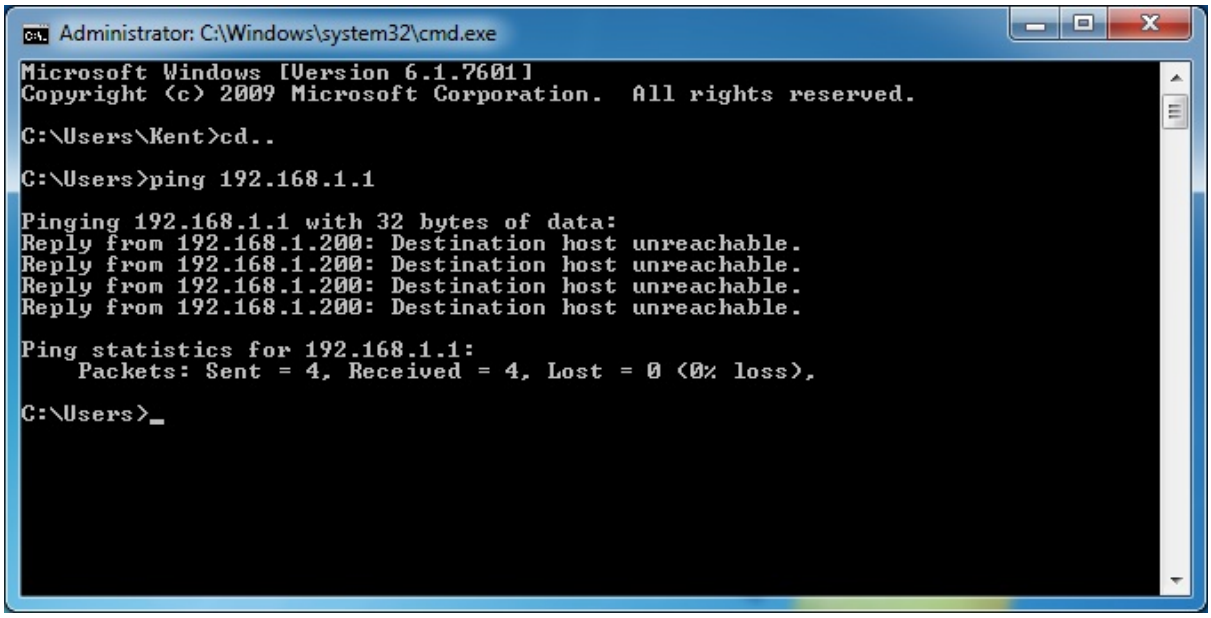


Figure 4-1-8 Failure result of Ping command

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.

Note

1. The 1/2/3/4 LEDs of LAN ports which you link to on the Router and LEDs on your PC's adapter should be lit.
2. 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 Web UI

It is easy to configure and manage the WNRT-633 via 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.

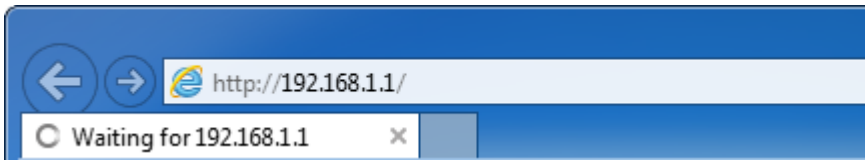


Figure 4-2-1 Login the Router

After a moment, a login window will appear. Enter the User Name and Password. Then click the **OK** button or press the **Enter** key.

Figure 4-2-2 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 your web browser's Tools menu>**Internet Options**>**Connections**>**LAN Settings**, in the screen that appears, cancel the Using Proxy checkbox, and click OK to finish it.

After you enter the username and password, the main screen appears as in Figure 4-2-3

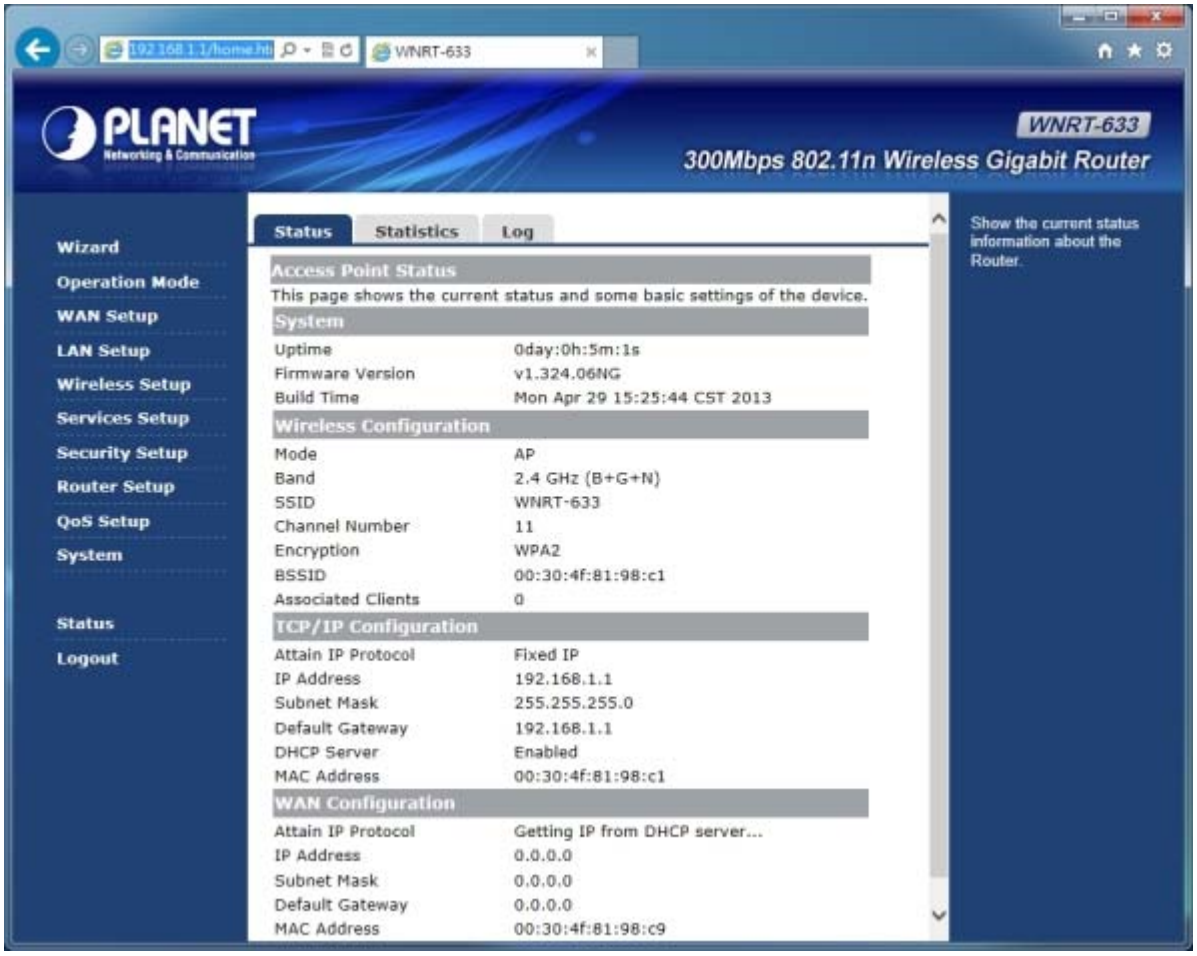


Figure 4-2-3 WNRT-633 Web UI Screenshot

On this page, you can view information about the current running status of WNRT-633, including WAN interface, LAN interface, wireless interface settings and status, and firmware version information.

The next chapter will introduce the functions of the web UI.

Chapter 5. Configuration in Web UI

After successfully logging into the web UI of the WNRT-633, you will see the main menus on the left side of the web-based utility. There are some different options appearing as the operation mode changes. For example, the figure below is the menu of Router Mode in the web UI.

During operation, if you are not clear about a certain feature, there are the corresponding explanations and instructions on the right side of the web page; you can simply read all related helpful info.
The details of the functions in each operation mode are listed in the following sections.

5.1 Wizard

The Setup Wizard will guide the user to configure the WNRT-633 easily and quickly. There are different procedures in different operation modes. According to the operation mode you switch to, please follow the instructions below to configure the WNRT-633 via Setup Wizard.

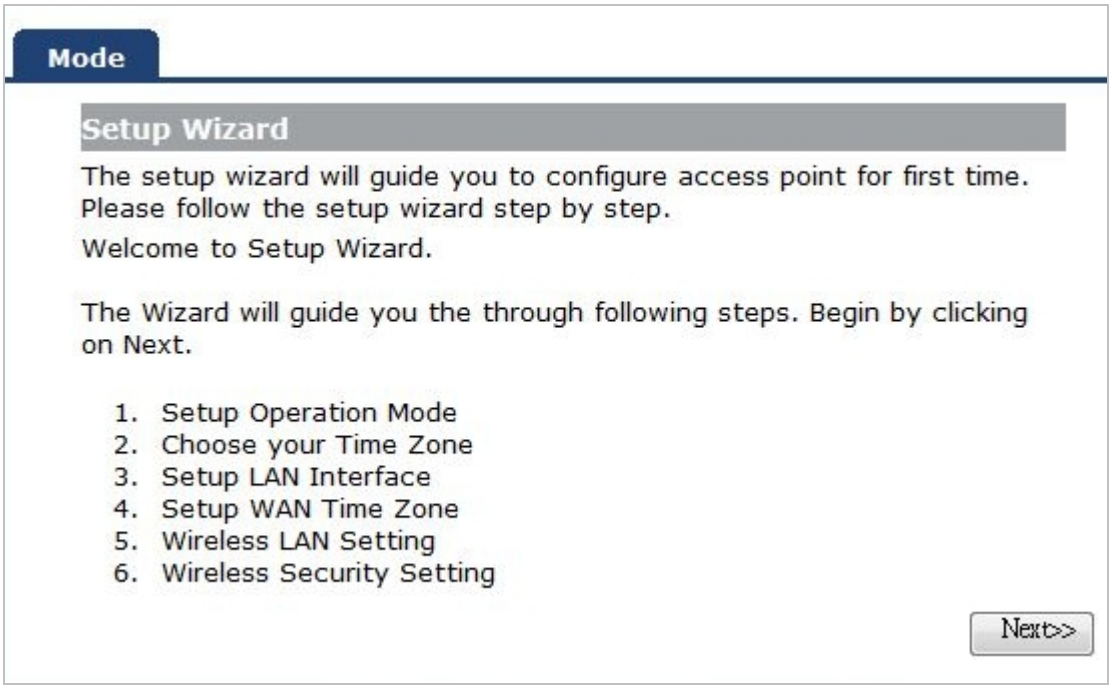
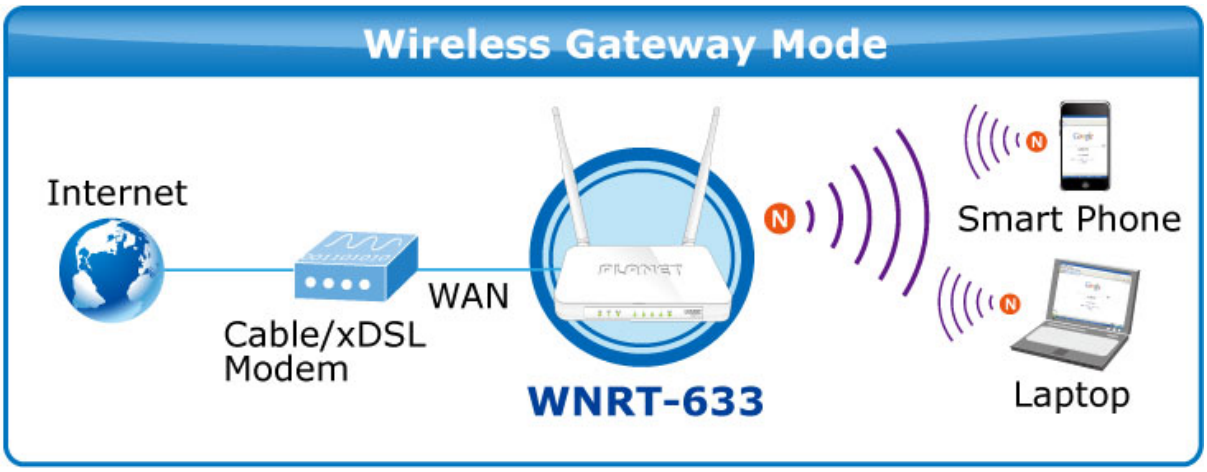
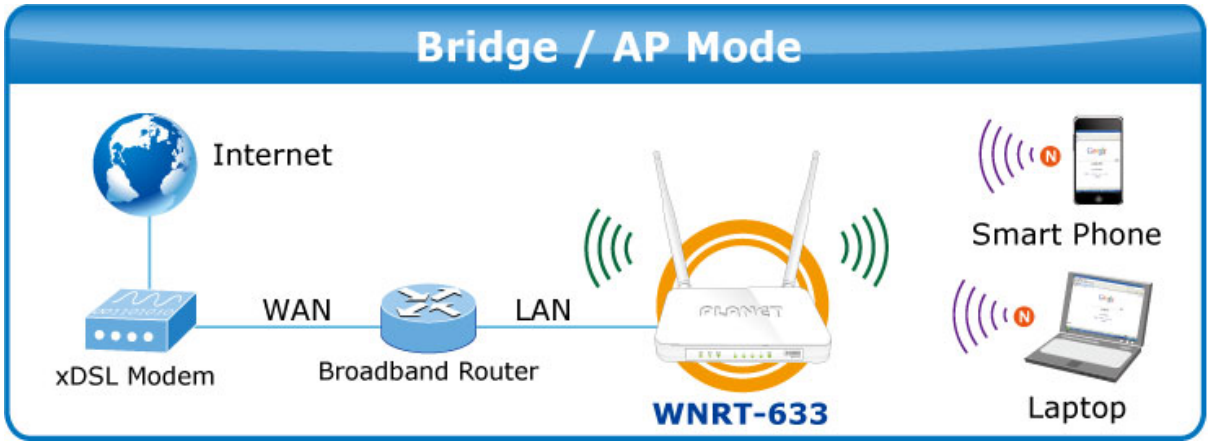


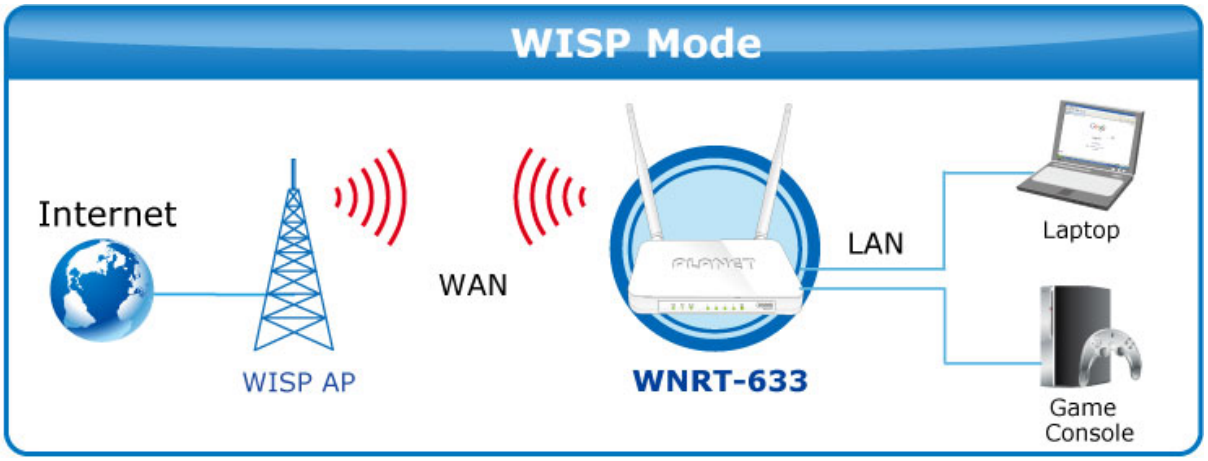
Figure 5-1-1 The Setup Wizard steps screenshot

Step 1: Setup Operation Mode

The router supports three operation modes**, Gateway**, **Bridge** and **Wireless ISP**.







Each mode is suitable for different uses. Please choose the correct mode.

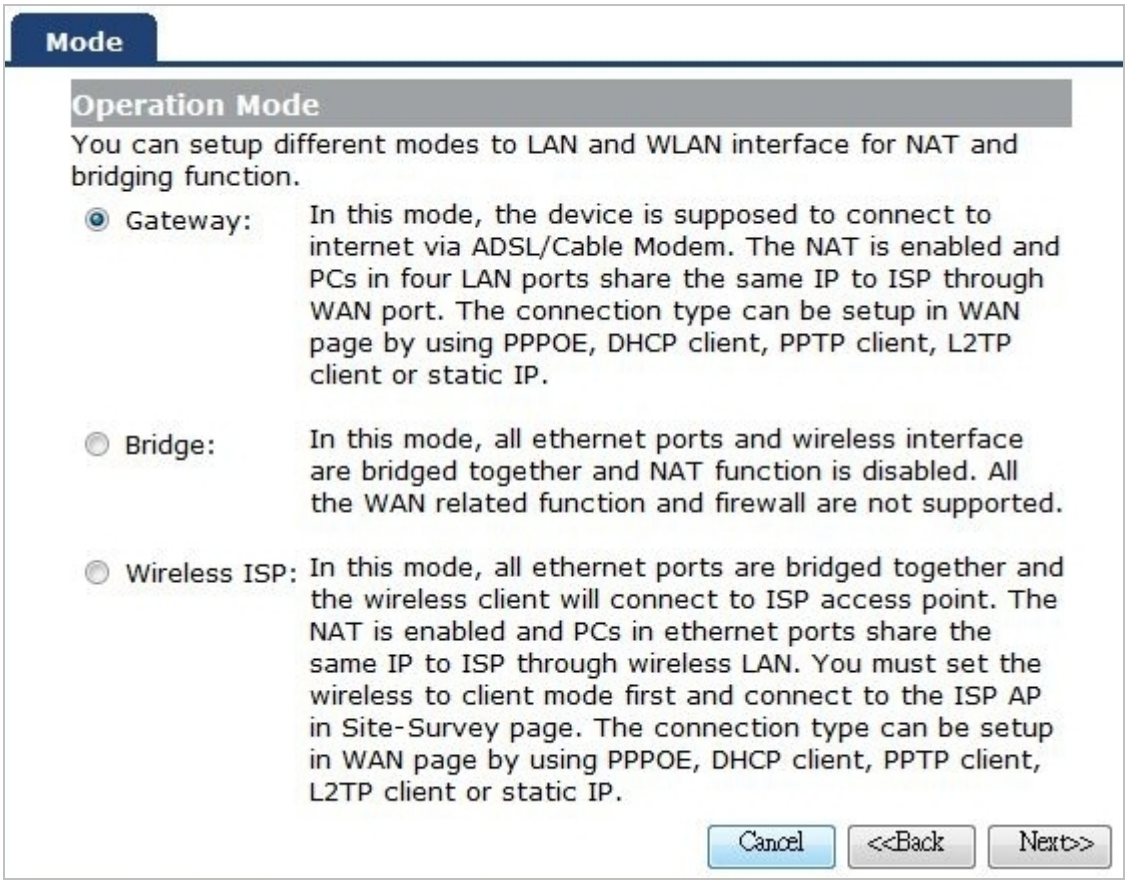


Figure 5-1-2 Setup Wizard – Operation Mode screenshot

Step 2: Time Zone Setting

The Time Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. Daylight Saving can also be configured to automatically adjust the time when needed.

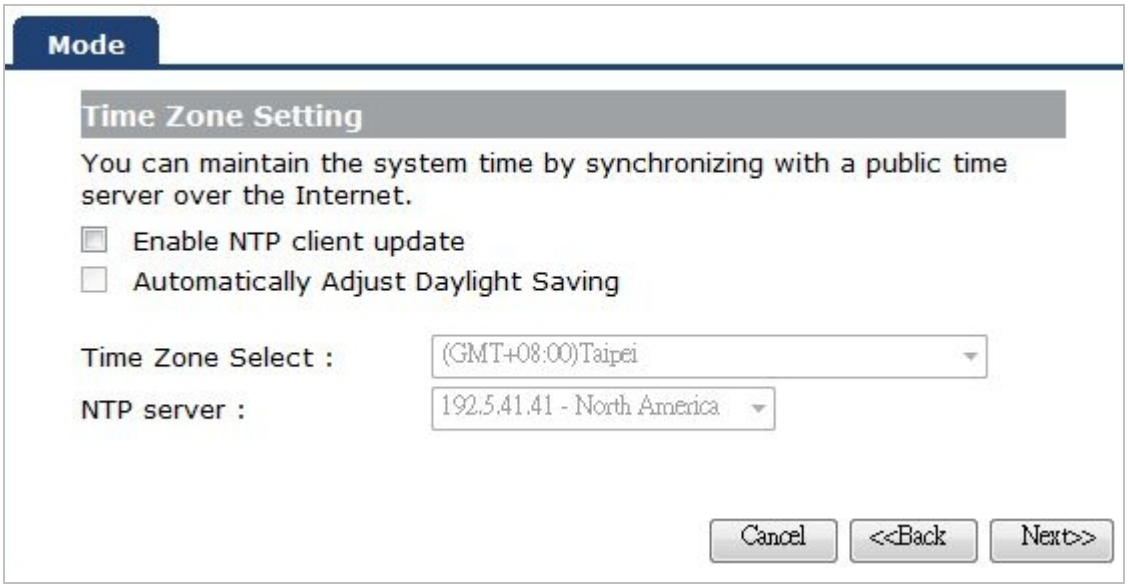


Figure 5-1-3 Setup Wizard – Time Zone Setting screenshot

The page includes the following fields:

Object	Description
Enable NTP client update	Check this box to connect NTP Server and synchronize internet time.
Automatically Adjust Daylight Saving	Check this box, system will adjust the daylight saving automatically.
Time Zone Select	Select the Time Zone from the drop-down menu.
NTP Server	Select the NTP Server from the drop-down menu.

Step 3: LAN Interface Setting

Set up the IP Address and Subnet Mask for the LAN interface.

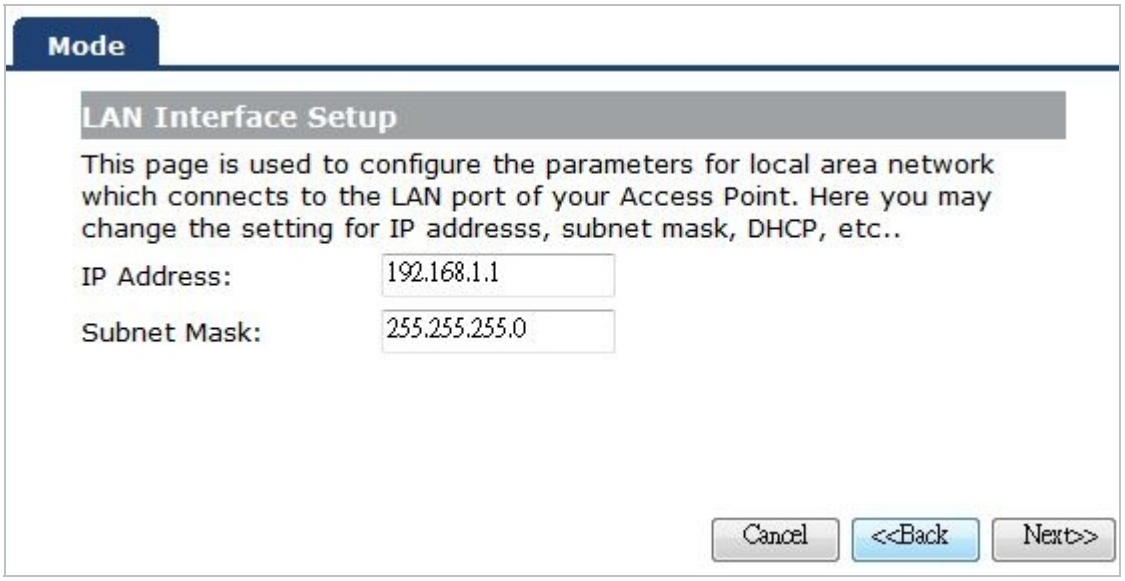


Figure 5-1-4 Setup Wizard – LAN Interface Setup screenshot

The page includes the following fields:

Object	Description
IP Address	Enter the IP address of your Router. Factory default: **192.168.1.1**
Subnet Mask	An address code that determines the size of the network. Normally use **255.255.255.0** as the subnet mask.

Step 4 WAN Interface Setting

The Wireless Router supports five access modes in the WAN side. Please choose the correct mode according to your ISP Service.

Mode 1 - DHCP Client

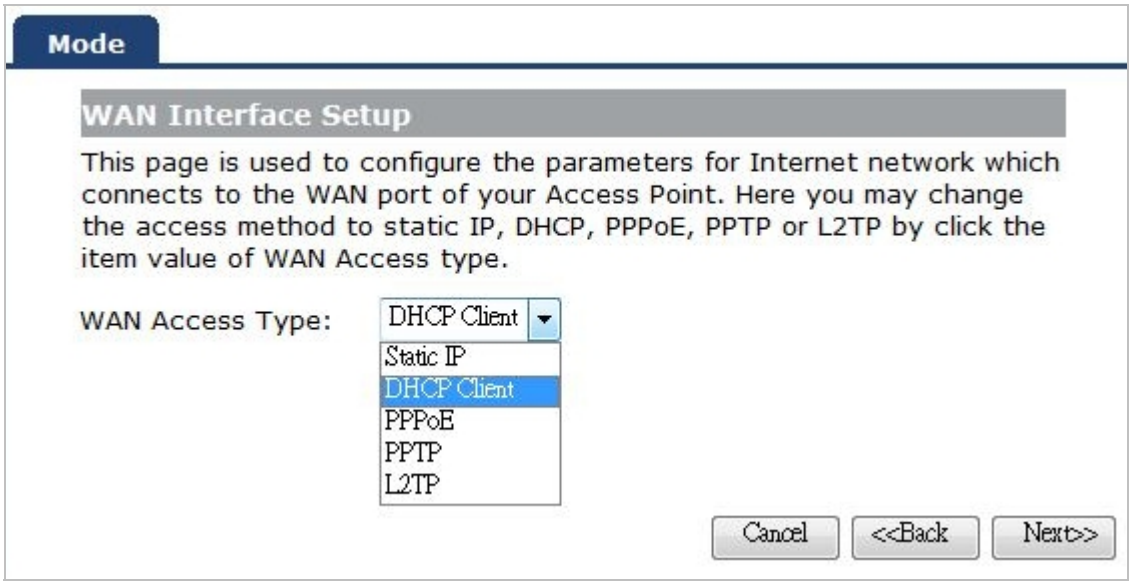


Figure 5-1-5 Setup Wizard – WAN Interface Setup screenshot

Select DHCP Client to obtain IP Address information automatically from your ISP.

Mode 2 Static IP

Select **Static IP Address** if all the Internet port's IP information is provided to you by your ISP. You will need to enter the **IP address**, **subnet mask**, **gateway address**, and **DNS address** provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The Router will not accept the IP address if it is not in this format.

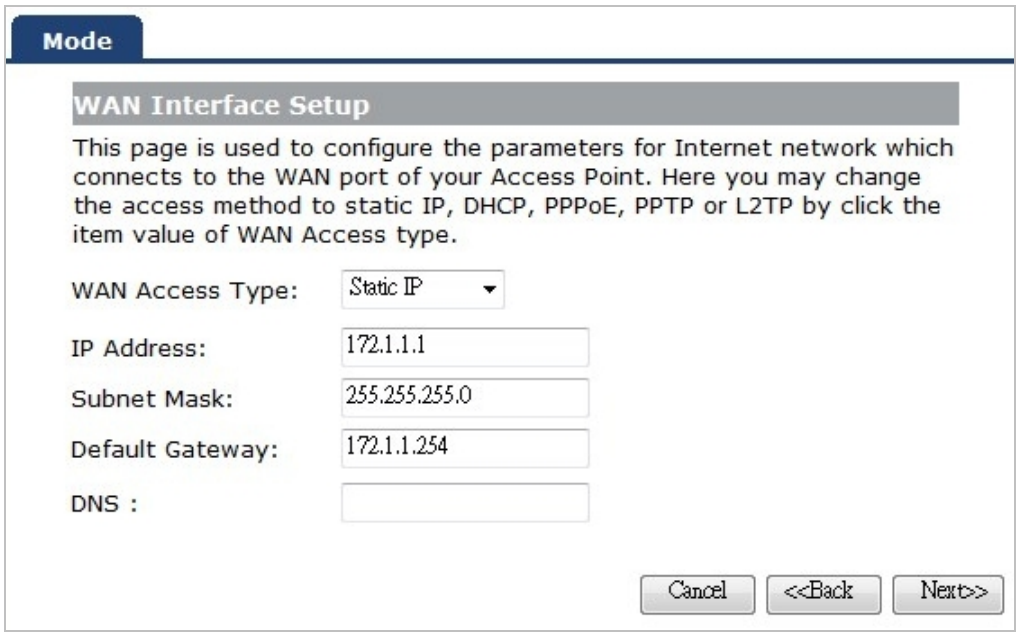


Figure 5-1-6 WAN Interface Setup – Static IP setup screenshot

The page includes the following fields:

Object	Description
IP Address	Enter the IP address assigned by your ISP.
Subnet Mask	Enter the Subnet Mask assigned by your ISP.
Default Gateway	Enter the Gateway assigned by your ISP.
DNS	The DNS server information will be supplied by your ISP (Internet Service Provider).

Mode 3 PPPoE

Choose **PPPoE** (**Point to Point Protocol over Ethernet**) if your ISP uses a PPPoE connection. Your ISP will provide you with a **username** and **password**. This option is typically used for DSL services.

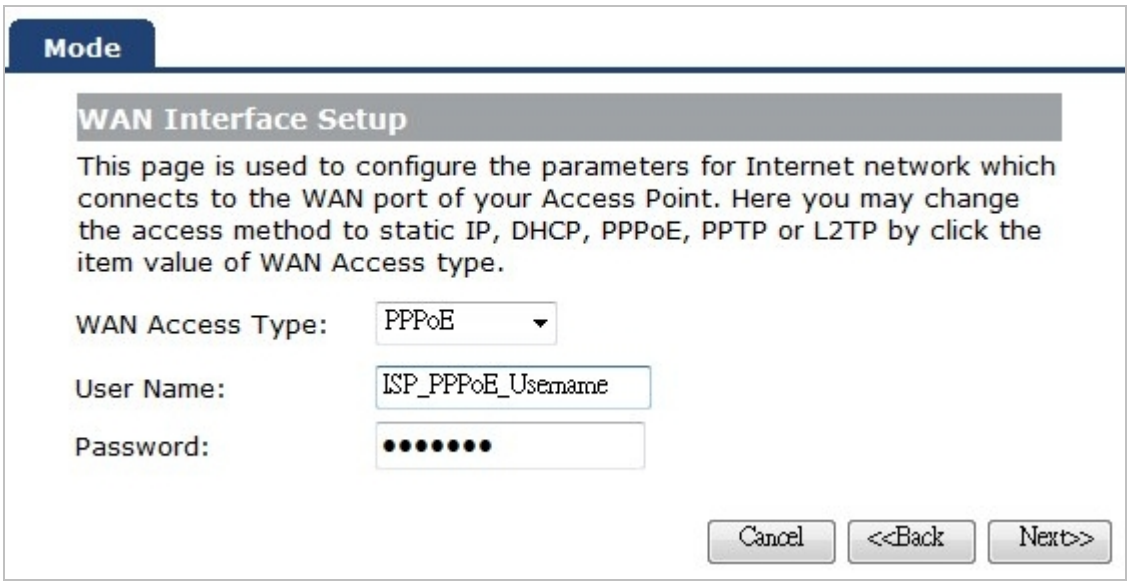


Figure 5-1-7 WAN Interface Setup – PPPoE setup screenshot

The page includes the following fields:

Object	Description
User Name	Enter your PPPoE user name.
Password	Enter your PPPoE password.

Mode 4 PPTP

Choose **PPTP** (**Point-to-Point-Tunneling Protocol**) if your ISP uses a PPTP connection. Your ISP will provide you with IP information and PPTP Server IP Address; of course, it also includes a **username** and **password**. This mode is typically used for DSL services.

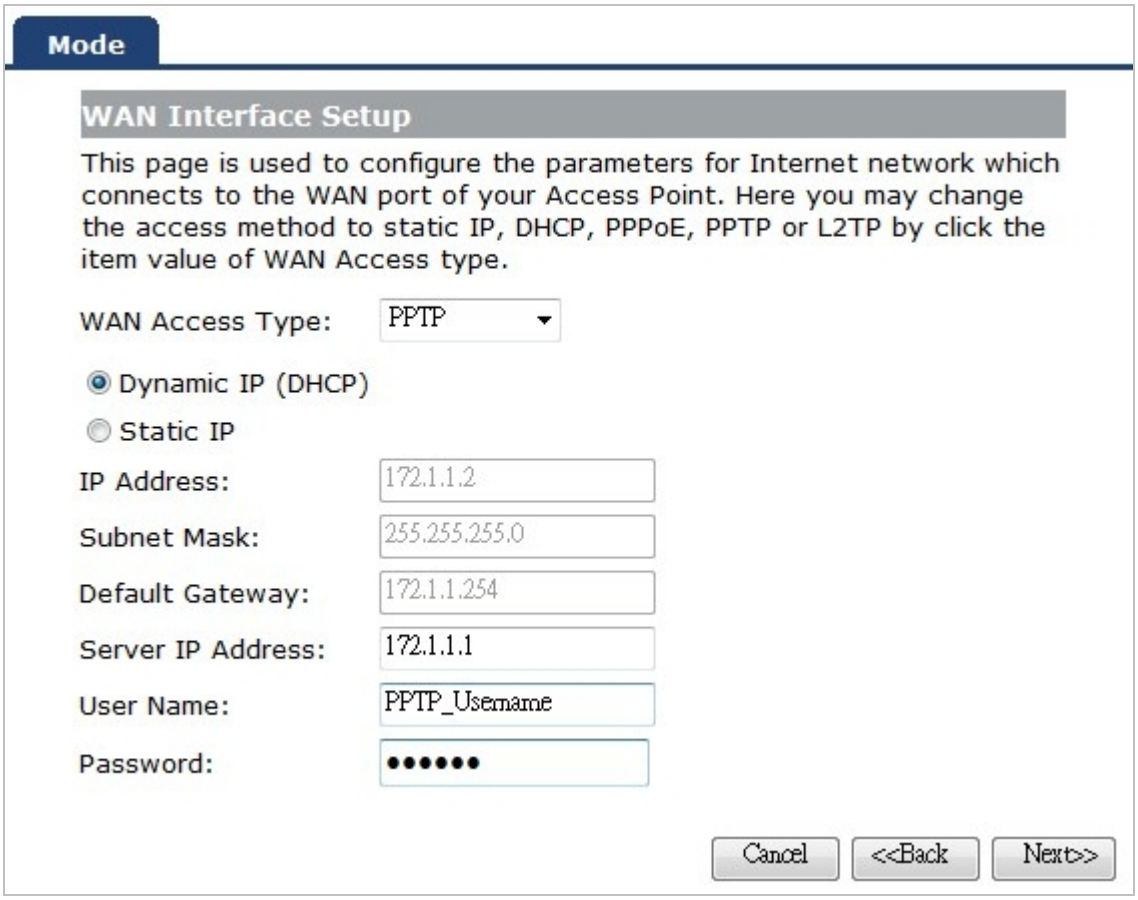


Figure 5-1-8 WAN Interface Setup – PPTP setup screenshot

The page includes the following fields:

Object	Description
IP Address	Enter the IP address.
Subnet Mask	Enter the subnet Mask.
Server IP Address	Enter the PPTP Server IP address provided by your ISP.
User Name	Enter your PPTP username.
Password	Enter your PPTP password.

Mode 5 L2TP

Choose L2TP (Layer 2 Tunneling Protocol) if your ISP uses a L2TP connection. Your ISP will provide you with a username and password.

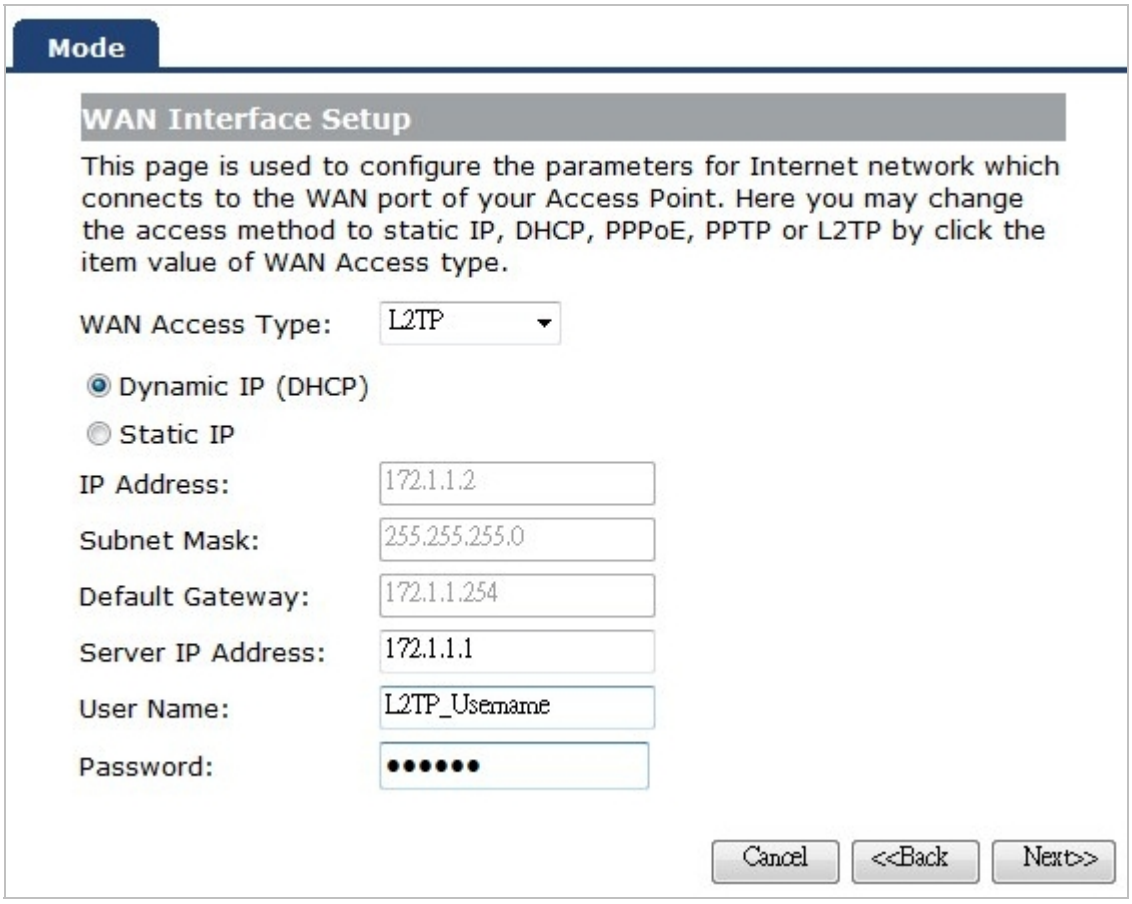


Figure 5-1-9 WAN Interface Setup – L2TP setup screenshot

The page includes the following fields:

Object	Description
IP Address	Enter the IP address.
Subnet Mask	Enter the subnet Mask.
Server IP Address	Enter the L2TP Server IP address provided by your ISP.
User Name	Enter your L2TP username.
Password	Enter your L2TP password.

Step 5: WLAN Settings

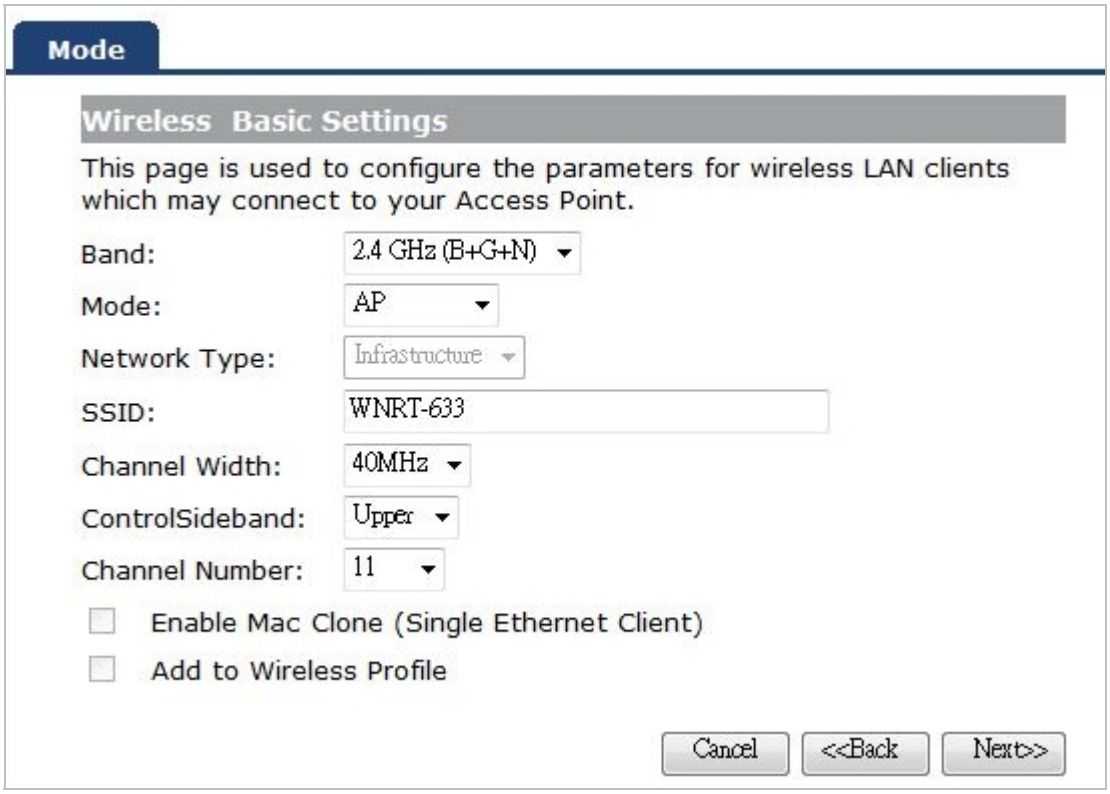


Figure 5-1-10 Wireless Basic Settings screenshot

The page includes the following fields:

Object	Description
Band	Supports 802.11B, 802.11G, 802.11N and mixed. Please choose its band according to your clients.
Mode	Supports AP, Client, WDS and AP+WDS mode.
Network Type	This type is only valid in client mode.
SSID	Service Set Identifier, it identifies your wireless network.
Channel Width	Select 40MHz if you use 802.11n or 802.11n mixed mode, otherwise 20MHz, it is default value.
Control Sideband:	It is only valid when you choose channel width 40MHz.
Channel Number	Indicates the channel setting for the router.
Enable Mac Clone	Enables or disables MAC clone option. You can use the "Mac Clone" button to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with this MAC address.

Step 6: Wireless Security Setup

Secure your wireless network by turning on the WPA or WEP security feature on the router. For this section you can set **WEP** and **WPA-PSK** security mode.

■ Encryption: WEP

The following picture shows how to set the WEP security.

Figure 5-1-11 Wireless Security Setup – WEP setting screenshot

The page includes the following fields:

Object	Description
Key length	WEP supports 64-bit or 128-bit security key.
Key Format	User can enter key in ASCII or Hex format.
Key Setting	Enter the key, its format is limited by the Key format, ASCII or Hex.

■ Encryption: WPA-PSK

The following picture shows how to set **WPA-PSK** security. You can select **WPA (TKIP)**, **WPA2 (AES)** and **Mixed mode**.

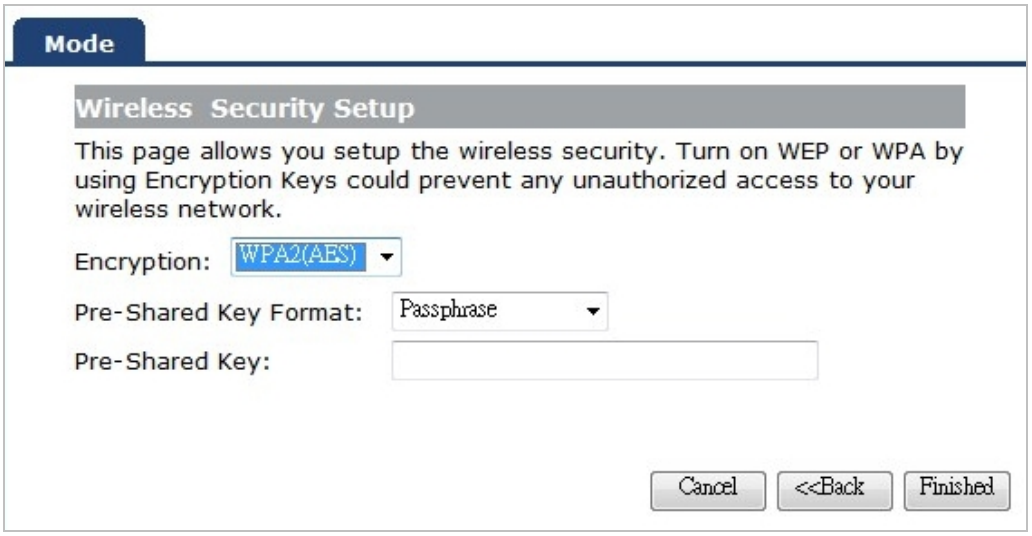


Figure 5-1-12 Wireless Security Setup – WPA setting screenshot

The page includes the following fields:

Object	Description
Pre-Shared Key Format	Specify the format of the key, pass phrase or hex.
Pre-Shared Key	Enter the key here, its format is limited by the key format.

Click the **Reboot** button to make your wireless configuration to take effect and finish the **Setup Wizard**.

Figure 5-1-13

After the rebooting, please check whether you can access the Internet or not in the "**Status**" page.

5.2 Operation Mode

This page shows the current operation mode, and users can set different modes to LAN and WLAN interface for NAT and bridging function on the WNRT-633.

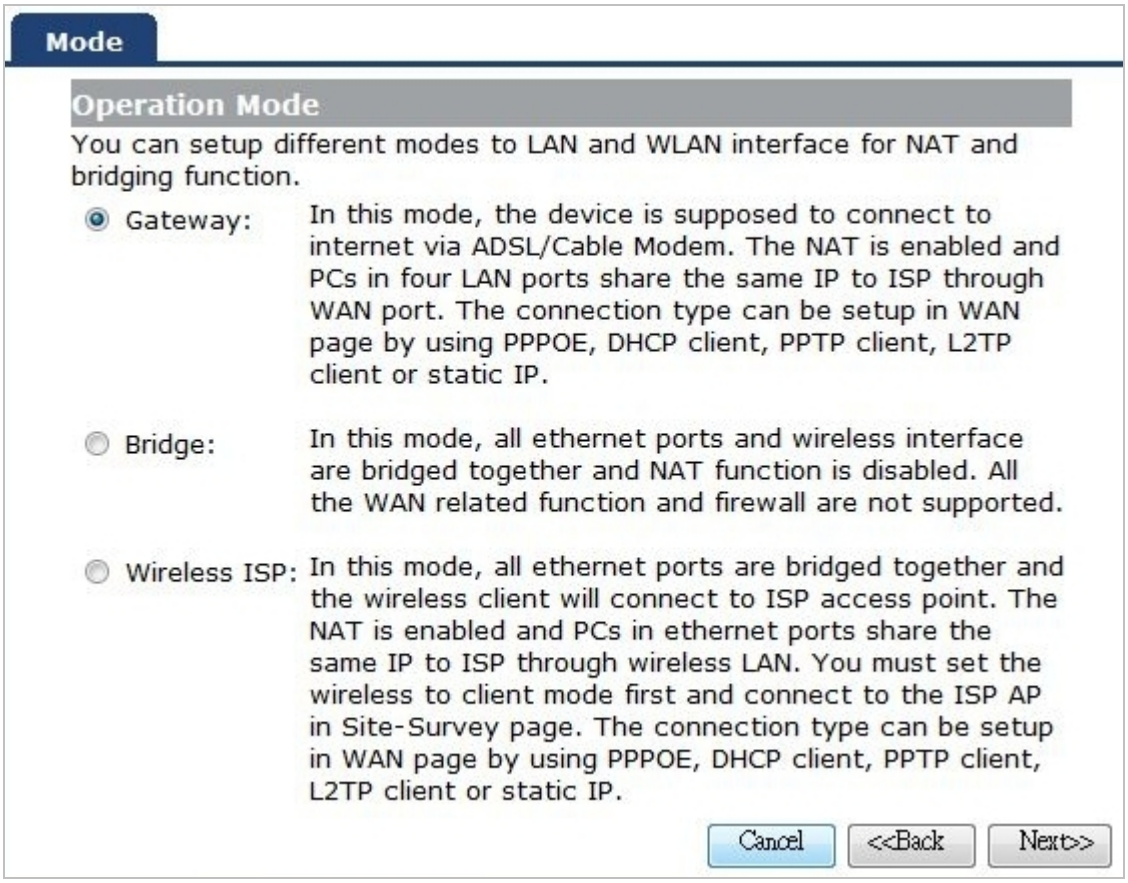
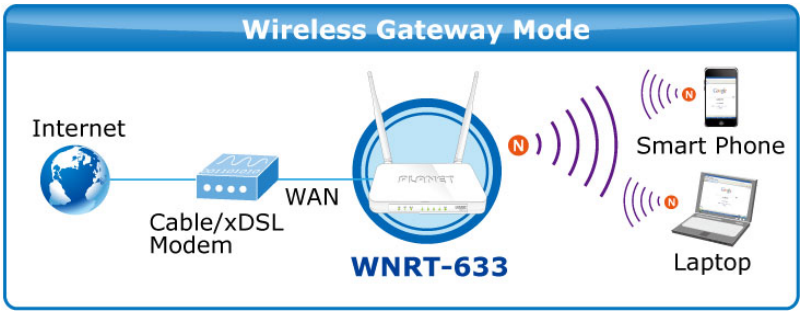
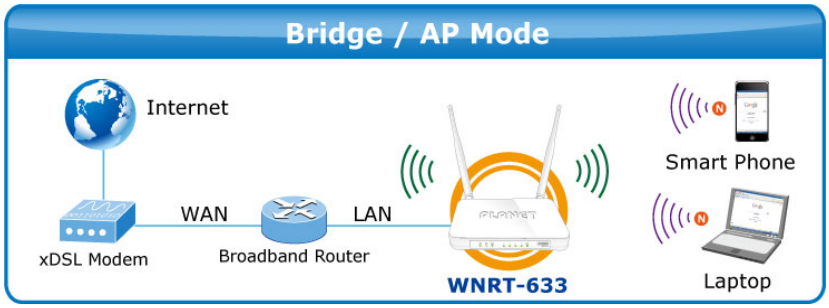
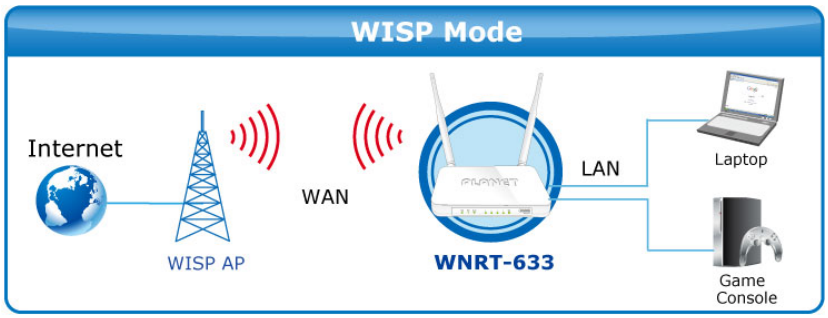


Figure 5-2-1 Operation Mode

The page includes the following fields:

Object	Description
Gateway	In this mode, the device enables multiusers to share Internet via ADSL/Cable Modem. The wireless port shares the same IP to ISP through Ethernet WAN port. The Wireless port acts the same as a LAN port while at AP Router mode. 

Bridge	In this mode, the device can be used to combine multiple local networks together to the same one via wireless connections, especially for a home or office where separated networks can't be connected easily together with a cable. 
Wireless ISP	In this mode, the device enables multiusers to share Internet from WISP. The LAN port devices share the same IP from WISP through Wireless port. While connecting to WISP, the **Wireless port works as a WAN port** at **AP Client** Router mode. The Ethernet port acts as a LAN port. 

5.3 WAN Setup

You can configure WAN connection type manually here just like it in Setup Wizard, and set advanced functions like DDNS (Dynamic DNS) here.

5.3.1 WAN Interface

This page is used to configure the parameters for Internet network which connects to the WAN port of your Wireless Router. Here you may change the access method to **static IP**, **DHCP**, **PPPoE**, **PPTP** or **L2TP** by clicking the item value of the WAN Access type.

Choose menu "**WAN Setup → WAN Setup**", and you can configure the parameters for the Internet network. After the configuration, please click the "Apply" button to save the settings.

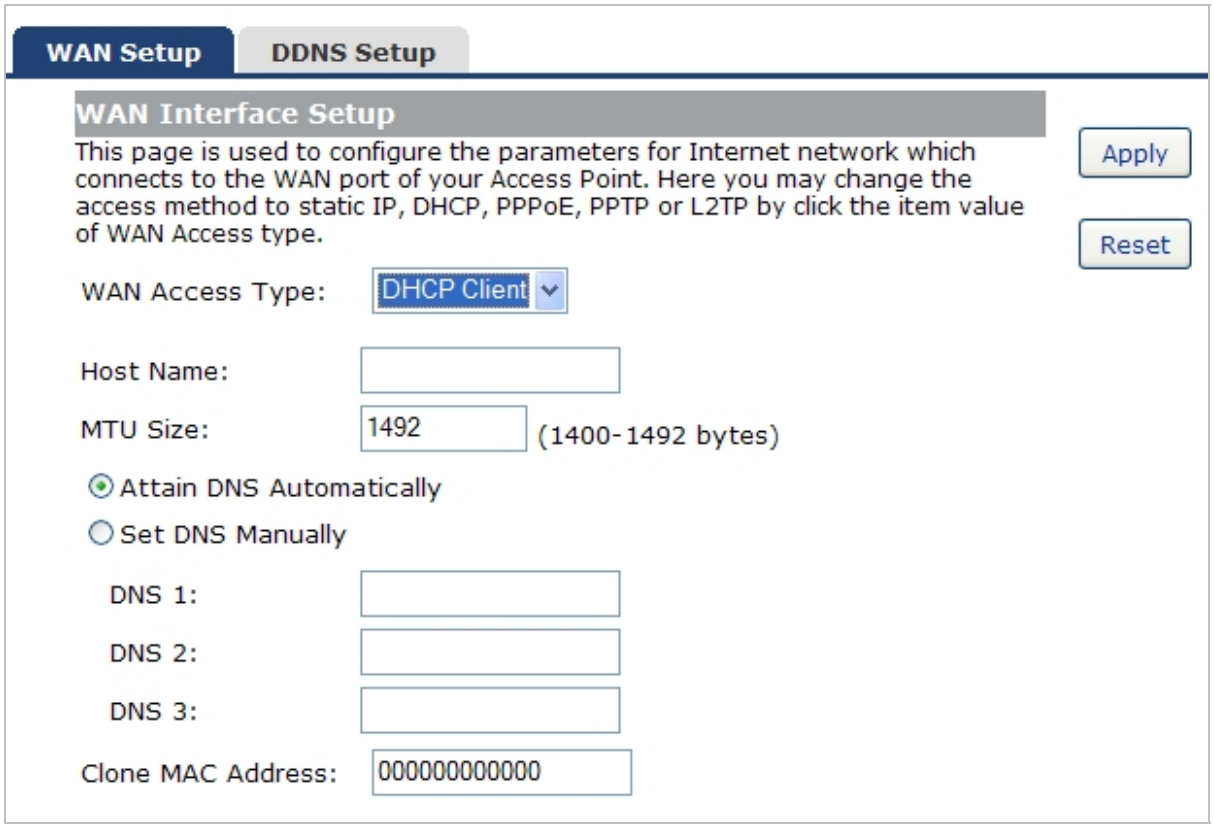


Figure 5-3-1 WAN Interface Setup screenshot

The page includes the following fields:

Object	Description	
WAN Access Type	Please select the corresponding WAN Access Type for the Internet, and fill the correct parameters from your local ISP in the fields which appear below.	
	DHCP Client	Select DHCP Client to obtain IP Address information automatically from your ISP.
	Static IP	Select Static IP Address if all the Internet port's IP information is provided to you by your ISP (Internet Service Provider). You will need to enter the IP address, subnet mask, gateway address, and DNS address provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The Router will not accept the IP address if it is not in this format. **IP Address** Enter the IP address assigned by your ISP. **Subnet Mask** Enter the Subnet Mask assigned by your ISP. **Default Gateway** Enter the Gateway assigned by your ISP.

		DNS The DNS server information will be supplied by your ISP.
	PPPoE	Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. **User Name** Enter your PPPoE user name. **Password** Enter your PPPoE password.
	PPTP	Choose PPTP (Point-to-Point-Tunneling Protocol) if your ISP uses a PPTP connection. Your ISP will provide you with IP information and PPTP Server IP Address; of course, it also includes a username and password. This mode is typically used for DSL services. **IP Address** Enter the IP address.. **Subnet Mask** Enter the Subnet Mask. **Server IP Address** Enter the PPTP Server IP address provided by your ISP. **User Name** Enter your PPTP user name. **Password** Enter your PPTP password.
	L2TP	Choose L2TP (Layer 2 Tunneling Protocol) if your ISP uses a L2TP connection. Your ISP will provide you with a username and password. **IP Address** Enter the IP address.. **Subnet Mask** Enter the Subnet Mask. **Server IP Address** Enter the L2TP Server IP address provided by your ISP. **User Name** Enter your L2TP user name. **Password** Enter your L2TP password.
Host Name	This option specifies the Host Name of the Wireless Router.	

MTU Size	The normal **MTU** (Maximum Transmission Unit) value for most Ethernet networks is 1492 Bytes. It is not recommended that you change the default **MTU Size** unless required by your ISP.
Attain DNS Automatically	Select "**Attain DNS Automatically**", the DNS servers will be assigned dynamically from your ISP.
Set DNS Manually	If your ISP gives you one or two DNS addresses, select **Set DNS Manually** and enter the primary and secondary addresses into the correct fields.
Clone MAC Address	You can input a MAC address here for using clone function.

If you get Address not found error when you access a Web site, it is likely that your DNS servers are set up improperly. You should contact your ISP to get DNS server addresses.

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.

5.3.2 DDNS

The Wireless Router offers the **DDNS** (Dynamic Domain Name System) feature, which allows the hosting of a website, FTP server, or e-mail server with a fixed domain name (named by yourself) and a dynamic IP address, and then your friends can connect to your server by entering your domain name no matter what your IP address is. Before using this feature, you need to sign up for DDNS service providers such as PLANET DDNS or www.dyndns.org. The Dynamic DNS client service provider will give you a password or key.

Choose menu "**WAN Setup → DDNS Setup**" to configure the settings about Dynamic DNS. After the configuration, please click the "Apply" button to save the settings.

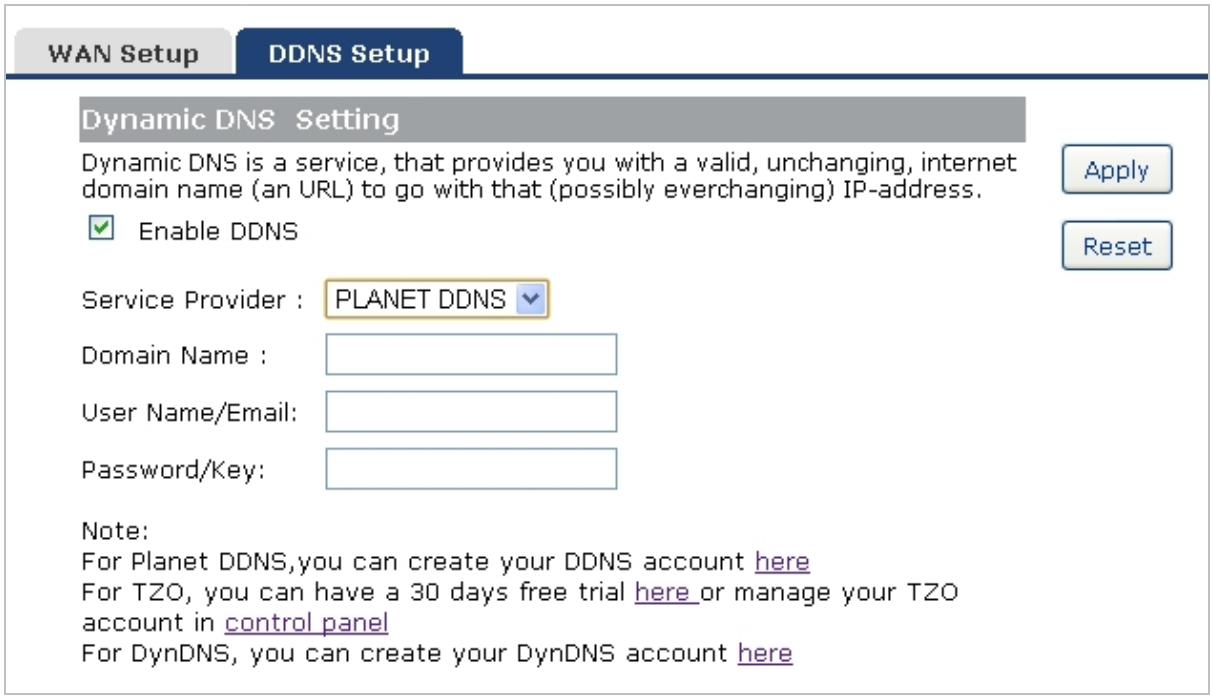


Figure 5-3-2 DDNS Setup screenshot

The page includes the following fields:

Object	Description
Enable DDNS	Check the box to enable the Dynamic DNS function.
Service Provider	Select the DDNS service provider from the drop-down menu, such as PLANET DDNS, DynDNS or TZO.
Domain Name	Enter the domain name you have registered from the DDNS service provider.
User Name/Email	Enter the user name or email you have registered from the DDNS service provider.
Password/Key	Enter the password you have registered from the DDNS service provider.

5.3.3 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.

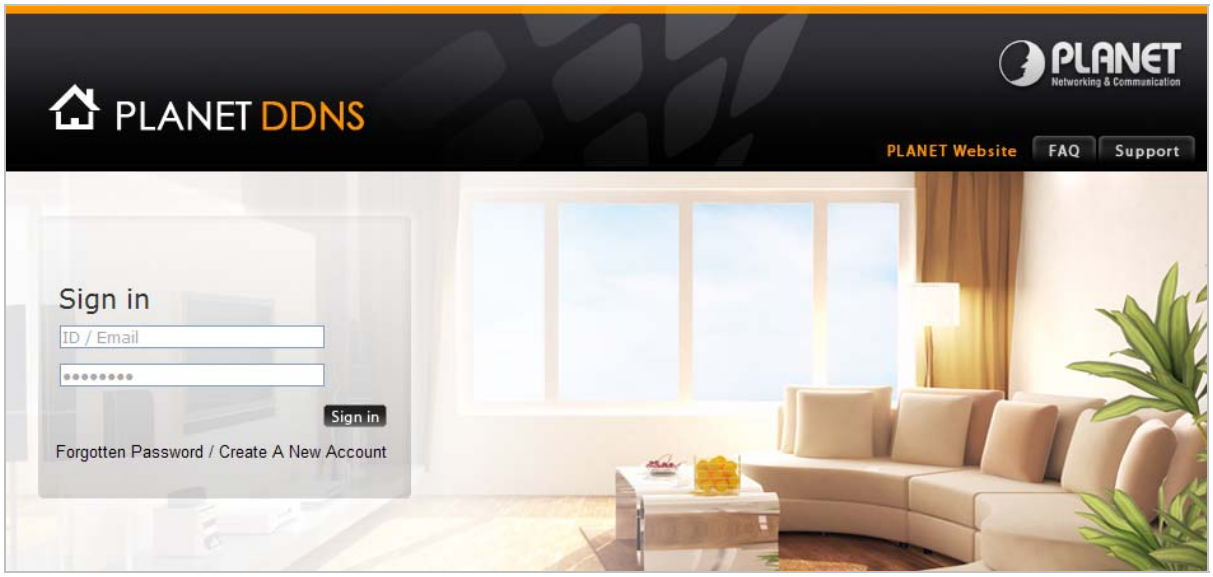


Figure 5-3-3 Planet DDNS Website

When you finish your DDNS account, please return to WAN Setup -> WAN Setup to set up your WAN type which can be connected to external network.

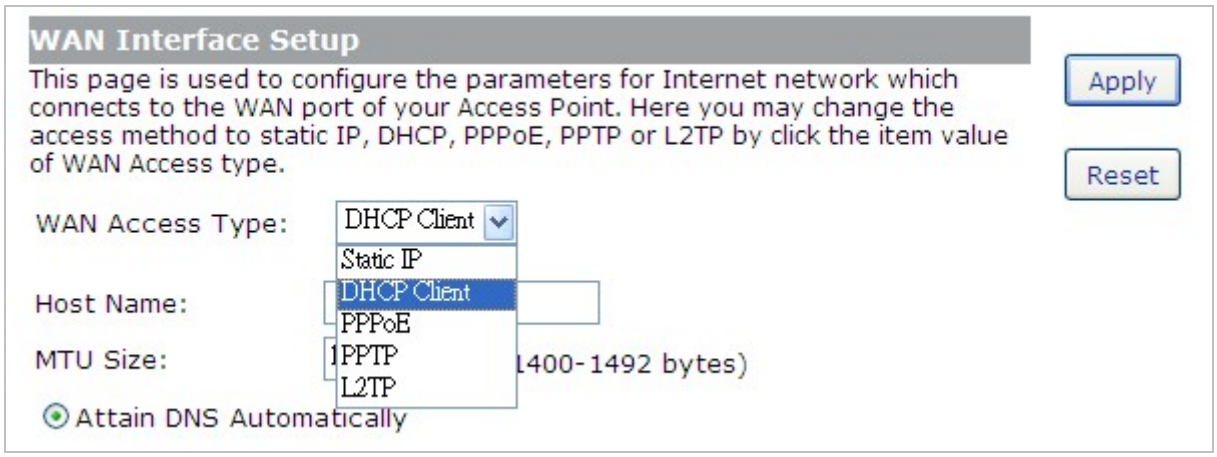


Figure 5-3-4 WAN Settings

To select dynamic DNS **Service Provider** www.planetddns.com, the page will appear as shown in **Figure 5-3-5**.

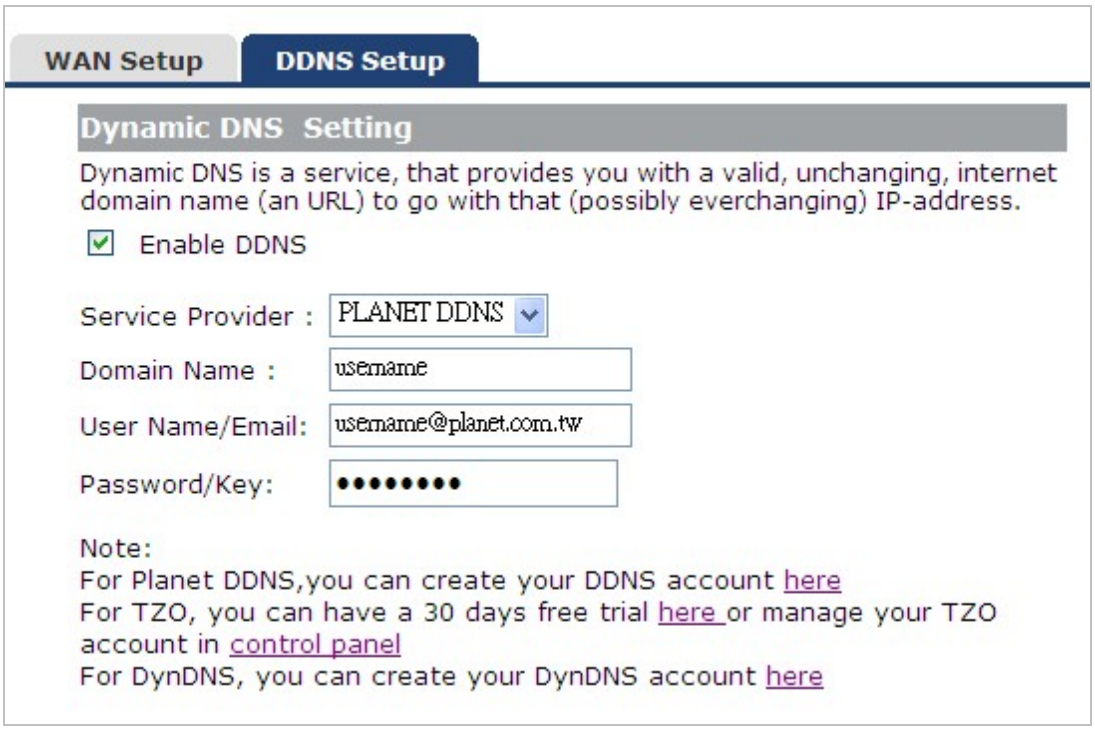


Figure 5-3-5 PlanetDDNS Settings

Step 1. Enable DDNS, and then select "**PLANET DDNS**".

To set up for DDNS, follow these instructions:

Step 1. Type the **Domain Name** you received from dynamic DNS service provider.

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

Step 3. Type the **Password** for your DDNS account.

Step 2. Go to "**Security Setup-> Security**" page to allow remote access from WAN port.

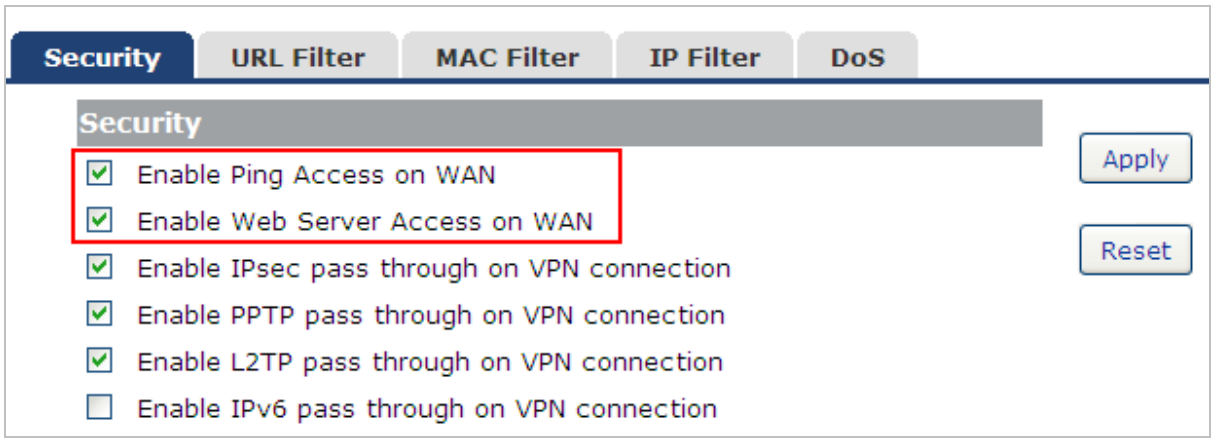


Figure 5-3-6 Enable Web Access on WAN

Step 3. Apply the settings, and ensure you have connected the WAN port to the internet by Ethernet cable.

Step 4. In a remote computer, enter the Domain Name to the internet browser's address bar.

Figure 5-3-7 Login PLANET DDNS

Lastly 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.

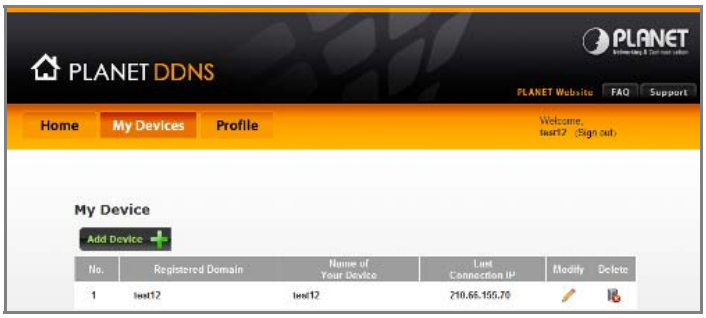


Figure 5-3-8 My Devices

5.3.4 Planet EasyDDNS

PLANET Easy DDNS is a way help to get your Domain Name with just one click. You can just login to the Web Management Interface of your devices, check the DDNS menu and just enable it.

Once you enabled the Easy DDNS, your PLANET Network Device will use the format PLxxxxxx where xxxxxx is the last 6 characters of your MAC address that can be found on the Web page or bottom label of the device. (For example: 00-30-4F-77-88-17, it will be converted into **PL778817**.planetddns.com)

To use Planet EasyDDNS service, please refer to the procedure listed as following.

Step 1. Select "**Enable Easy DDNS**" to use the Planet Easy DDNS service.

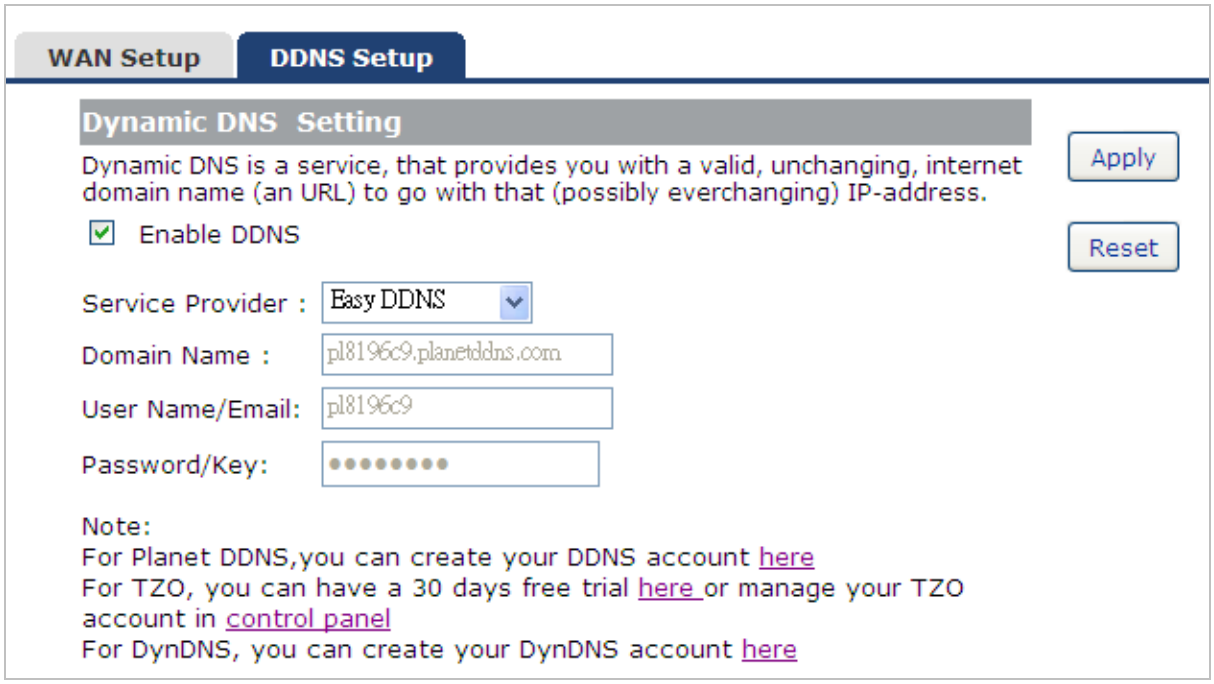


Figure 5-1-9 Planet EasyDDNS Settings

Domain Name：Display the specified domain name for this device. (format: plxxxxxx.planetddns.com, xxxxxx is the last six-digit of the WAN Port MAC address)

Step 2. Go to "**Security Setup-> Security**" page to allow remote access from WAN port.

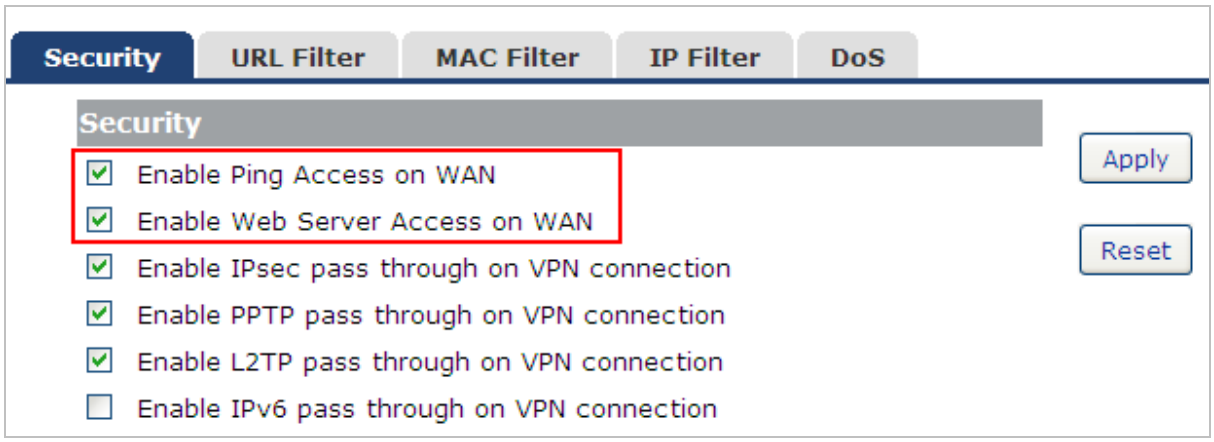


Figure 5-3-10 Enable Web Access on WAN

Step 3. Apply the settings, and ensure you have connected the WAN port to the internet by Ethernet cable.

Step 4. In a remote computer, enter the Domain Name displayed in the **Figure 5-3-9** to the internet browser's address bar.

Figure 5-3-11 Login Easy DDNS

5.4 LAN Setup

There are two ways to assign IP addresses to computers:

- **Static IP Address** (set the IP address for every computer manually)
- **Dynamic IP Address** (IP address of computers will be assigned by a router automatically)

It is recommended for most of computers to use dynamic IP address, because it will save a lot of time on setting IP addresses for every computer, especially when there are a lot of computers in the network; for servers and network devices which will provide services to other computers and users that come from Internet, static IP address should be useful, so other computers are able to locate the server. You can configure the IP parameters of the LAN on the screen as below.

5.4.1 LAN Interface Setup

Choose menu "**LAN Setup → LAN Interface**", and you can configure the parameters for LAN (Local Area Network). After the configuration, please click the "Apply" button to save the settings.

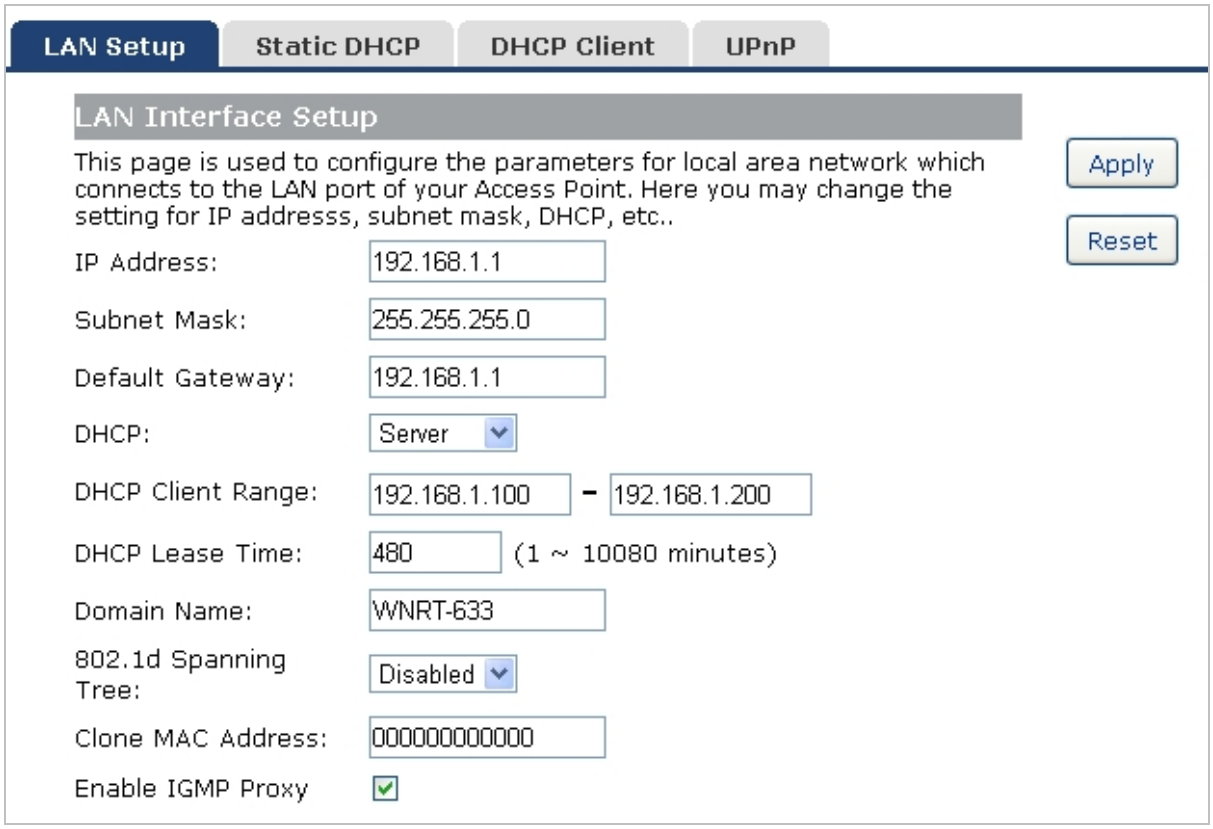


Figure 5-4-1 LAN Interface Setup screenshot

The page includes the following fields:

Object	Description
IP Address	The LAN IP address of the WNRT-633, and default is **192.168.1.1**. You can change it according to your request.
Subnet Mask	Default is **255.255.255.0**. You can change it according to your request.
Default Gateway	Default is **192.168.1.1**. You can change it according to your request.

DHCP	You can select one of **Disable**, **Client**, **and Server**. Default is **Server,** that the WNRT-633 can assign IP addresses to the computers automatically.
DHCP Client Range	For the **Server** mode, you must enter the DHCP client IP address range in the field. And you can click the "**Show Client**" button to show the Active DHCP Client Table.
Static DHCP	Click the "**Set Static DHCP**" button, and you can reserve some IP addresses for those network devices with the specified MAC addresses anytime when they request IP addresses.
Domain Name	Default is **Router**.
802.1d Spanning Tree	You can enable or disable the spanning tree function.
Clone MAC Address	You can input a MAC address here for using clone function.

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.

5.4.2 Static DHCP

This page allows you reserve IP addresses, and assign the same IP address to the network device with the specified MAC address any time it requests an IP address. This is almost the same as when a device has a static IP address except that the device must still request an IP address from the DHCP server.

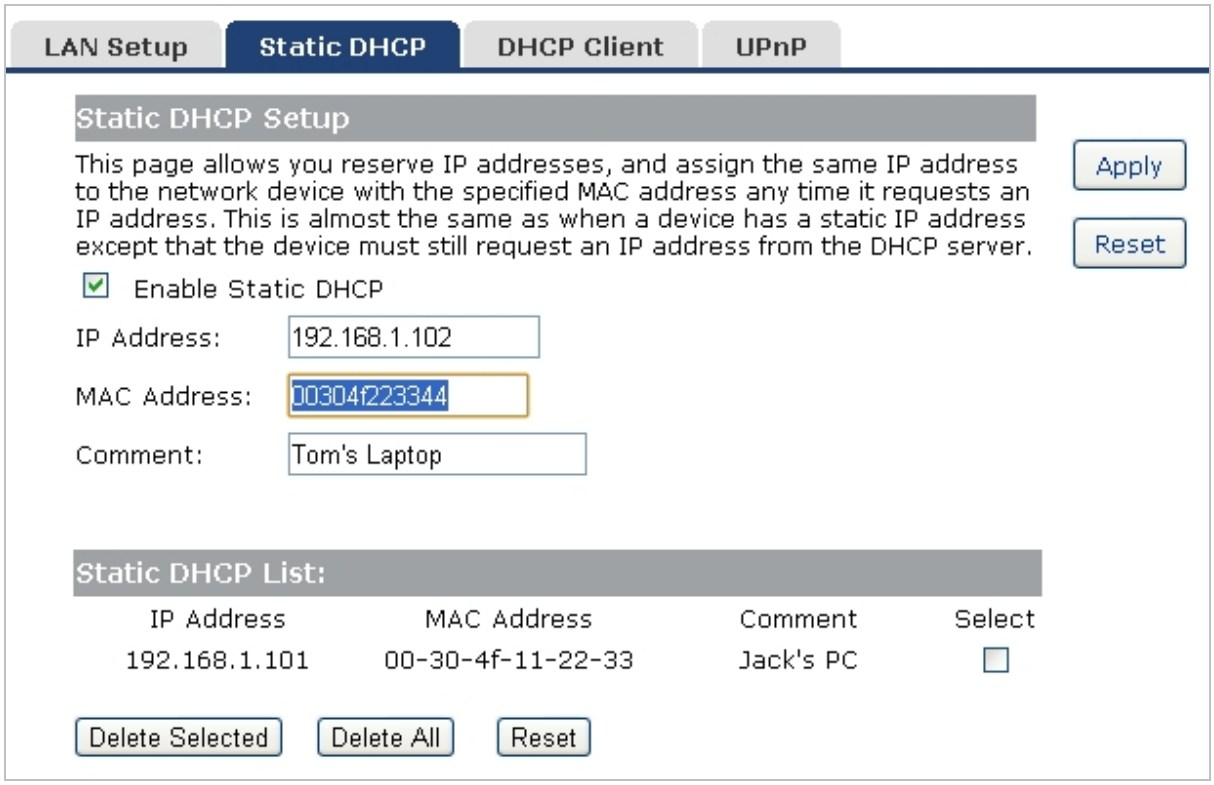


Figure 5-4-2 Static DHCP Setup screenshot

The page includes the following fields:

Object	Description
IP Address	Enter the IP address which needs to be bound.
MAC Address	Enter the MAC address of the computer you want to assign the above IP address.
Comment	You can add some comment for this item.

Click "**Apply**" to add the entry in the list.

5.4.3 DHCP Client

This table shows the assigned IP address, MAC address and time expired for each DHCP leased client.

Figure 5-4-3 DHCP Client screenshot

The page includes the following fields:

Object	Description
IP Address	The IP address that the Router has allocated to the DHCP client.
MAC Address	The MAC address of the DHCP client
Time Expired(s)	Remaining time for a corresponding IP address lease.

5.4.4 UPnP

The UPnP feature allows the devices, such as Internet computers, to access the local host resources or devices as needed. UPnP devices can be automatically discovered by the UPnP service application on the LAN.

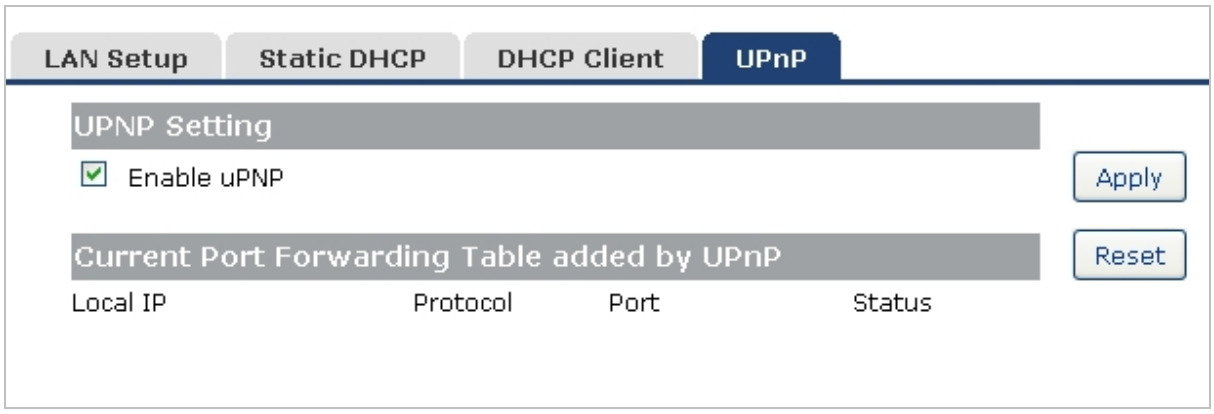


Figure 5-4-4 UPnP Setting screenshot

The page includes the following fields:

Object	Description
UPnP	Check on to enable UPnP function.
Local IP	The IP address of an internal host that receives/sends responses.
Protocol	Indicates whether to perform TCP or UDP port forwarding
Port	Port on host side.

Note

The pages also list the forwarding port added by UPnP Service.

5.5 Wireless

The Wireless menu contains submenus of the settings about wireless network. Please refer to the following sections for the details.

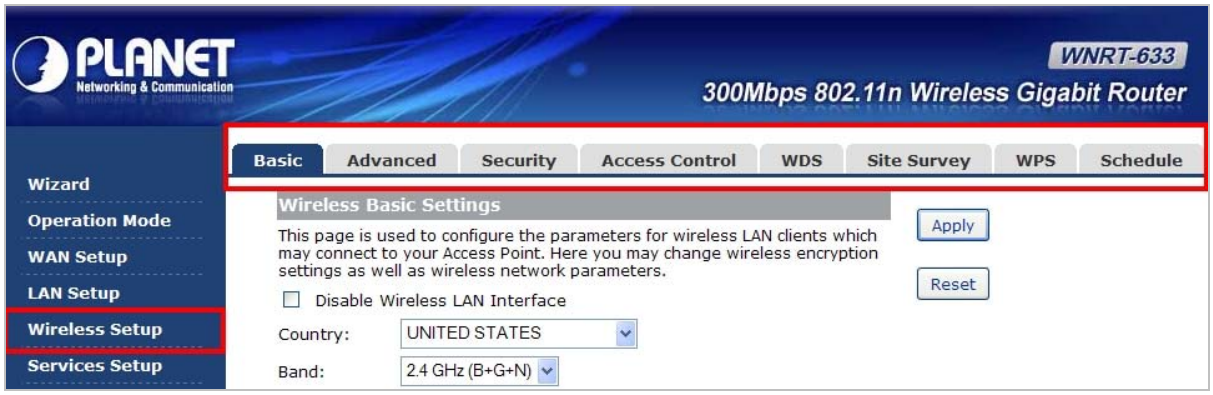


Figure 5-5-1

5.5.1 Basic Settings

Choose menu "**Wireless Setup → Basic**", and you can configure the basic settings for the wireless network on this page. After the configuration, please click the "Apply" button to save the settings.

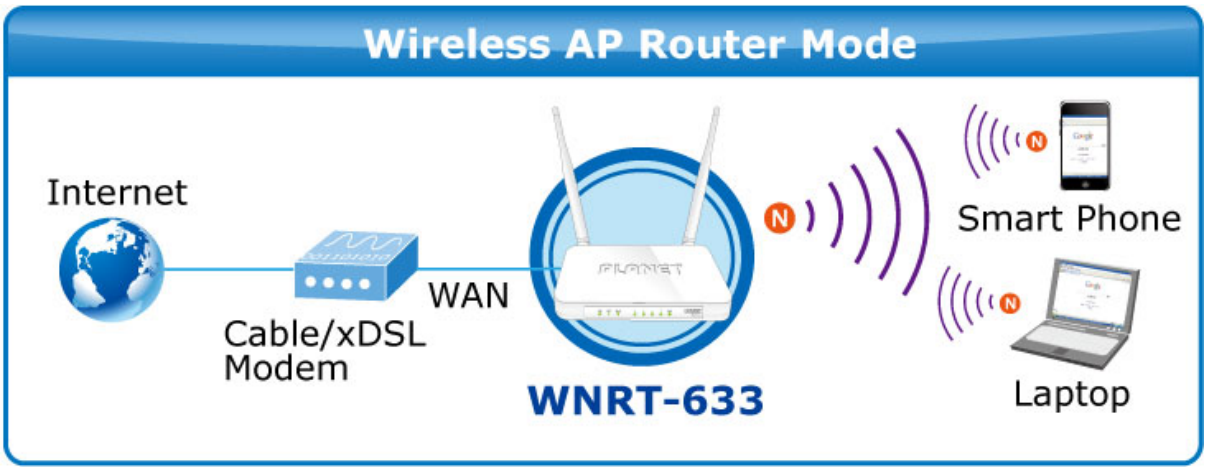
First of all, the Wireless Router supports multiple wireless modes for different network applications, which includes:

- **AP**
- **Client**
- **WDS**
- **AP+WDS**

It is so easy to combine the WNRT-633 with the existing wired network. The WNRT-633 definitely provides a total network solution for the home and the SOHO users.

■ **AP**

Standard **wireless Access Point**



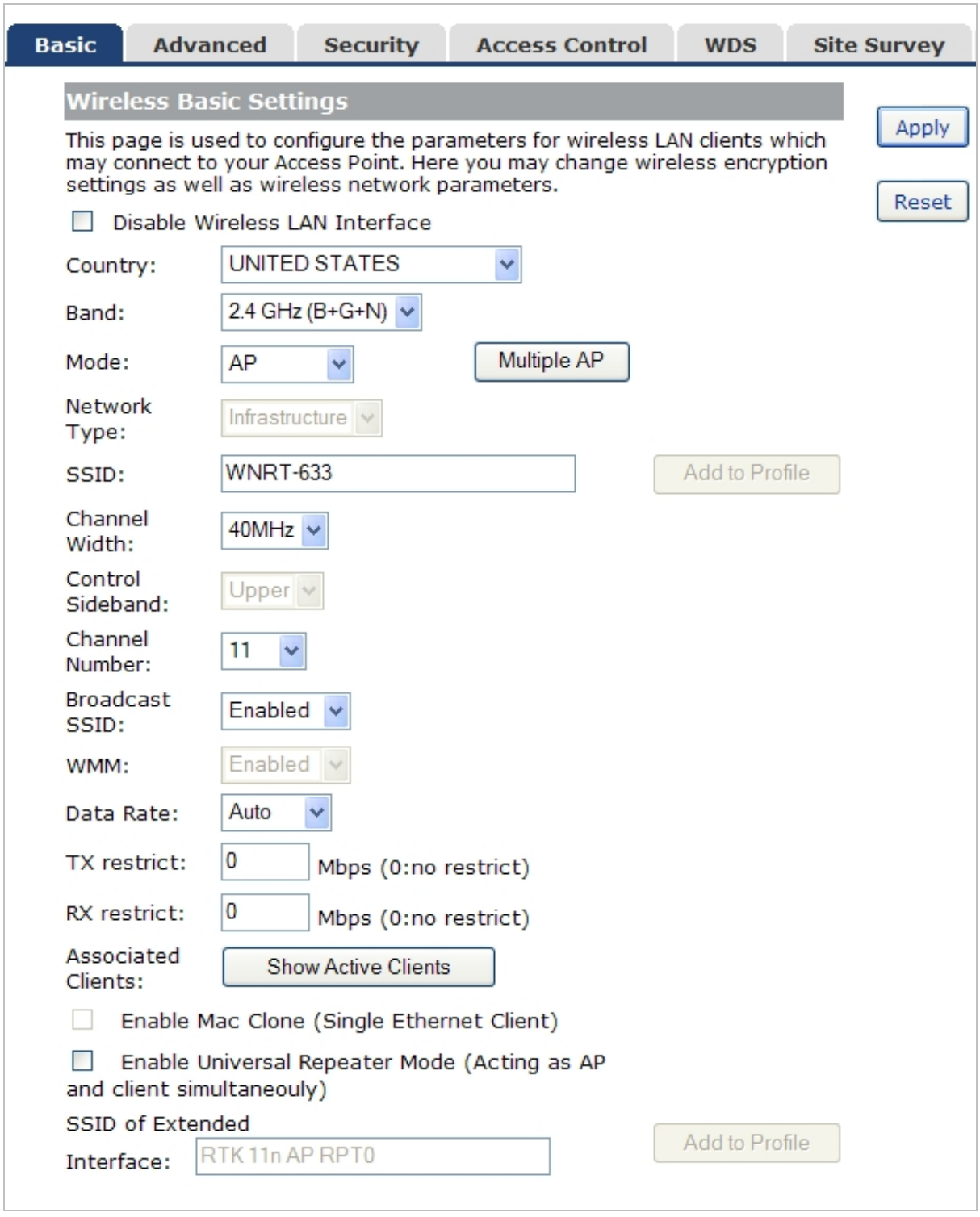


Figure 5-5-2 Wireless Basic Settings-AP mode screenshot

The page includes the following fields:

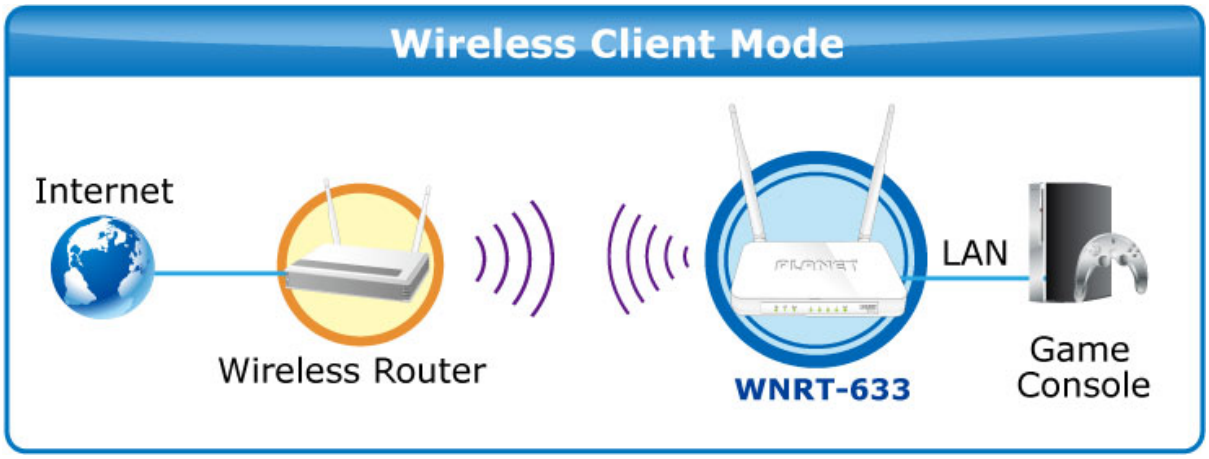
Object	Description
Disable Wireless LAN Interface	Check the box to disable the wireless function.
Country	Select your region from the pull-down list. This field specifies the region where the wireless function of the Router can be used. It may be illegal to use the wireless function of the Router

	in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.
Band	Select the desired mode. Default is "**2.4GHz (B+G+N)**". It is strongly recommended that you set the Band to "2.4GHz (B+G+N)", and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the WNRT-633. ■ **2.4 GHz (B)**: 802.11b mode, rate is up to 11Mbps ■ **2.4 GHz (G)**: 802.11g mode, rate is up to 54Mbps ■ **2.4 GHz (N)**: 802.11n mode, rate is up to 300Mbps(2T2R) ■ **2.4 GHz (B+G)**: 802.11b/g mode, rate is up to 11Mbps or 54Mbps ■ **2.4 GHz (G+N)**: 802.11g/n mode, rate is up to 54Mbps or 300Mbps ■ **2.4 GHz (B+G+N)**: 802.11b/g/n mode, rate is up to 11Mbps, 54Mbps, or 300Mbps
Mode	There are four kinds of wireless mode selections: ■ **AP** ■ **Client** ■ **WDS** ■ **AP+WDS** If you select WDS or AP+WDS, please click "**WDS Settings**" submenu for the related configuration. Furthermore, click the "**Multiple AP"** button to enable multiple SSID function.
SSID	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: WNRT-633
Channel Width	You can select **20MHz** or **40MHz**.
Control Sideband	You can select **Upper** or **Lower**.
Channel Number	You can select the operating frequency of wireless network.
Broadcast SSID	If you enable "Broadcast SSID", every wireless station located within the coverage of the WNRT-633 can discover its signal easily. If you are building a public wireless network, enabling this feature is recommended. In private network, disabling "Broadcast SSID" can provide better wireless network security. Default is "**Enabled**".
Data Rate	Set the wireless data transfer rate to a certain value. Since most of wireless devices will negotiate with each other and pick a proper data transfer rate automatically, **it's not necessary to change this value unless you know what will happen after modification.** Default is "**Auto"**.

Associated Clients	Click the "**Show Active Clients**" button to show the status table of active wireless clients.
Enable Universal Repeater Mode **(Acting as AP and client simultaneously)**	Universal Repeater is a technology used to extend wireless coverage. To enable Universal Repeater Mode, check the box and enter the SSID you want to broadcast in the field below. Then please click "Security" submenu for the related settings of the AP you want to connect with.

■ Client (Infrastructure)

Combine the Wireless Router to the Ethernet devices such as TV, Game player, or HDD&DVD, to make them be wireless stations.



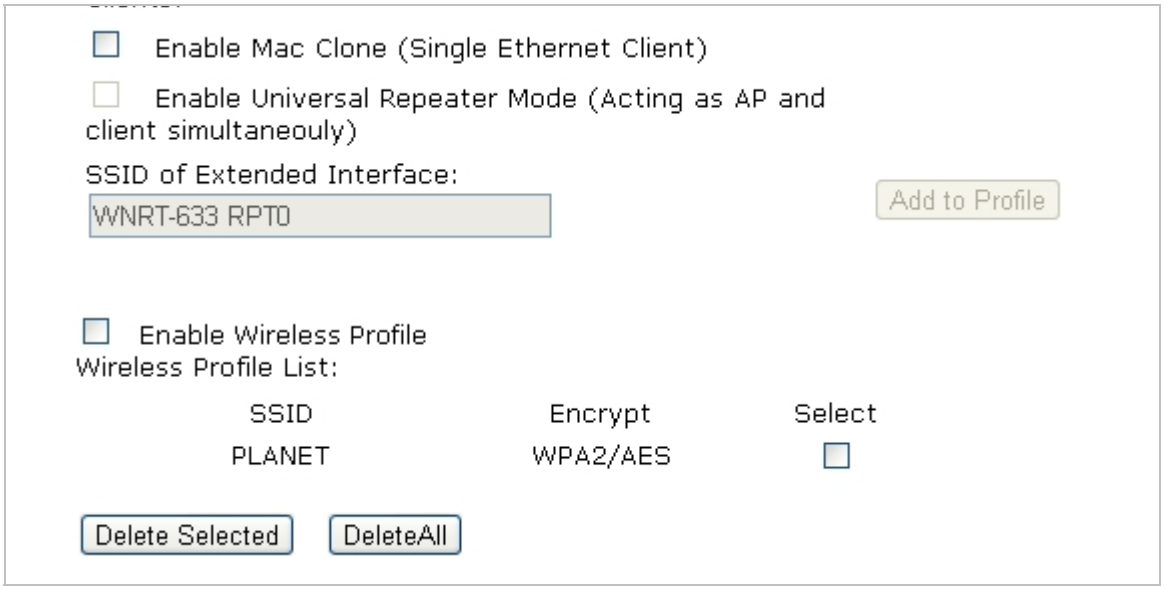


Figure 5-5-3 Wireless Basic Settings-Client mode screenshot

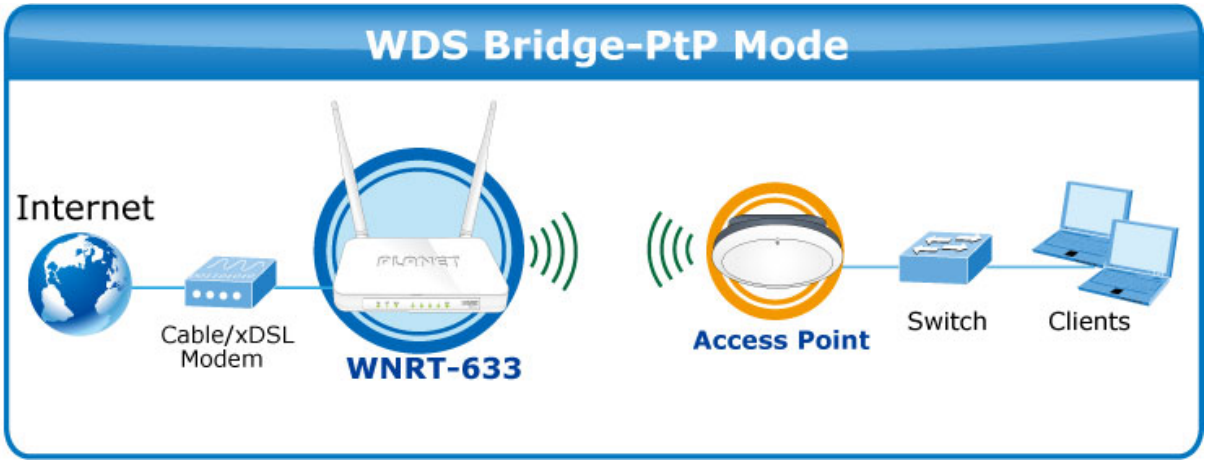
The page includes the following fields:

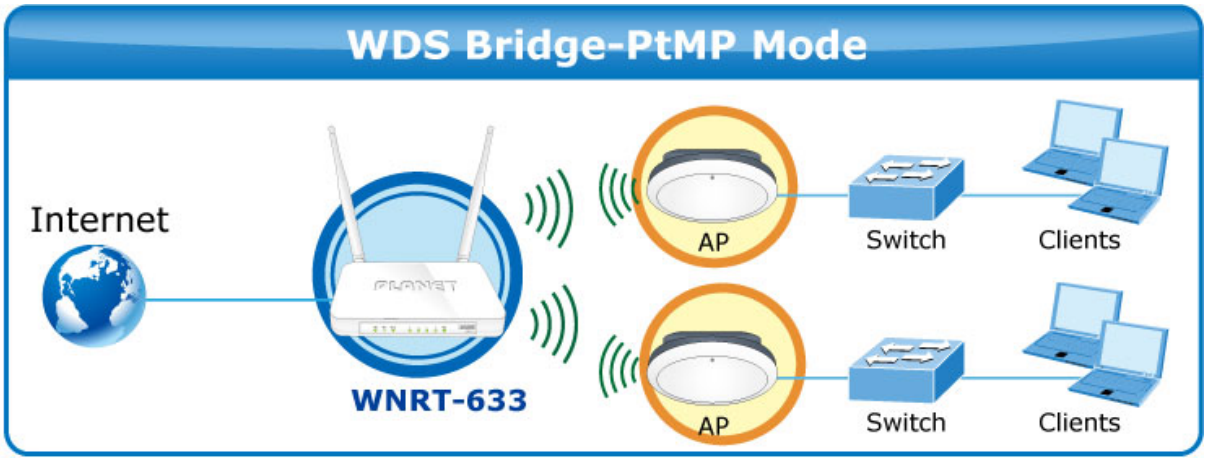
Object	Description
Disable Wireless LAN Interface	Check the box to disable the wireless function.
Country	Select your region from the pull-down list.
Band	Select the desired mode. Default is "**2.4GHz (B+G+N)**". It is strongly recommended that you set the Band to "2.4GHz (B+G+N)", and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the WNRT-633. ■ **2.4 GHz (B)**: 802.11b mode, rate is up to 11Mbps ■ **2.4 GHz (G)**: 802.11g mode, rate is up to 54Mbps ■ **2.4 GHz (N)**: 802.11n mode, rate is up to 300Mbps(2T2R) ■ **2.4 GHz (B+G)**: 802.11b/g mode, rate is up to 11Mbps or 54Mbps ■ **2.4 GHz (G+N)**: 802.11g/n mode, rate is up to 54Mbps or 300Mbps ■ **2.4 GHz (B+G+N)**: 802.11b/g/n mode, rate is up to 11Mbps, 54Mbps, or 300Mbps
Mode	There are four kinds of wireless mode selections: ■ **AP** ■ **Client** ■ **WDS** ■ **AP+WDS** If you select WDS or AP+WDS, please click "**WDS Settings**" submenu for the related configuration. Furthermore, click the "**Multiple AP"** button to enable multiple SSID function.
Network Type	In **Infrastructure**, the wireless LAN serves as a wireless station. And the user can use the PC equipped with the WNRT-633 to access the wireless network via other access points. In **Ad hoc**, the wireless LAN

	will use the Ad-hoc mode to operate. Default is "**Infrastructure**". Note: only while the wireless mode is set to "**Client**", then the **Network Type** can be configured.
SSID	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: WNRT-633
Broadcast SSID	If you enable "Broadcast SSID", every wireless station located within the coverage of the WNRT-633 can discover its signal easily. If you are building a public wireless network, enabling this feature is recommended. In private network, disabling "Broadcast SSID" can provide better wireless network security. Default is "**Enabled**".
Data Rate	Set the wireless data transfer rate to a certain value. Since most of wireless devices will negotiate with each other and pick a proper data transfer rate automatically, **it's not necessary to change this value unless you know what will happen after modification.** Default is "**Auto"**.
Enable Mac Clone (Single Ethernet Client)	Enable Mac Clone.

■ **WDS**

Connect this Wireless Router with up to 8 WDS-capable wireless routers to expand the scope of network.





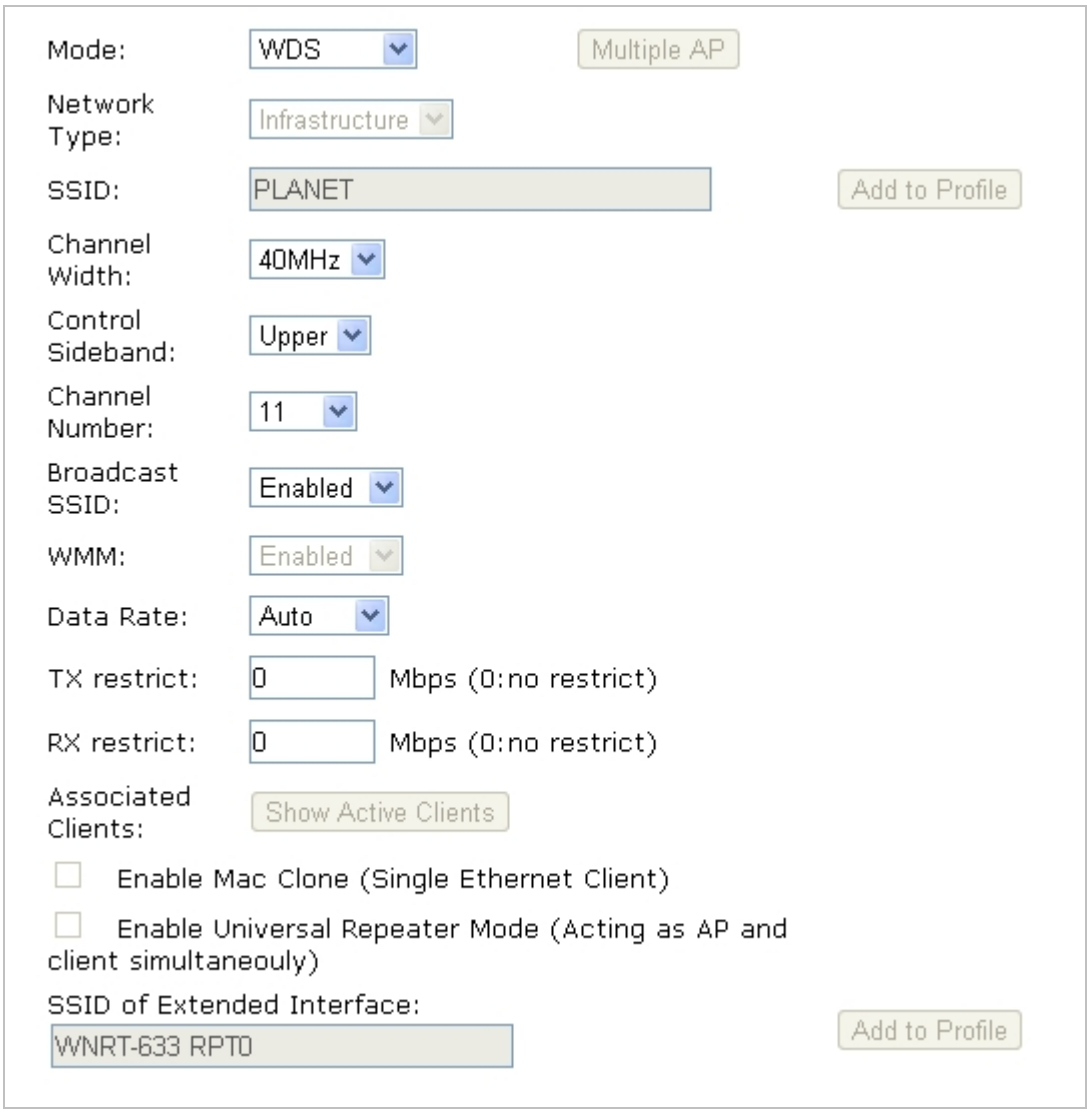


Figure 5-5-4 Wireless Basic Settings-WDS mode screenshot

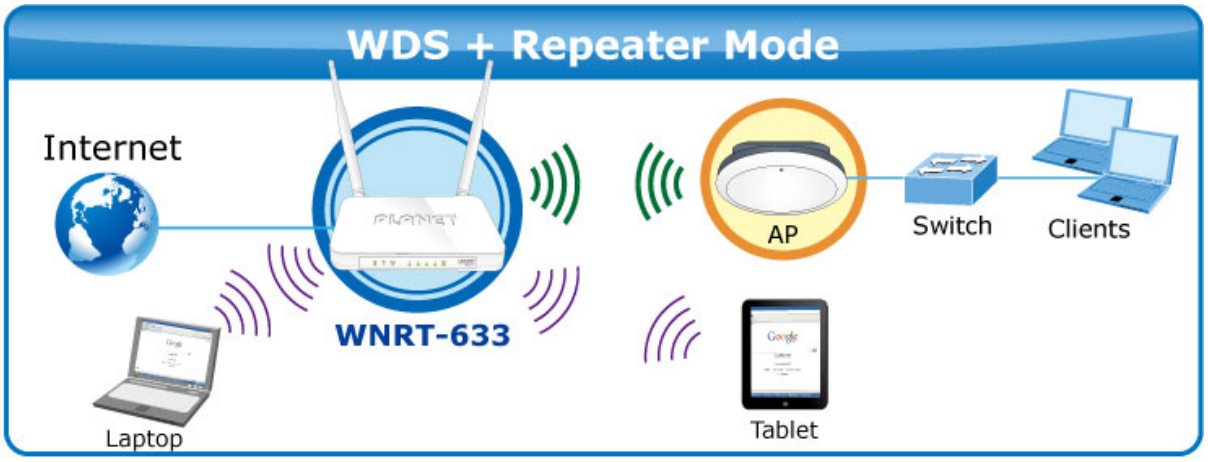
The page includes the following fields:

Object	Description
Disable Wireless LAN Interface	Check the box to disable the wireless function.

Country	Select your region from the pull-down list. This field specifies the region where the wireless function of the Router can be used. It may be illegal to use the wireless function of the Router in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.
Band	Select the desired mode. Default is "**2.4GHz (B+G+N)**". It is strongly recommended that you set the Band to "2.4GHz (B+G+N)", and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the WNRT-633. ■ **2.4 GHz (B)**: 802.11b mode, rate is up to 11Mbps ■ **2.4 GHz (G)**: 802.11g mode, rate is up to 54Mbps ■ **2.4 GHz (N)**: 802.11n mode, rate is up to 300Mbps(2T2R) ■ **2.4 GHz (B+G)**: 802.11b/g mode, rate is up to 11Mbps or 54Mbps ■ **2.4 GHz (G+N)**: 802.11g/n mode, rate is up to 54Mbps or 300Mbps ■ **2.4 GHz (B+G+N)**: 802.11b/g/n mode, rate is up to 11Mbps, 54Mbps, or 300Mbps
Mode	There are four kinds of wireless mode selections: ■ **AP** ■ **Client** ■ **WDS** ■ **AP+WDS** If you select WDS or AP+WDS, please click "**WDS Settings**" submenu for the related configuration. Furthermore, click the "**Multiple AP"** button to enable multiple SSID function.
Channel Width	You can select **20MHz** or **40MHz**.
Control Sideband	You can select **Upper** or **Lower**.
Channel Number	You can select the operating frequency of wireless network.
Data Rate	Set the wireless data transfer rate to a certain value. Since most of wireless devices will negotiate with each other and pick a proper data transfer rate automatically, **it's not necessary to change this value unless you know what will happen after modification.** Default is "**Auto"**.

■ AP+ WDS

Connect this Wireless Router with up to 8 WDS-capable wireless routers, and as another AP to provide service for all wireless stations within its coverage.



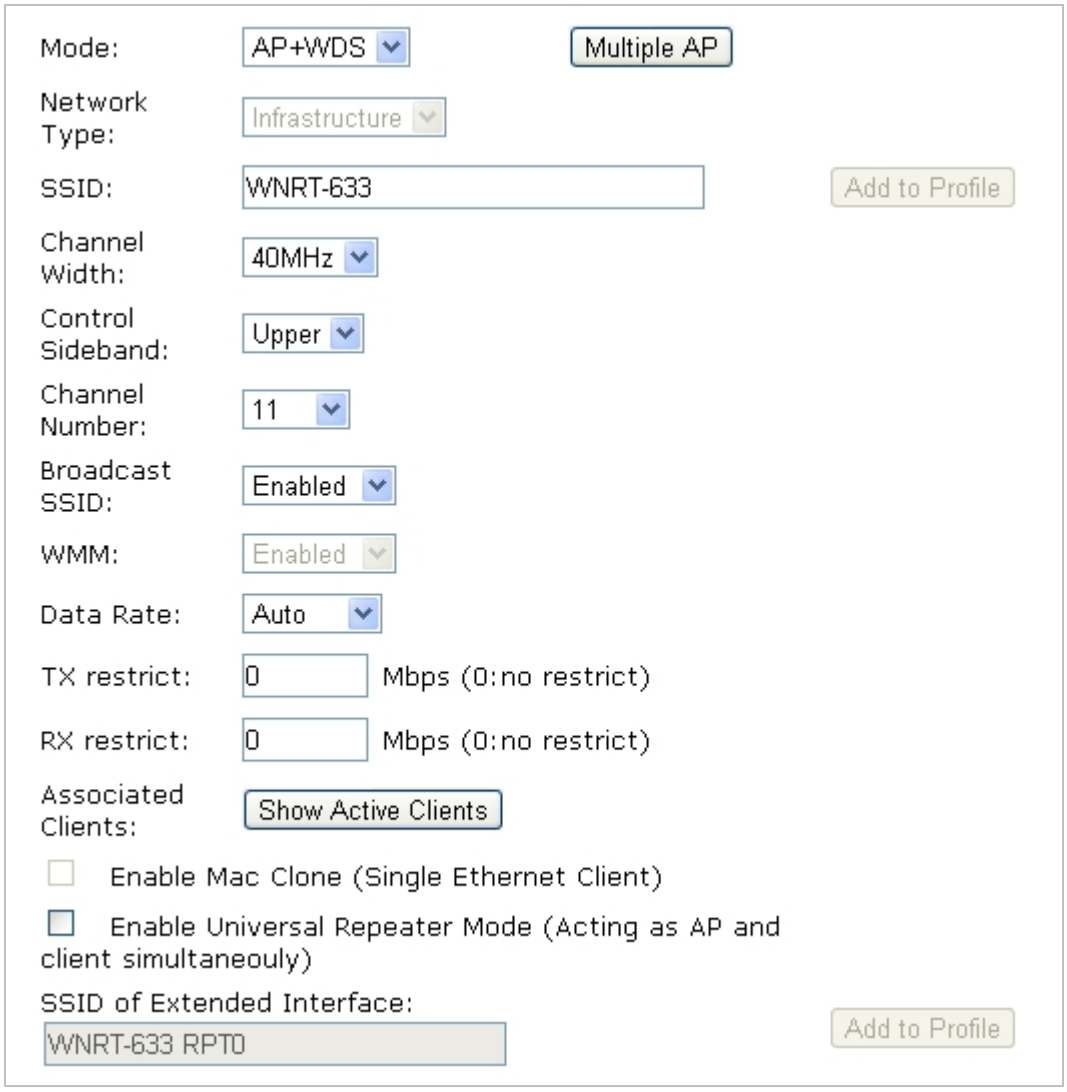


Figure 5-5-5 Wireless Basic Settings-AP+WDS mode screenshot

The page includes the following fields:

Object	Description
Disable Wireless LAN Interface	Check the box to disable the wireless function.
Country	Select your region from the pull-down list. This field specifies the region where the wireless function of the Router can be used. It may be illegal to use the wireless function of the Router in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.
Band	Select the desired mode. Default is "**2.4GHz (B+G+N)**". It is strongly recommended that you set the Band to "2.4GHz (B+G+N)", and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the WNRT-633. ■ **2.4 GHz (B)**: 802.11b mode, rate is up to 11Mbps ■ **2.4 GHz (G)**: 802.11g mode, rate is up to 54Mbps ■ **2.4 GHz (N)**: 802.11n mode, rate is up to 300Mbps(2T2R) ■ **2.4 GHz (B+G)**: 802.11b/g mode, rate is up to 11Mbps or 54Mbps ■ **2.4 GHz (G+N)**: 802.11g/n mode, rate is up to 54Mbps or 300Mbps ■ **2.4 GHz (B+G+N)**: 802.11b/g/n mode, rate is up to 11Mbps, 54Mbps, or 300Mbps
Mode	There are four kinds of wireless mode selections: ■ **AP** ■ **Client** ■ **WDS** ■ **AP+WDS** If you select WDS or AP+WDS, please click "**WDS Settings**" submenu for the related configuration. Furthermore, click the "**Multiple AP"** button to enable multiple SSID function.
SSID	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: WNRT-633
Channel Width	You can select **20MHz** or **40MHz**.
Control Sideband	You can select **Upper** or **Lower**.
Channel Number	You can select the operating frequency of wireless network.
Broadcast SSID	If you enable "Broadcast SSID", every wireless station located within the coverage of the WNRT-633 can discover its signal easily. If you are building a public wireless network, enabling this feature is recommended. In private network, disabling "Broadcast SSID" can provide better wireless network security.

	Default is "**Enabled**".
Data Rate	Set the wireless data transfer rate to a certain value. Since most of wireless devices will negotiate with each other and pick a proper data transfer rate automatically, **it's not necessary to change this value unless you know what will happen after modification.** Default is "**Auto"**.
Associated Clients	Click the "**Show Active Clients**" button to show the status table of active wireless clients.
Enable Universal Repeater Mode **(Acting as AP and client simultaneously)**	Universal Repeater is a technology used to extend wireless coverage. To enable Universal Repeater Mode, check the box and enter the SSID you want to broadcast in the field below. Then please click "Security" submenu for the related settings of the AP you want to connect with.

5.5.2 Advanced

Choose menu "**Wireless Setup→ Advanced Settings**", and you can configure the advanced settings for the wireless network on this page. After the configuration, please click the "Apply" button to save the settings.

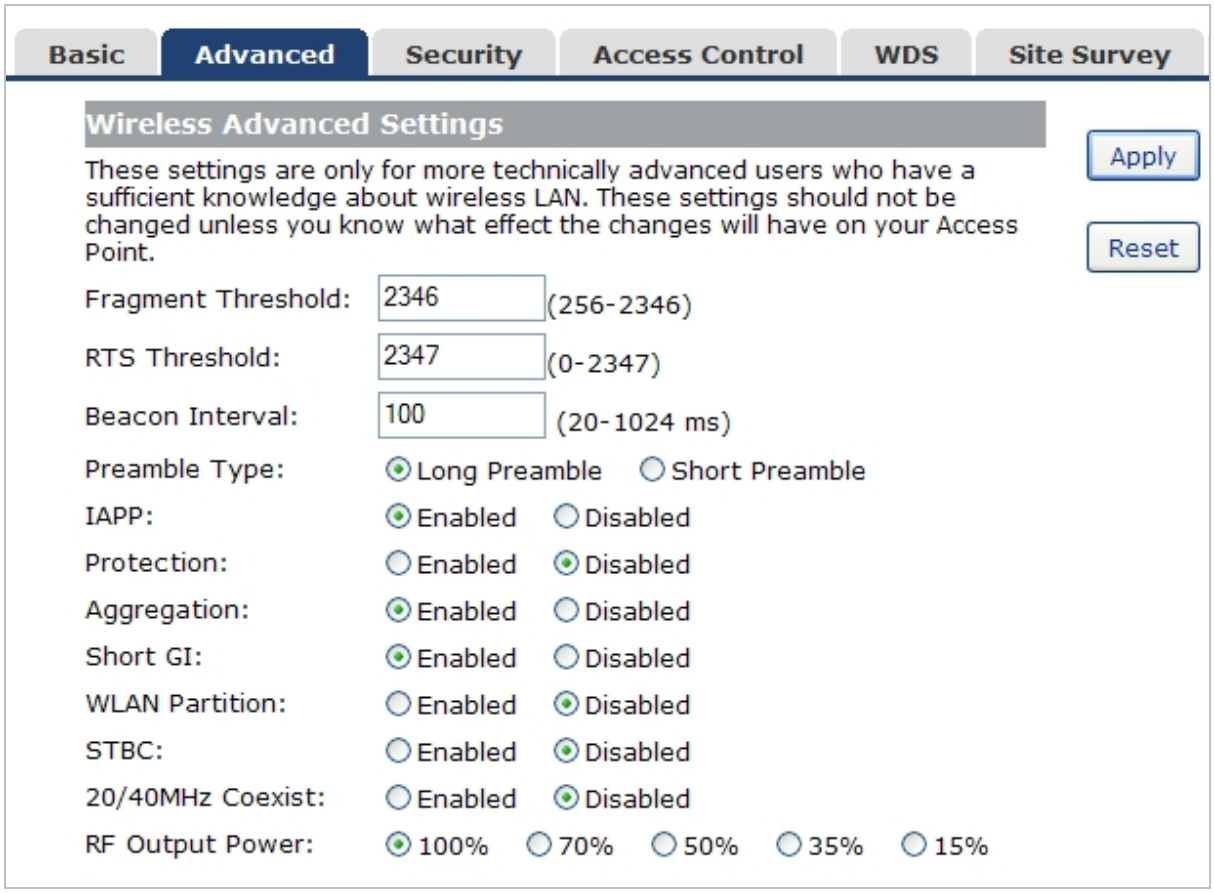


Figure 5-5-6 Wireless Advanced Settings

The page includes the following fields:

Object	Description
Fragment Threshold	You can specify the maximum size of packet during the fragmentation of data to be transmitted. If you set this value too low, it will result in bad performance. Default is "2346".
RTS Threshold	When the packet size is smaller than the RTS threshold, the access point will not use the RTS/CTS mechanism to send this packet. Default is "2347".
Beacon Interval	The interval of time that this access point broadcast a beacon. Beacon is used to synchronize the wireless network. Default is "100".
Preamble Type	Preamble type defines the length of CRC block in the frames during the wireless communication. "**Short Preamble**" is suitable for high traffic wireless network. "**Long Preamble**" can provide more reliable communication. Default is "Long Preamble".
IAPP	**IAPP (Inter-Access Point Protocol)** enabled is recommendation that describes an optional extension to IEEE 802.11 that provides wireless access-point communications among multivendor systems. Default is "Enabled".
Protection	It is recommended to enable the protection mechanism. This mechanism can decrease the rate of data collision between 802.11b and 802.11g wireless stations. When the protection mode is enabled, the throughput of the AP will be a little lower due to many of frame traffic should be transmitted. Default is "Disabled".
Aggregation	It is a function where the values of multiple rows are grouped together. Default is "Enabled"
Short GI	It is used to set the time that the receiver waits for RF reflections to settle out before sampling data. Default is "Enabled"
WLAN Partition	This feature also called "**WLAN isolation**" or "**Block Relay**". If this is enabled, wireless clients cannot exchange data through the WNRT-633. Default is "Disabled".
STBC	Activate **Space Time Blocking Code (STBC)** which does not need channel statement information (CSI). Default Setting: "Disabled"
20/40MHz Coexist	Configure 20/40MHz coexisting scheme. If you set up as "Enabled", "20MHz" and "40MHz" will coexist. Default Setting: "Disabled"
RF Output Power	Users can adjust the wireless output power here. Default is "100%".

5.5.3 Security

Choose menu "**Wireless → Security**", and you can configure the settings of wireless security for the wireless network on this page. After the configuration, please click the "Apply" button to save the settings.

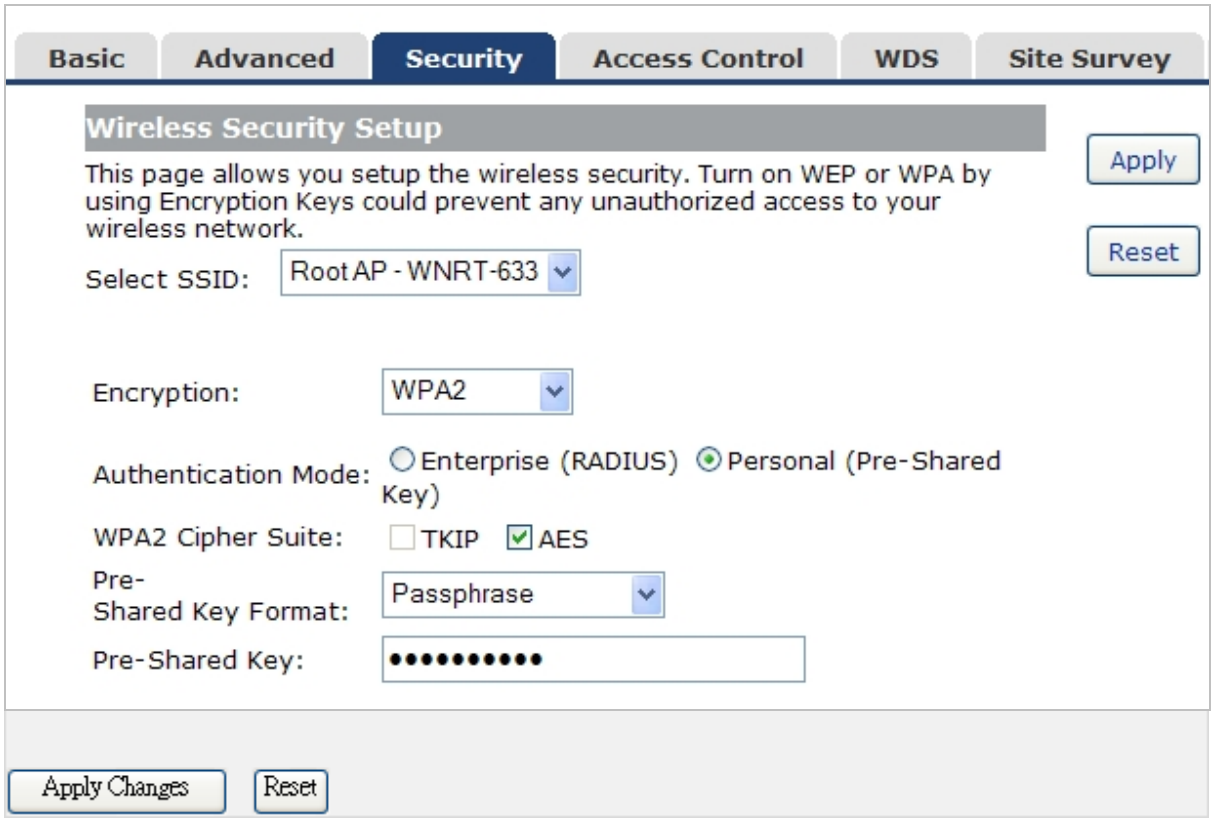


Figure 5-5-7 Wireless Security Setup screenshot

The page includes the following fields:

Object	Description
Select SSID	Select the SSID you want to configure the wireless security function, which includes the root one and the client one.
Encryption	**Disable:** No security setup for wireless connection.
	WEP: It is based on the IEEE 802.11 standard. And the default setting of authentication is **Automatic**, which can select **Open System** or **Shared Key** authentication type automatically based on the wireless station's capability and request. Furthermore, you can select **Key Length** and enter 10 & 26 **Hexadecimal** digits (any combination of 0-9, a-f, A-F, zero key is not promoted) or 5 & 13 **ASCII** characters in the **Encryption Key** field.

	WPA: WPA is a medium level encryption and is supported by most wireless devices and operating systems.
	WPA2: WPA2 is a high level encryption and is supported by most wireless devices and operating systems.
	WPA / WPA2 / WPA-Mixed: WPA Mixed Mode allows the use of both WPA and WPA2 at the same time.
Authentication Mode	**Enterprise (RADIUS)** When you select the authentication mode based on Enterprise (Radius Server), please enter the **IP Address**, **Port**, and **Password** of the Radius Server.
	Personal (Pre-Shared Key) When you select the other authentication mode based on Personal (Pre-Shared Key), please enter at least 8 ASCII characters (Passphrase) or 64 Hexadecimal characters. All of the Cipher Suites support **TKIP** and **AES**.
802.1x Authentication	Enable 802.1x authentication function, then please enter the **IP Address**, **Port**, and **Password** of the Radius Server.

5.5.4 Access Control

Choose menu "**Wireless → Access Control**", you can choose to allow or deny the computer of specified MAC address to connect with the WNRT-633 on this page. After the configuration, please click the "Apply" button to save the settings.

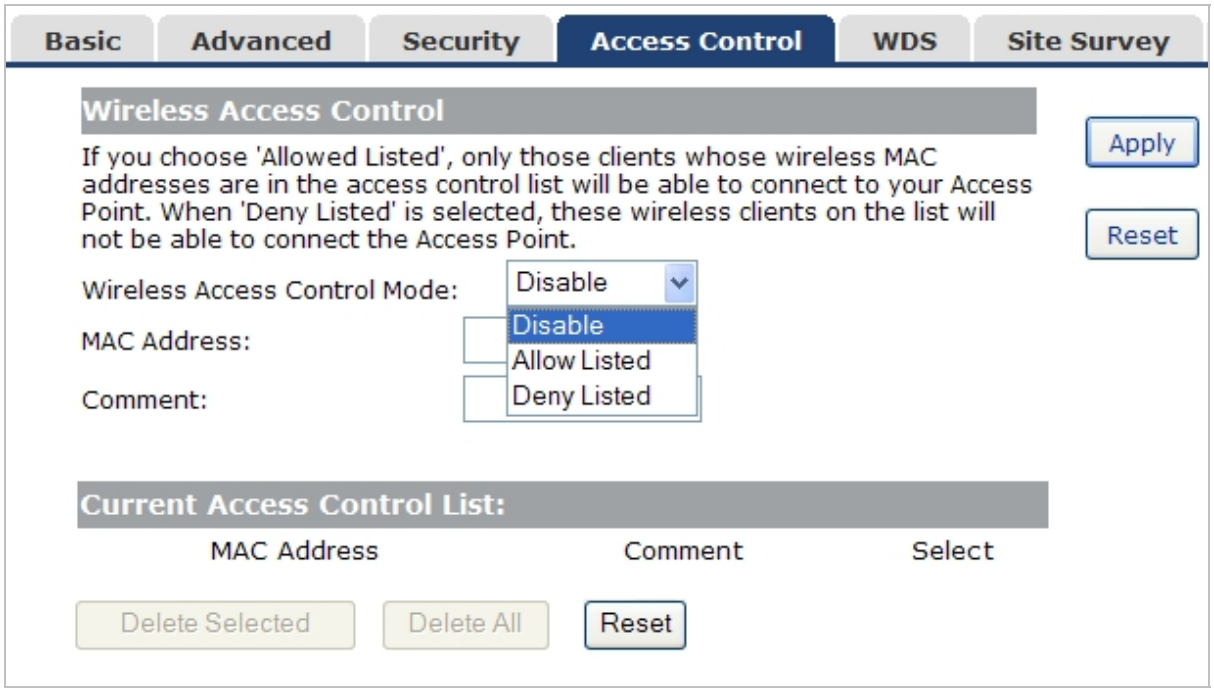


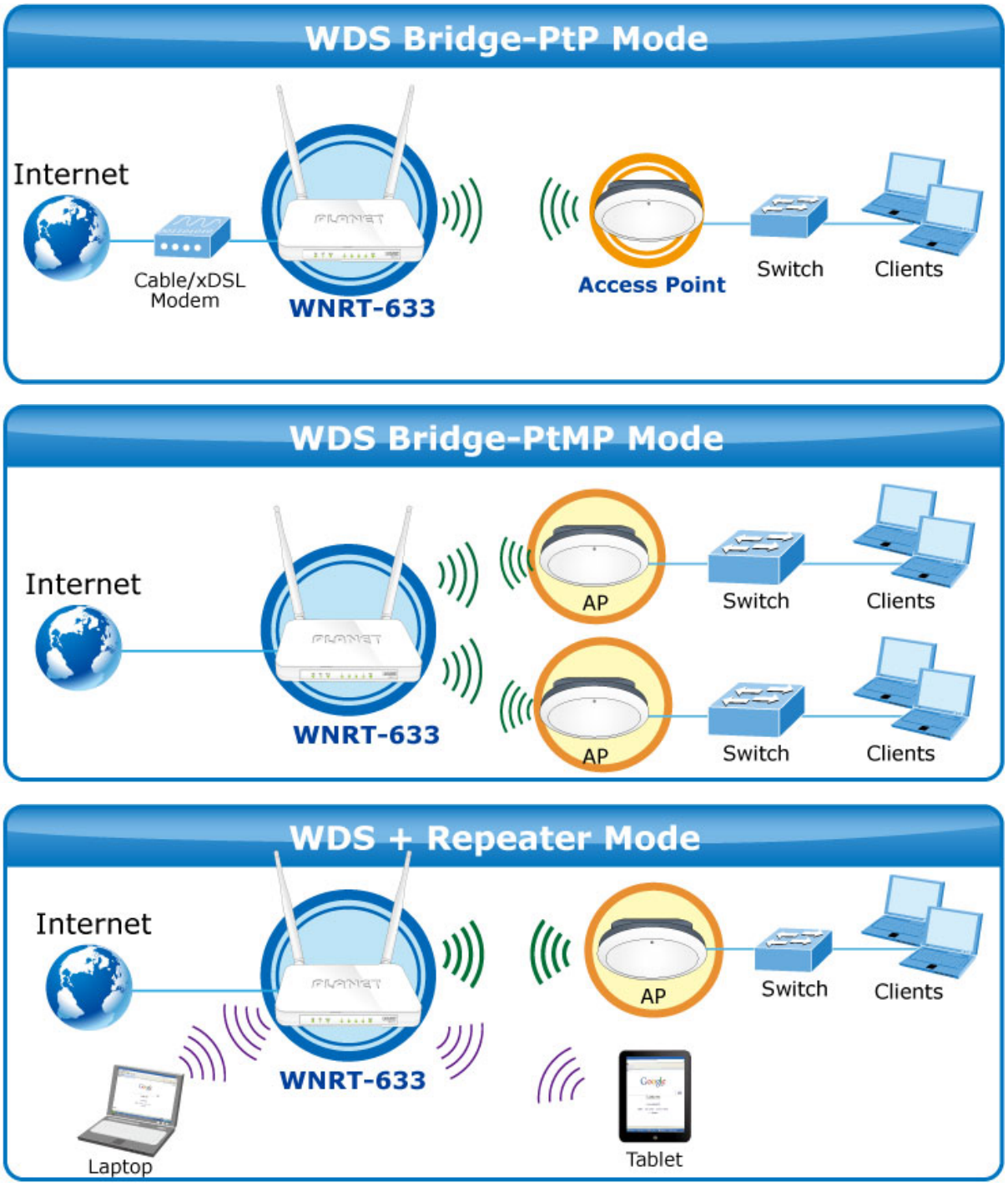
Figure 5-5-8 Wireless Access Control Setup screenshot

The page includes the following fields:

Object	Description
Wireless Access Control Mode	You can choose to set the Allowed-List, Denied-List, or disable this function.
MAC Address	Enter the MAC address you want to allow or deny to connect to the WNRT-633 in the field.
Comment	You can make some comment on each MAC address on the list.
Current Access Control List	You can select some MAC address, and click the "Delete Selected" button to delete it.

5.5.5 WDS Settings

Wireless Distribution System (WDS) uses wireless media to communicate with other APs, like the Ethernet does. 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.



Before configuring the WDS Setting page, you have to select the wireless mode to "WDS" on the **Wireless** -> **Basic** web page.

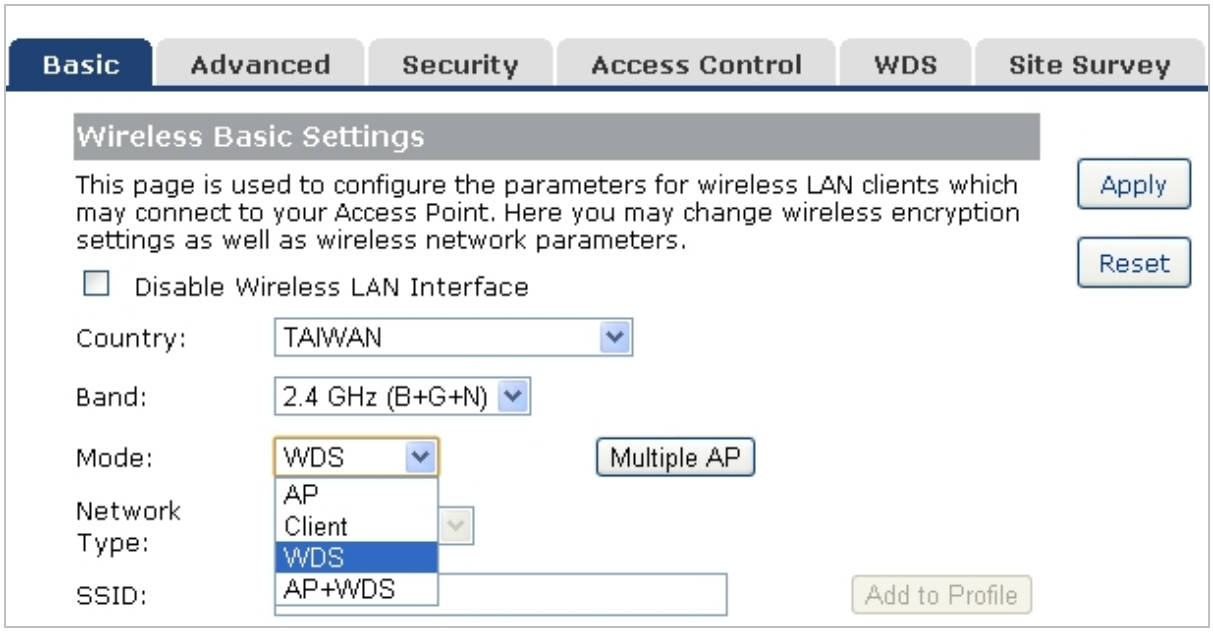


Figure 5-5-9 WDS Settings

Choose menu "**Wireless → WDS Settings**", and you can configure WDS to connect the WNRT-633 with another AP on this page. After the configuration, please click the "Apply" button to save the settings.

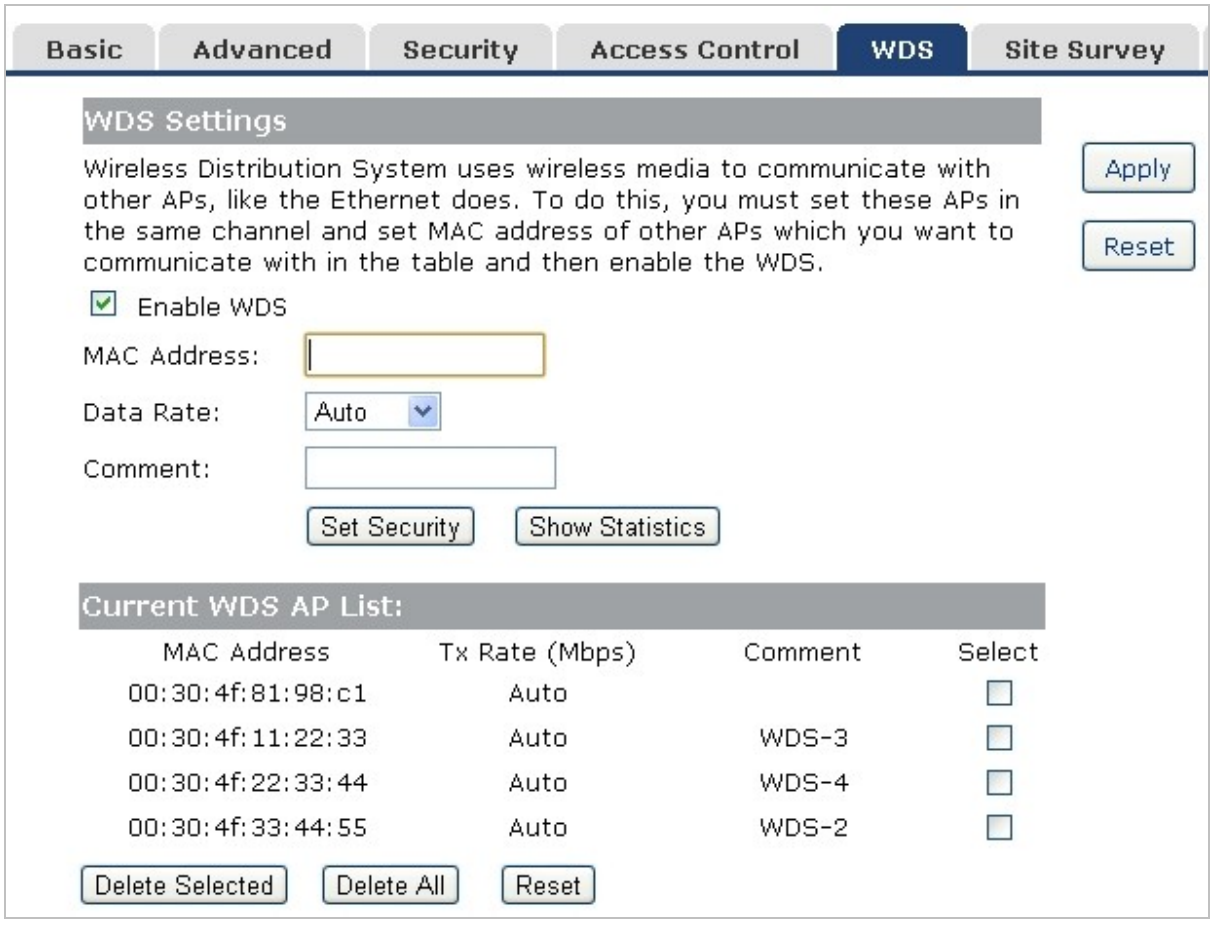


Figure 5-5-10 WDS Settings

The page includes the following fields:

Object	Description
Enable WDS	Check the box to enable the WDS function. Please select **WDS** or **AP+WDS** in the Mode of **Wireless Basic Settings** before you enable WDS on this page.
MAC Address	You can enter the MAC address of the AP you want to connect with.
Data Rate	Default is "**Auto"**.
Comment	You can make some comment for each MAC address on the list.
Set Security	Click the "**Set Security**" button, then configure the wireless security parameters of the AP you want to connect via WDS.
Show Statics	Click the "Show Statics" button to show the WDS AP.
Current WDS AP List	You can select some MAC address of the AP, and click the "Delete Selected" button to delete it.

Note

1. WDS feature can only be implemented between 2 wireless devices that both support the WDS feature. Plus, **SSID**, **channel**, **security settings** and **security key** must be **the same** on both such devices.
2. To encrypt your wireless network, see **sections 5.5.3**. Do remember to reboot the device after you save your wireless security settings; otherwise, the WDS feature may not function.

5.5.6 Site Survey

Choose menu "**Wireless → Site Survey**" to scan the available local AP. If any Access Point is found, you could choose any one to connect with manually when the **Client Mode** is enabled.

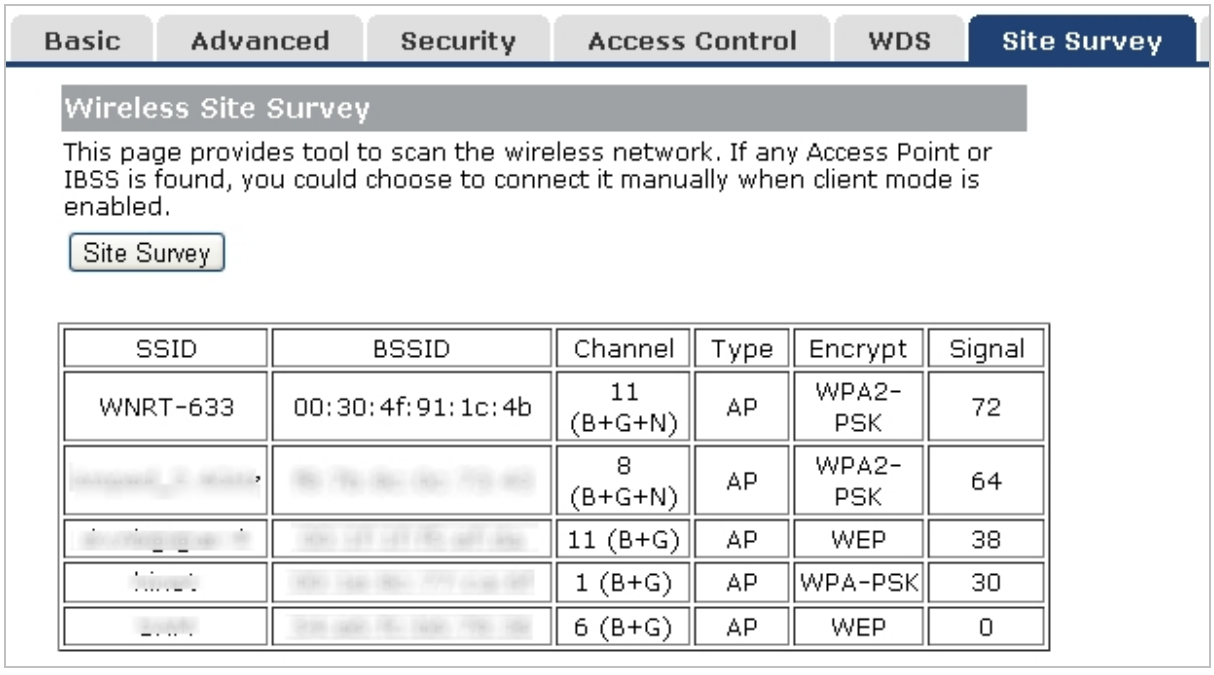


Figure 5-5-11 Wireless Site Survey

5.5.7 WPS

WPS (**Wi-Fi Protected Setup**) is designed to ease setup of security Wi-Fi networks and subsequently network management. This Wireless Router supports WPS features for **AP mode**, **AP+WDS mode**, **Infrastructure-Client mode**, and the wireless root interface of **Universal Repeater mode**.

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

- **PBC:** If you find the WPS LED blinking for 2 minutes after 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, and the WPS LED turns off. Repeat steps mentioned above if you want to connect more wireless client devices to the device.
- **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.

Choose menu "**Wireless → WPS**", and you can configure the setting for WPS. After the configuration, please click the "Apply" button to save the settings.

Figure 5-5-12 WPS (Wi-Fi Protected Setup)

The page includes the following fields:

Object	Description
Disable WPS	You can check the box to disable the WPS function.
WPS Status	Here you can check if the connection via WPS is established or not.
Self-PIN Number	It is the PIN number of the WNRT-633 here.
Push Button Configuration	Click the "Start PBC", and then activate WPS as well in the client device within 2 minutes.
Client PIN Number	In addition to the PBC method, you can also use the PIN method to activate the WPS. Just enter the PIN number of the client device in the field, and click the "Start PIN" button.

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

5.5.8 Schedule

Wireless Schedules 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, guests) during specific times of the day for parental control or security reasons.

Choose menu "**Wireless → Schedule**", and you can configure the schedule rule of enabling wireless function. After the configuration, please click the "Apply" button to save the settings.

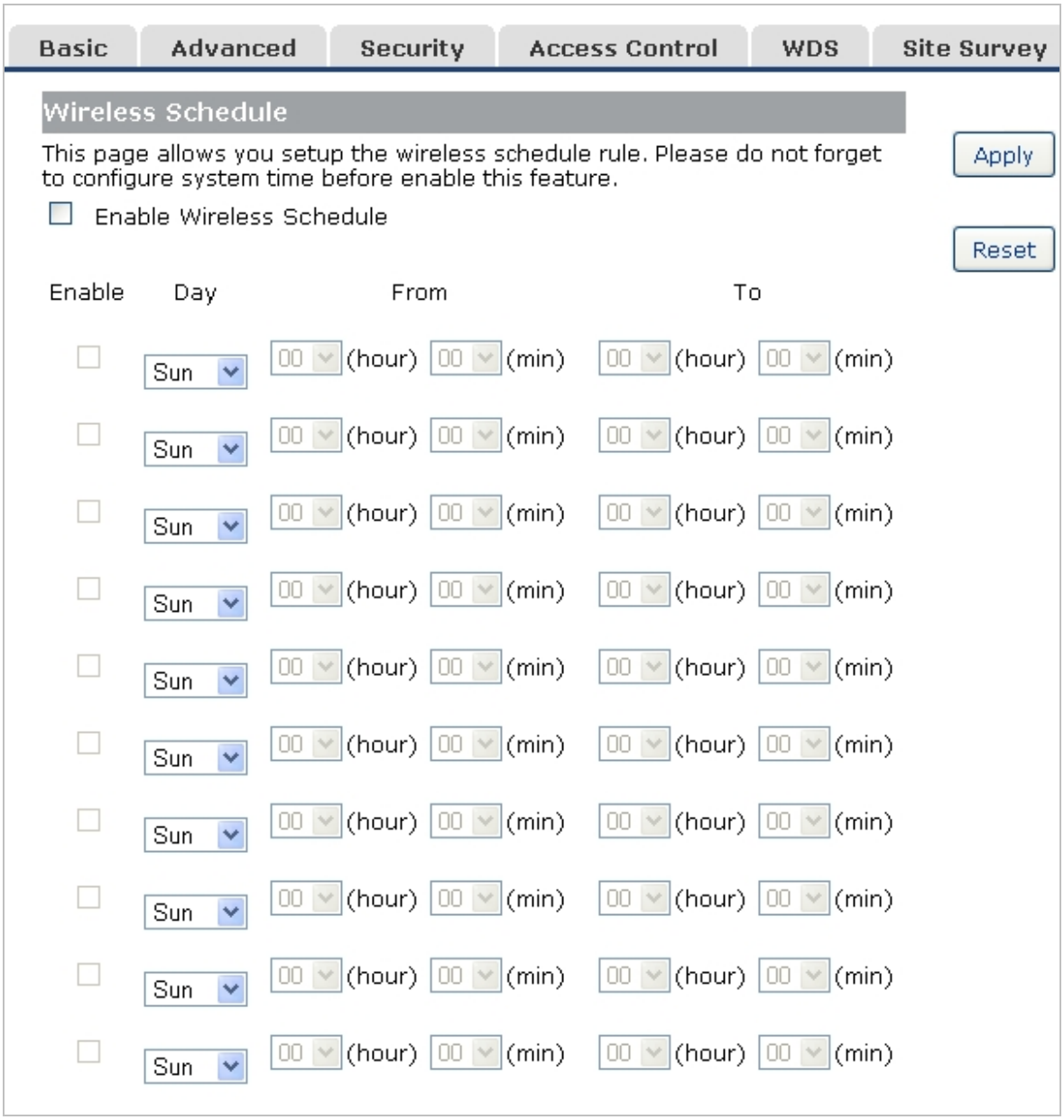


Figure 5-5-13 Wireless Schedule

Note

When setting the Wireless Schedule, it is important to ensure that your **System Clock** settings have been configured. If they have not, your Wireless Schedule will not function correctly.

5.6 Service Setup

5.6.1 Port Forwarding

Choose menu "**Service Setup → Port Forwarding**", and you can configure to re-direct a particular range of service port numbers from the Internet network to a particular LAN IP address. It helps users to host some servers behind the firewall. After the configuration, please click the "Apply" button to save the settings.

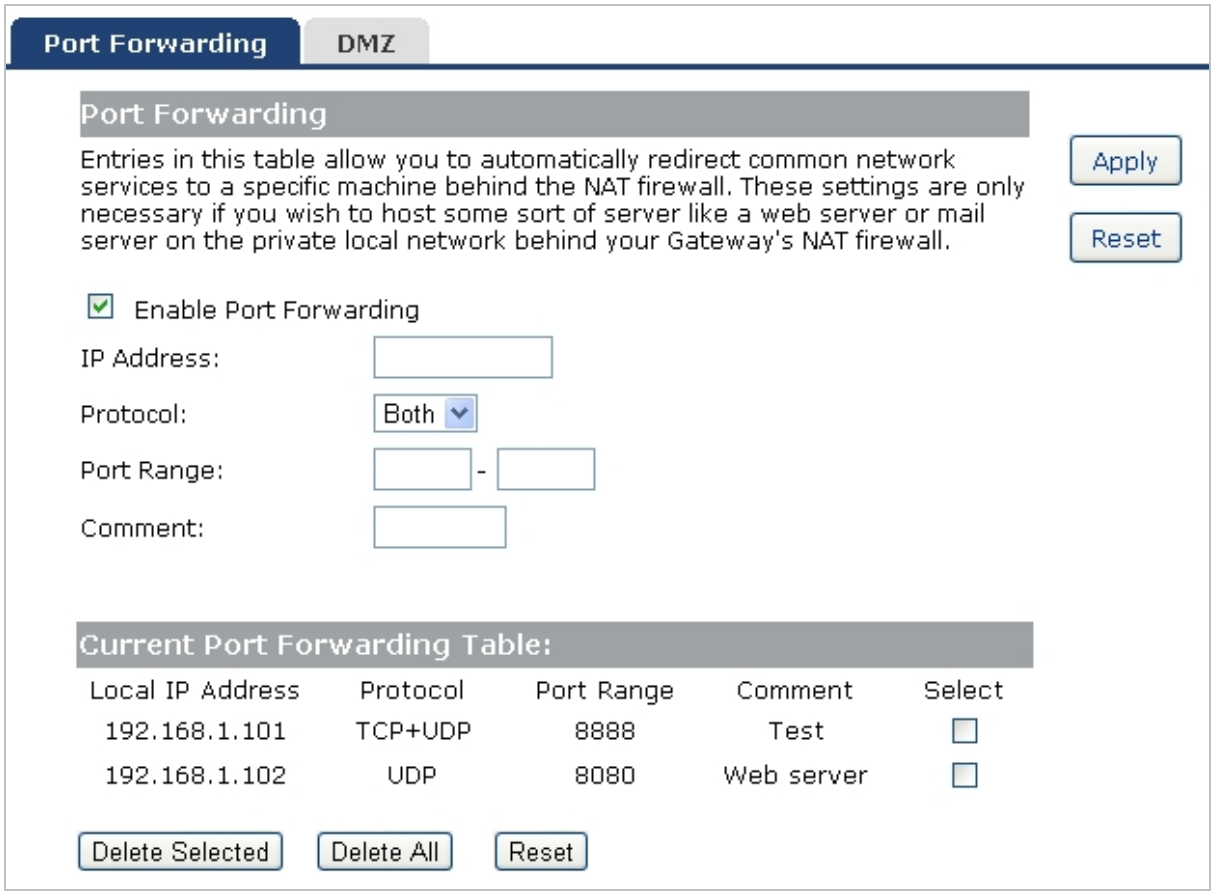


Figure 5-6-1 Port Forwarding

The page includes the following fields:

Object	Description
Enable Port Forwarding	Enable Port Forwarding function
IP Address	Add **LAN IP address** of specified host or server on the private local network
Protocol	Select the port number protocol type (TCP, UDP or both). If you are unsure, then leave it to the default both protocol
Port Range	Add ports you want to control. For TCP and UDP Services, enter the beginning of the range of port numbers used by the service. If the service uses a single port number, enter it in both the start and finish fields.
Comment	The description of this setting

Check the "**Select**" box of which rule you want to delete, and then click the "**Delete Selected**" button to delete it.

5.6.2 DMZ

This page allows you to set a **De-militarized Zone (DMZ)** to separate internal network and Internet.

Choose menu "**Service Setup → DMZ**", and you can configure the private IP address of DMZ. The DMZ feature allows one local host to be exposed to the Internet for a special-purpose service such as Internet gaming or video conferencing. After the configuration, please click the "Apply" button to save the settings.

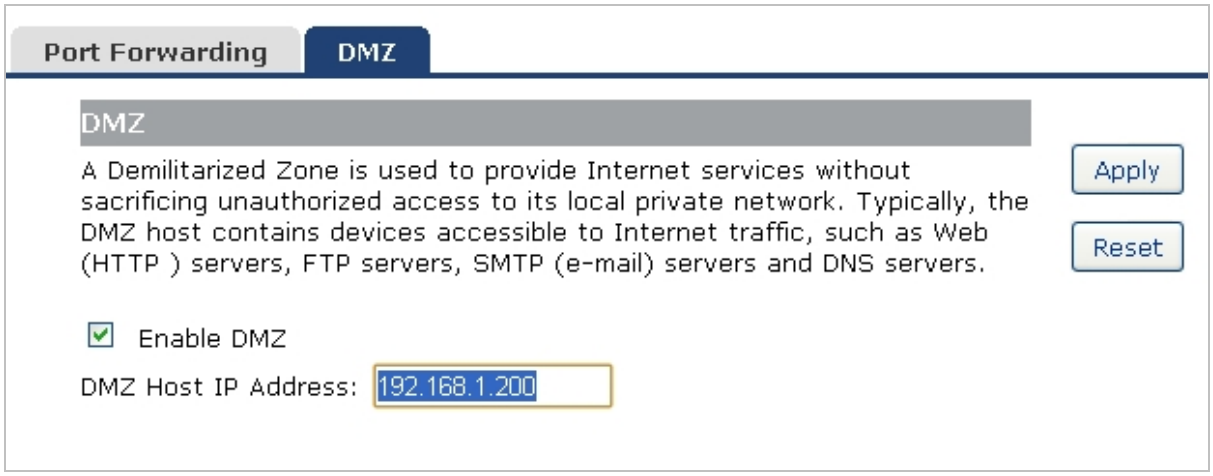


Figure 5-6-2 DMZ

The page includes the following fields:

Object	Description
Enable DMZ	Check the box to enable DMZ function. If the DMZ Host Function is enabled, it means that you set up DMZ host at a particular computer to be exposed to the Internet so that some applications/software, especially Internet / online game can have two way connections.
DMZ Host IP Address	Enter the IP address of a particular host in your LAN which will receive all the packets originally going to the WAN port / Public IP address above.

5.7 Security Setup

The Security Setup contains submenus of the settings about firewall and access filtering. Please refer to the following sections for the details.

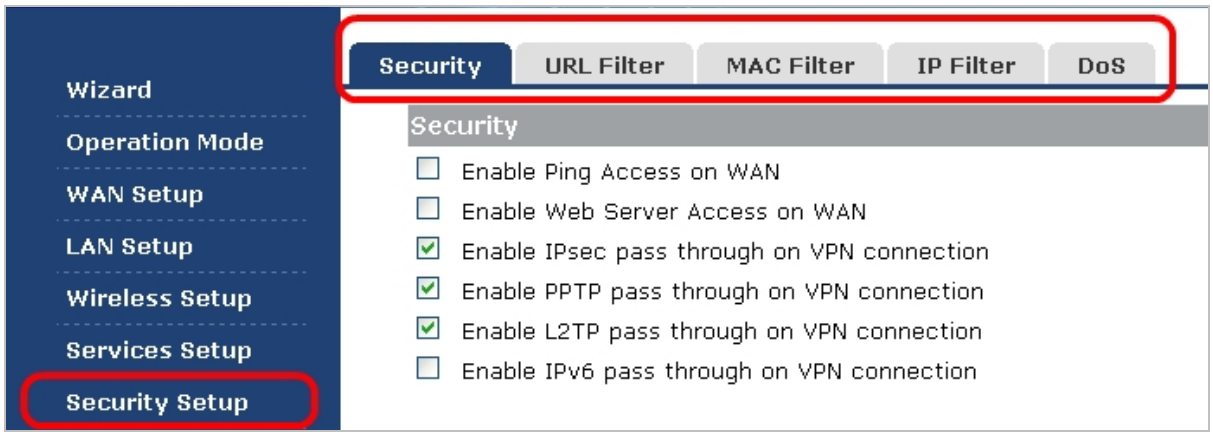


Figure 5-7-1

5.7.1 Security

The Wireless router provides extensive firewall protection by restricting connection parameters to limit the risk of intrusion and defending against a wide array of common hacker attacks.

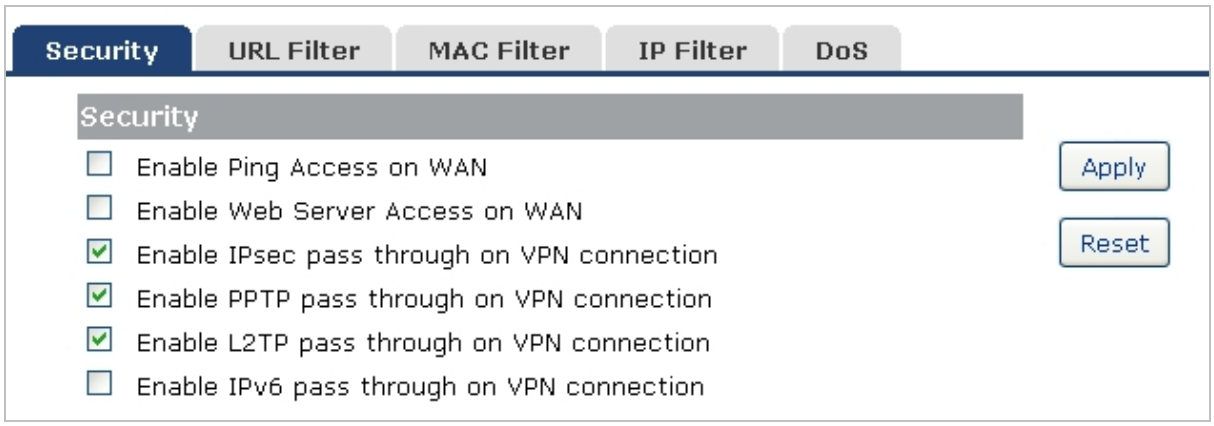


Figure 5-7-2

The page includes the following fields:

Object	Description
Enable IGMP Proxy	Check the box to enable the IGMP Proxy function.
Enable Ping Access on WAN	Check the box to enable Ping access from the Internet Network.
Enable Web Server Access on WAN	Check the box to enable the web server access of the WNRT-633 from the Internet network.
Enable IPsec pass through on VPN connection	Check the box to enable IPsec pass through function on VPN connection.
Enable PPTP pass through on VPN connection	Check the box to enable PPTP pass through function on VPN connection.
Enable L2TP pass through on VPN connection	Check the box to enable L2TP pass through function on VPN connection.

Enable IPv6 pass through on VPN connection	Check the box to enable IPv6 pass through function on VPN connection.

5.7.2 URL Filtering

URL filter is used to deny LAN users from accessing the internet. Block those URLs which contain keywords listed below.

Choose menu "**Security Setup → URL Filtering**", and you can configure which URL addresses to be blocked. After the configuration, please click the "Apply" button to save the settings.

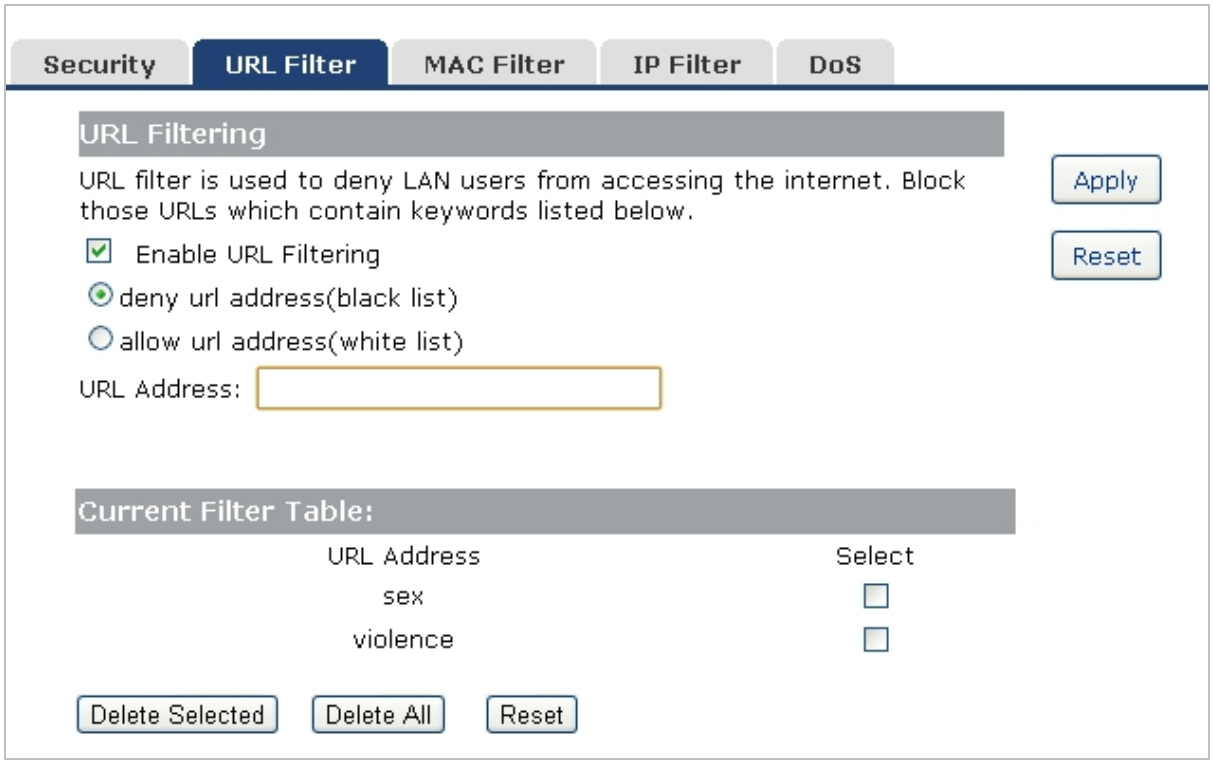


Figure 5-7-3 URL Filtering

The page includes the following fields:

Object	Description
Enable URL Filtering:	Check this box to enable URL Filter function.
IP Address:	The IP Address that you want to filter.
URL Address:	The URL Address that you want to filter.

Check the "Select" box of which rule you want to delete, and then click the "Delete Selected" button to delete it.

Note

If you wish to block www.facebook.com, simply type in "facebook" and the Wireless Router will block all websites with the text "facebook" in the URL.

5.7.3 MAC Filtering

Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Wireless Router. Use of such filters can be helpful in securing or restricting your local network.

Choose menu "**Security Setup→ MAC Filter**", and you can configure which computer of the specified MAC address to be restricted. After the configuration, please click the "Apply" button to save the settings.

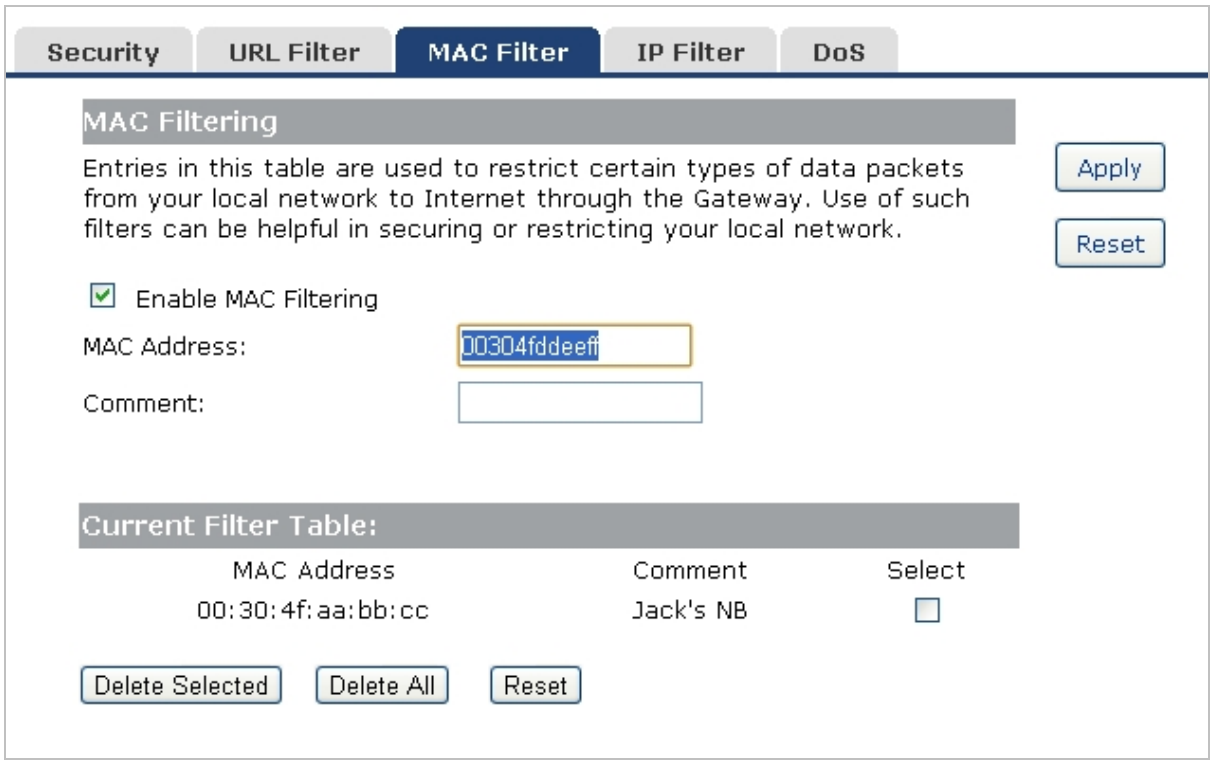


Figure 5-7-4 MAC Filtering

The page includes the following fields:

Object	Description
Enable MAC Filtering	Enable MAC filtering
MAC Address	Add MAC address you want to control
Comment	The description of this setting

Check the "**Select**" box of which rule you want to delete, and then click the "**Delete Selected**" button to delete it.

5.7.4 IP Filtering

IP Filtering is used to block internet or network access to **specific IP addresses** on your local network. The restricted user may still be able to login to the network but will not be able to access the internet. To begin blocking access to an IP address, enable IP Filtering and enter the IP address of the user you wish to block.

Choose menu "**Security Setup → IP Filter**", and you can configure which IP address and protocol to be restricted. After the configuration, please click the "**Apply**" button to save the settings.

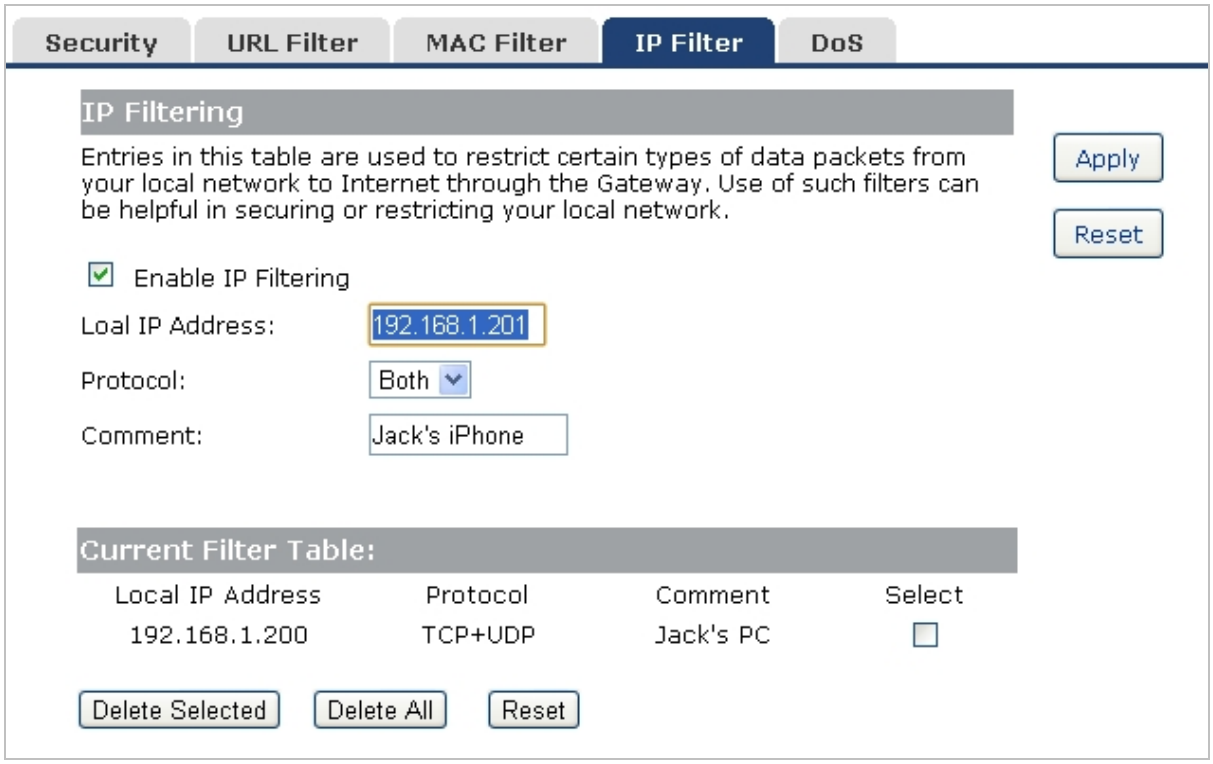


Figure 5-7-5 IP Filtering

The page includes the following fields:

Object	Description
Enable IP Filtering	Check this box to enable IP Filter function
Local IP Address	Add LAN IP address you want to control
Protocol	Select the port number protocol type (**TCP**, **UDP** or **both**). If you are unsure, then leave it to the default **both** protocol
Comment	The description of this setting

Check the "**Select**" box of which rule you want to delete, and then click the "**Delete Selected**" button to delete it.

5.7.5 Denial of Service (DoS)

The Wireless Router can prevent specific DoS attacks from entering your network. A "**Denial-of-Service**" (**DoS**) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

Choose menu "**Security Setup → DoS**" to configure the settings of DoS attack prevention. After the configuration, please click the "Apply" button to save the settings.

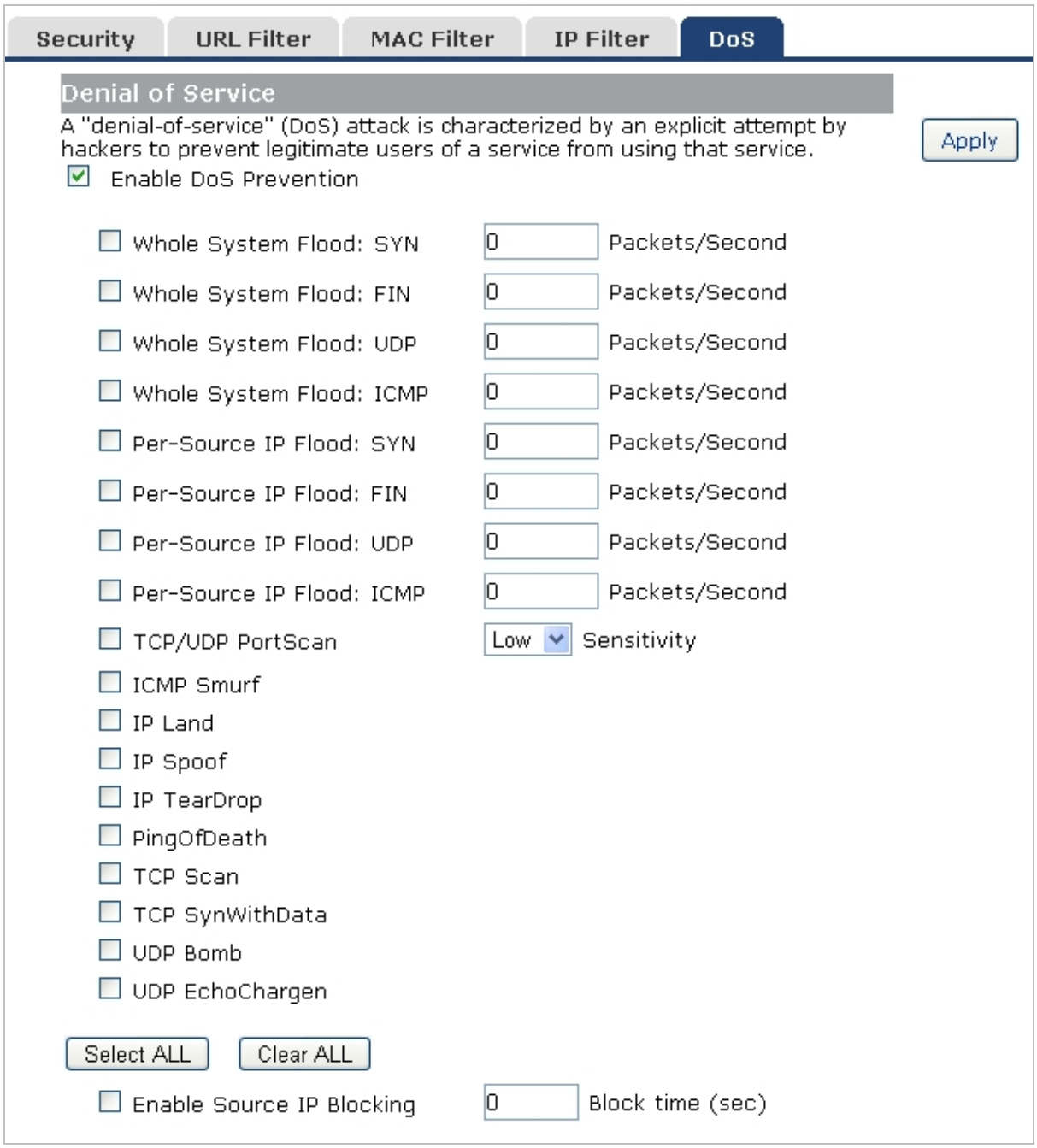


Figure 5-7-6 Denial of Service

The page includes the following fields:

Object	Description
Enable DoS Prevention	Check to enable DoS function. User may set other related configurations about DoS below

5.8 Route Setup

Static routing is a special type of routing that can be applied in a network to reduce the problem of routing selection and data flow overload caused by routing selection so as to improve the packets forwarding speed. You can set the destination IP address, subnet mask, and gateway to specify a routing rule. The destination IP address and subnet mask determine a destination network or host to which the router sends packets through the gateway.

5.8.1 Router Setup

A static route is a pre-determined pathway that network information must travel to reach a specific host or network.

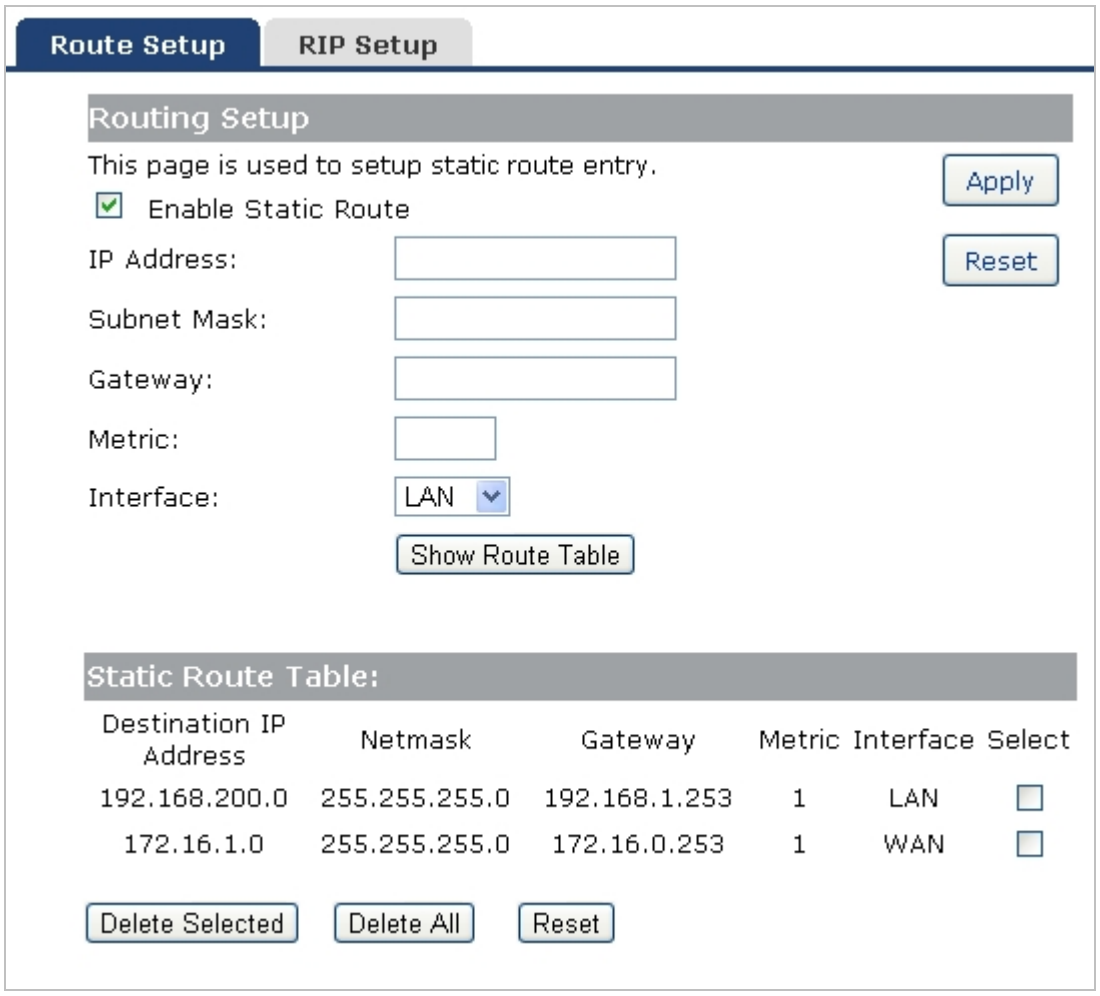


Figure 5-8-1 Routing Setup

The page includes the following fields:

Object	Description
Enable Static Route	Click this box to enable static route.
IP Address	The network or host IP address desired to access.

Subnet Mask	The subnet mask of destination IP.
Gateway	The gateway is the router or host's IP address to which packet was sent. It must be the same network segment with the WAN or LAN port.
Show Routing Table	Clicking this button will show you all the routing table of the system.
Static Routing table	It only shows the static routing table and you can delete one or all.

5.8.2 RIP Setup

The page is used to set up dynamic routing protocol or edit static route entry. After the configuration, please click the "Apply" button to save the settings.

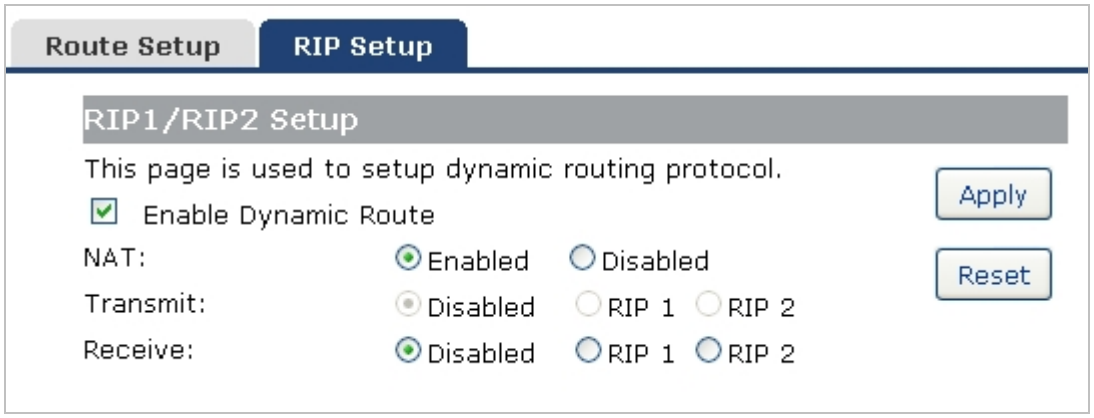


Figure 5-8-2 RIP Setup

The page includes the following fields:

Object	Description
Enable Dynamic Route	Click this box to enable Dynamic Route.

5.9 QoS Setup

The **QoS (Quality of Service)** helps improve your network gaming performance by prioritizing applications. By default the bandwidth control are disabled and application priority is not classified automatically. In order to complete this settings, please follow the steps below.

1. Enable this function.
2. Enter the total speed or choose automatic mode.
3. Enter the IP address or MAC address user want to control.
4. Specify how to control this PC with this IP address or MAC address, including maximum or minimum bandwidth, priority and its up/down speed.

After the configuration, please click the "**Apply**" button to save the settings.

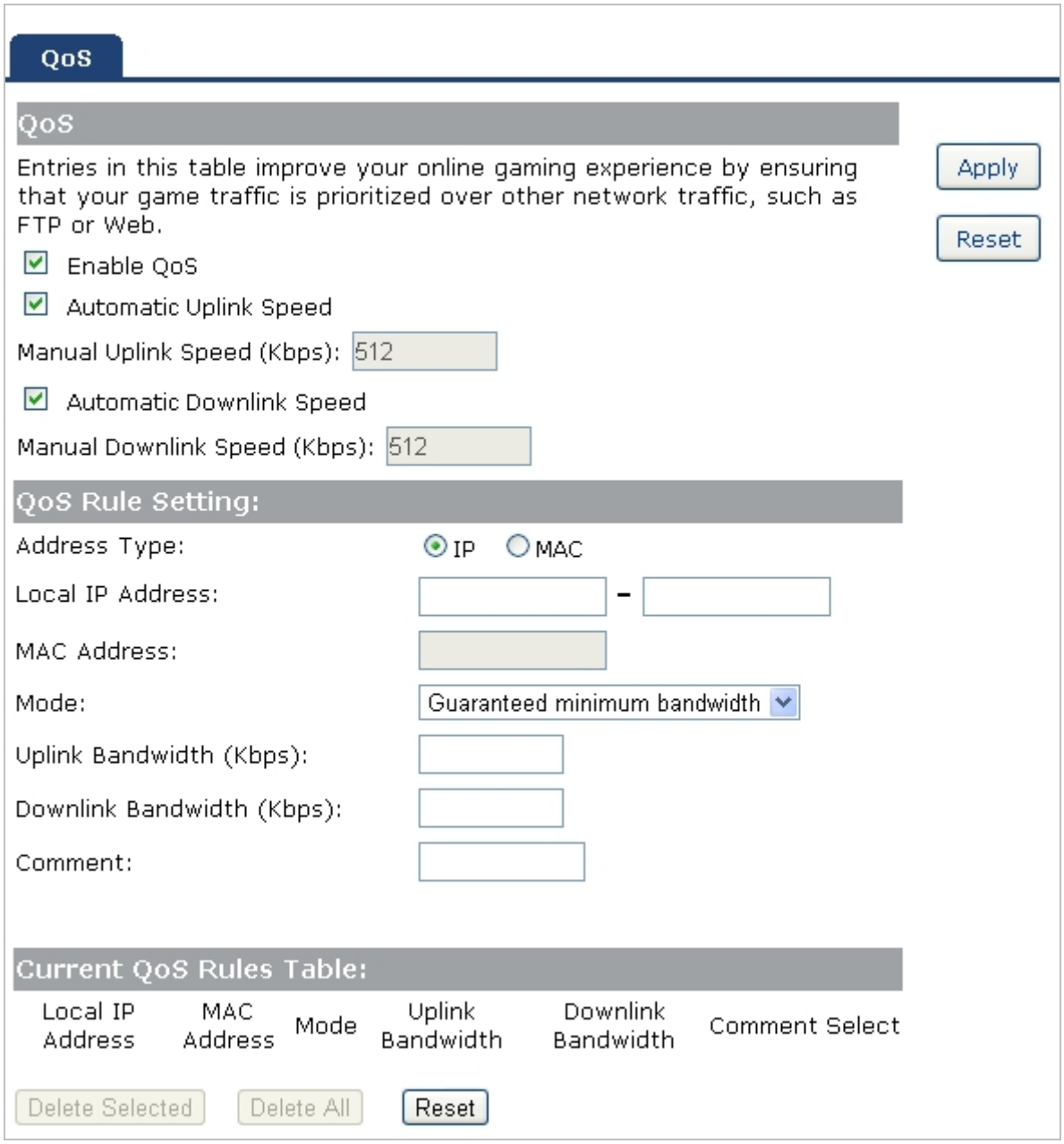


Figure 5-9-1 QoS

The page includes the following fields:

Object	Description
Enable QoS	Check the box to enable the QoS function.
Automatic Uplink Speed	Check the box to adjust the uplink speed automatically by the WNRT-633. Or enter the uplink data rate manually in the field below.
Automatic Downlink Speed	Check the box to adjust the downlink speed automatically by the WNRT-633. Or enter the downlink data rate manually in the field below.
QoS Rule Setting	To set the priority rule, you can appoint the computer by **IP** address or **MAC** address, and enter it in the correct field. Select **minimum** or **maximum** bandwidth, and then fill the **uplink** and **downlink** data rate into the field.

5.10 System

The System menu contains submenus of the general settings of the WNRT-633. Please refer to the following sections for the details.

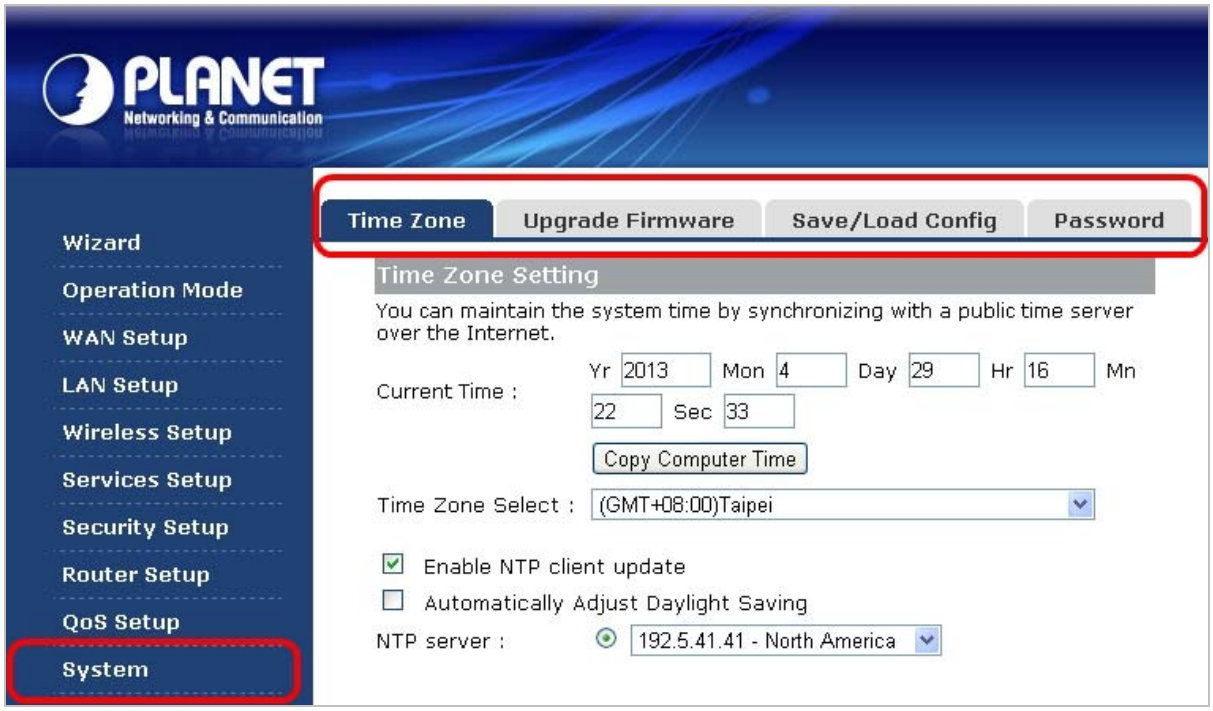


Figure 5-10-1

5.10.1 Time Zone Setting

This section assists you in setting the Wireless Router's system time. You can either select to set the time and date manually or automatically obtain the GMT time from Internet.

Choose menu "**System → Time Zone Setting**" to configure the system time. You can also maintain the system time by synchronizing with a public time server over the Internet. After the configuration, please click the "Apply" button to save the settings.

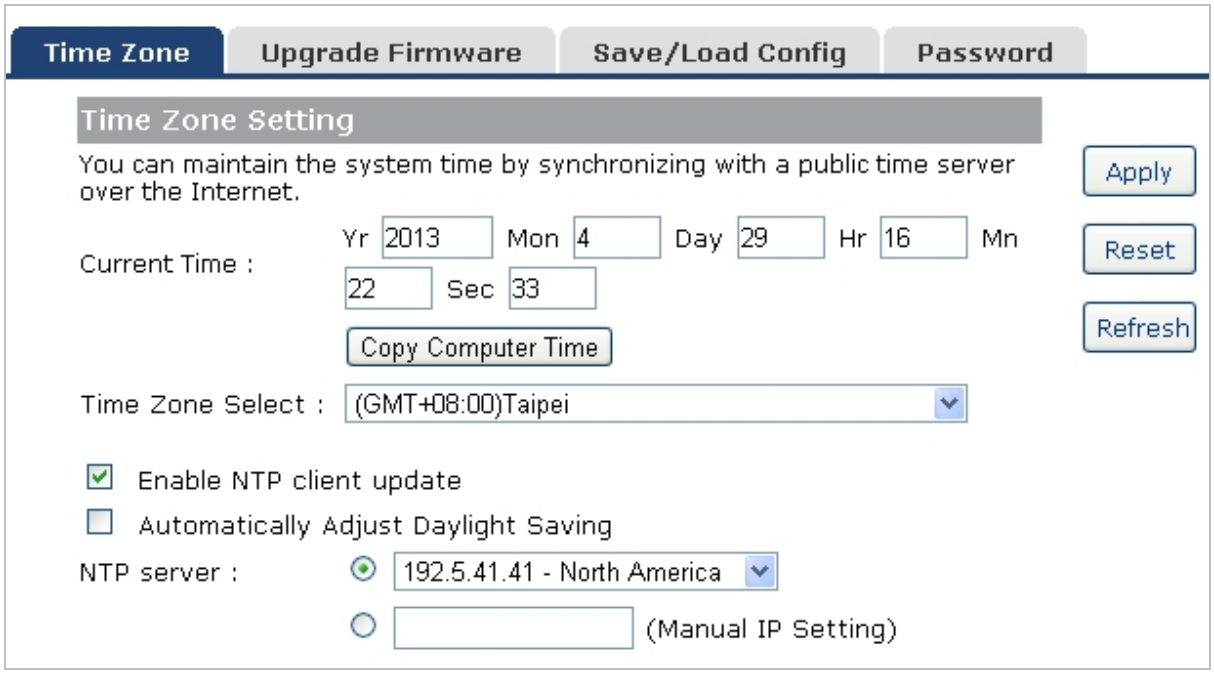


Figure 5-10-2 Time Zone Setting

The page includes the following fields:

Object	Description
Time Zone Select	Input current time manually.
Time Zone Select	Select the time zone of the country you are currently in. The router will set its time based on your selection.
Enable NTP client update	Check to enable NTP update. Once this function is enabled, Router will automatically update current time from NTP server.
NTP Server	User may select prefer NTP sever or input address of NTP server manually.

Note

The configured time and date settings are lost when the Wireless Router is powered off.

5.10.2 Upgrade Firmware

Firmware upgrade is released periodically to improve the functionality of your device and also to add new features. If you run into a problem with a specific feature of the device, log on to our website www.planet.com.tw to download the latest firmware to update your device.

Choose menu "**System → Upgrade Firmware**" to upgrade the firmware of the WNRT-633. Select the new firmware file downloaded from the PLANET website, and then click "**Upload**" button to upgrade it.

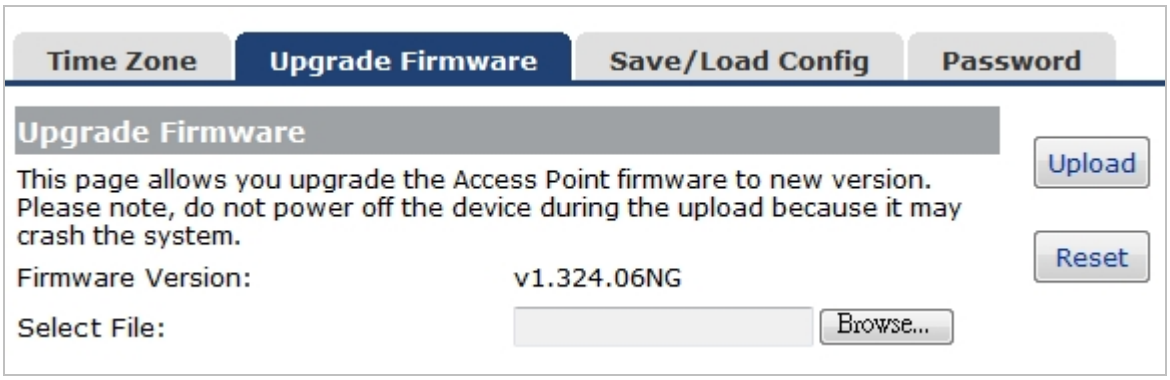


Figure 5-10-3 Upgrade Firmware

The page includes the following fields:

Object	Description
Select File	Browse and select file you want to upgrade and press Upload to perform upgrade. **Please wait till on screen shows related information after upgrade is finished.**

Note

Do not disconnect the Wireless Router from your management PC (the PC you use to configure the device) or power off it during the upgrade process; otherwise, it may be permanently damaged. The Wireless Router will restart automatically when the upgrade process, which takes several minutes, completes.

5.10.3 Save/Reload Settings

Choose menu "**System → Save/Reload Settings**" to back up or reset the configuration of the WNRT-633.

Once you have configured the Wireless Router the way you want it, you can save these settings to a configuration file on your local hard drive that can later be imported to your Wireless Router in case the device is restored to factory default settings.

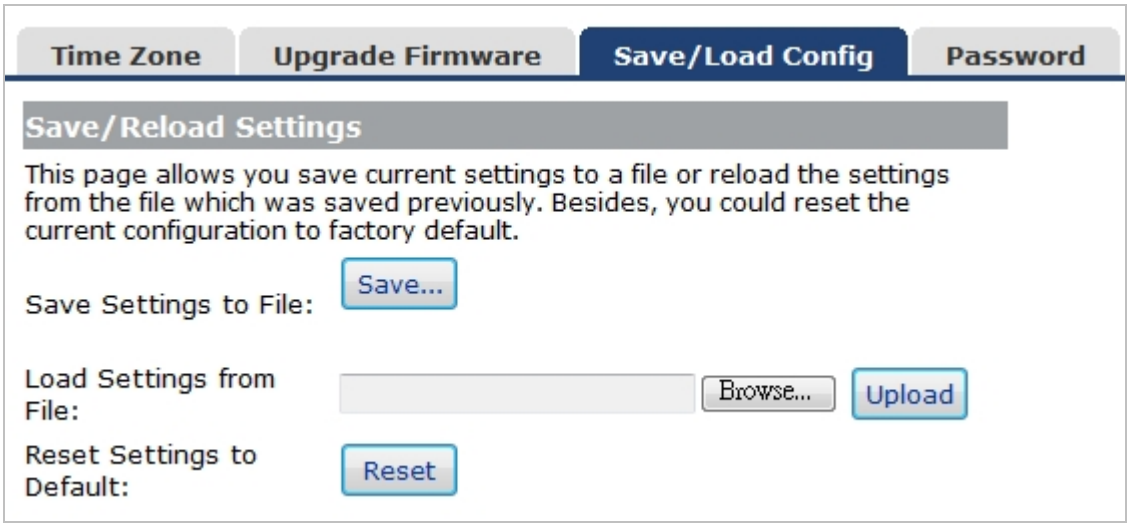


Figure 5-10-4 Save/Reload Settings

The page includes the following fields:

Object	Description
Save Settings to File	Click the "**Save…**" button to back up the configuration of the WNRT-633. And then save the "config.dat" in your computer.
Load Settings from File	Select the configuration file of the WNRT-633, and then click the "**Upload**" button to reload the configuration back into the WNRT-633.
Reset Settings to Default	Click the "**Reset**" button to reset all settings of the WNRT-633 to factory default. **Factory Default Settings:** User Name: **admin** Password: **admin** IP Address: **192.168.1.1** Subnet Mask: **255.255.255.0** SSID: **WNRT-633** Wireless Security: **None**

Note

To activate your settings, you need to reboot the Wireless Router after you reset it.

5.10.4 Password

To ensure the Wireless Router's security, you will be asked for your password when you access the Wireless Router's Web-based Utility. The default user name and password is "admin". This page will allow you to add or modify the user name and passwords.

Choose menu "**System → Password**" to change the user name and password which is inputted to access the web UI of the WNRT-633.

Figure 5-10-5 Password Setup

The page includes the following fields:

Object	Description
User Name	Enter user name.
New Password	Input password for this user.
Confirmed Password	Confirm password again.

Note

For the sake of security, it is highly recommended that you change default login password and user name.

5.11 Status

You can use this function to realize the instantaneous information of the Wireless Router. The Information displayed here may vary on different configurations.

5.11.1 Status

Choose menu "**Status → Status**" to show the current status and some basic settings of the WNRT-633.

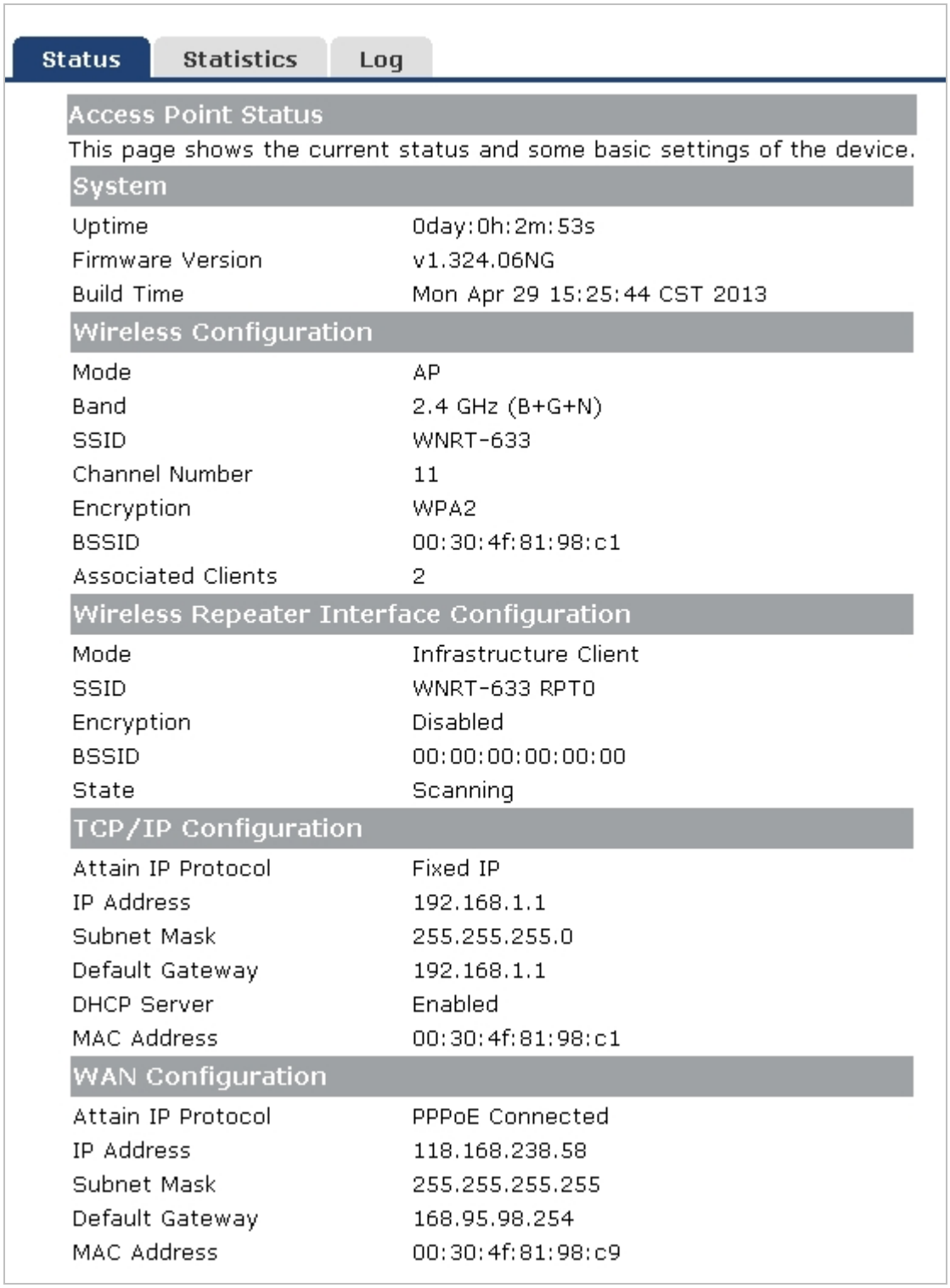


Figure 5-11-1 Status

5.11.2 Statistics

Choose menu "**Status → Statistics**" to show the packet counters for transmission and reception regarding wireless and Ethernet network.

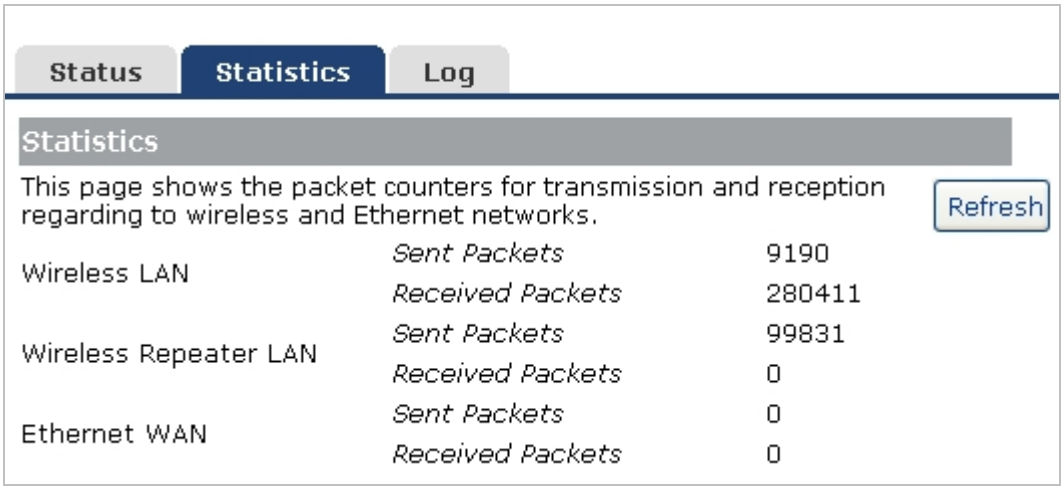


Figure 5-11-2 Statistics

The page includes the following fields:

Item	Description
Wireless LAN ***Sent Packets***	It shows the statistic count of sent packets on the wireless LAN interface.
Wireless LAN ***Received Packets***	It shows the statistic count of received packets on the wireless LAN interface.
Ethernet WAN ***Sent Packets***	It shows the statistic count of sent packets on the Ethernet WAN interface.
Ethernet WAN ***Received Packets***	It shows the statistic count of received packets on the Ethernet WAN interface.
Refresh	Click the refresh the statistic counters on the screen.

5.11.3 Log

Choose menu "**Management → Log**" to configure the settings of system log. You can check the box of the items you want to record it in the log. After the configuration, please click the "Apply" button to save the settings.

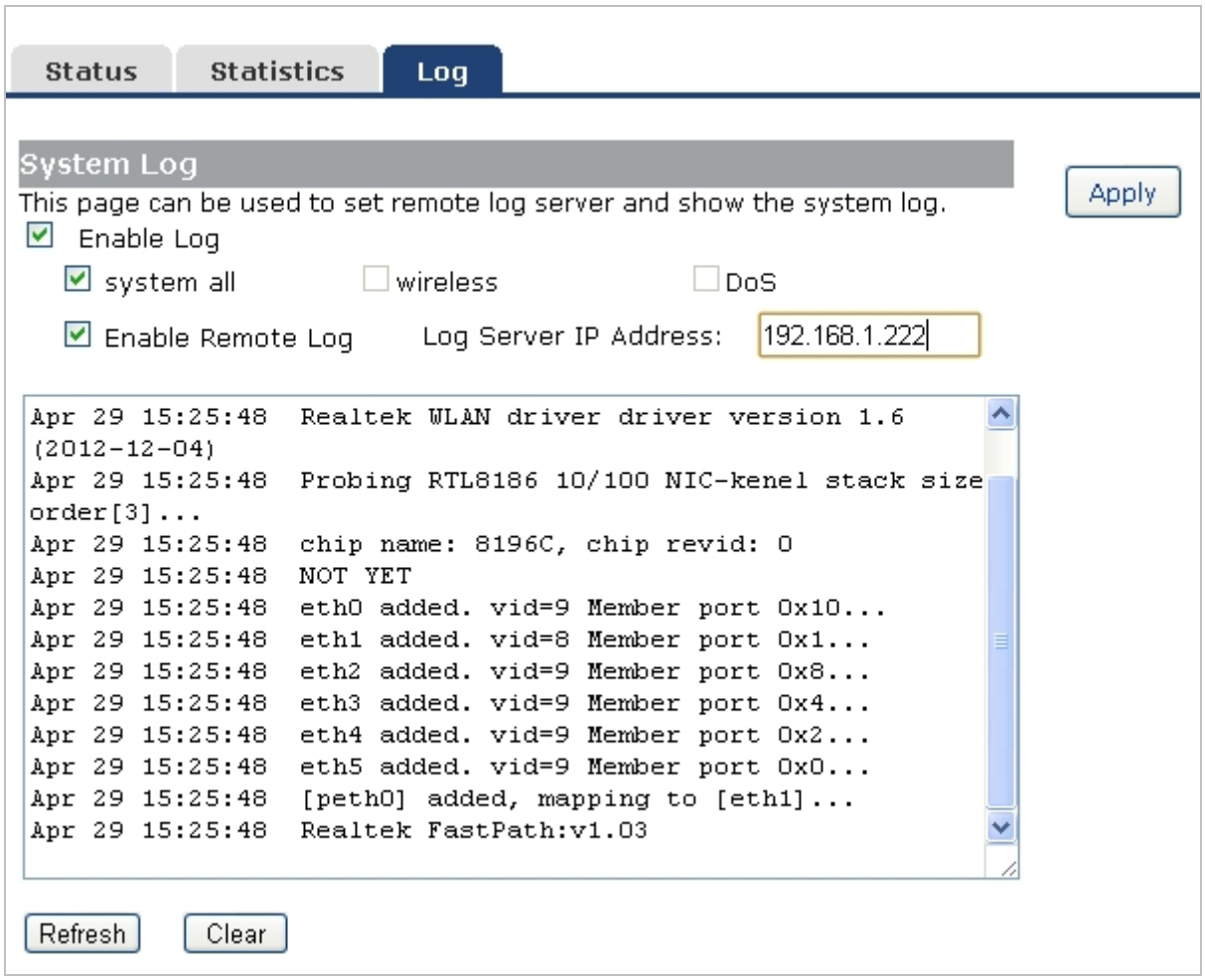


Figure 5-11-3 System Log

The page includes the following fields:

Object	Description
Enable Log	Check to enable log function.
System all/Dos	Select which log you want to check. Related information will be shown below.

5.12 Logout

Click "Logout" to log out the web UI of the WNRT-633. And then click the "Apply" button for sure.

Figure 5-12-1 Logout

Chapter 6. Quick Connection to a Wireless Network

In the following sections, the **default SSID** of the WNRT-633 is configured to "**default**".

6.1 Windows XP (Wireless Zero Configuration)

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

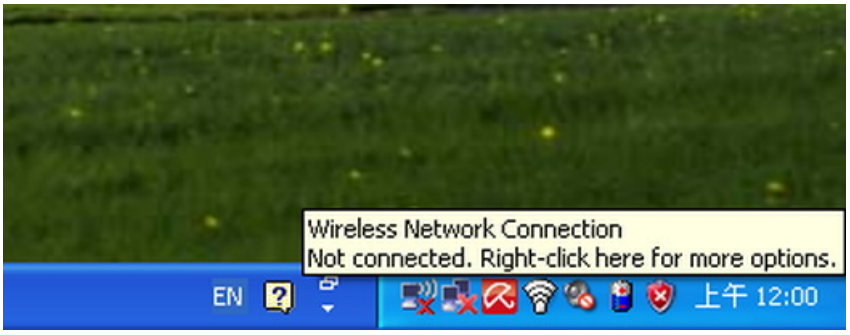


Figure 6-1-1

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

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

(1) Select SSID [**default**]

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

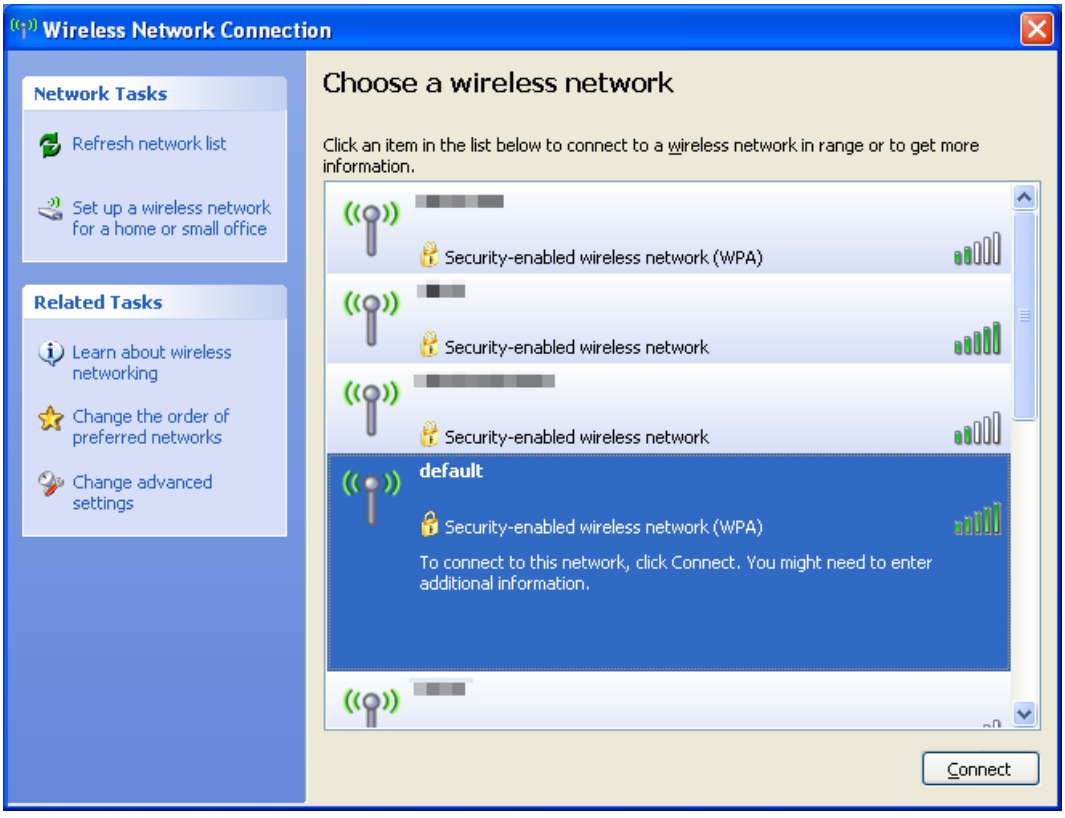


Figure 6-1-2

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

(1) The Wireless Network Connection box will appear

(2) Enter the encryption key that configured in section 5.5.3

(3) Click the [Connect] button

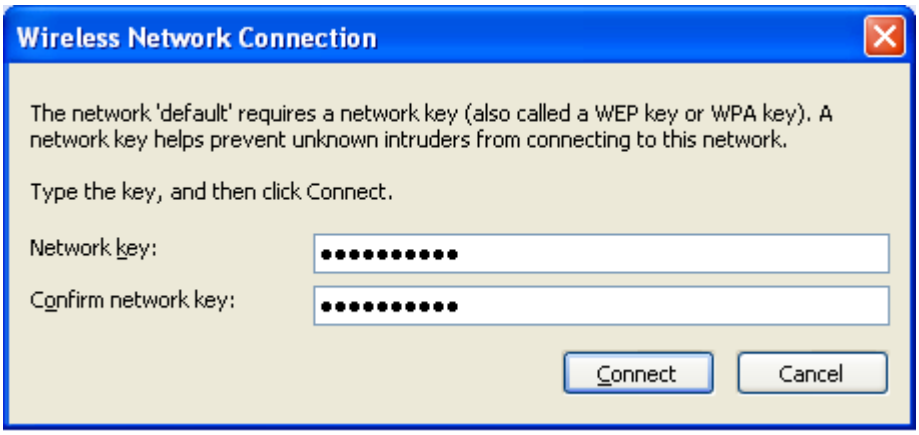


Figure 6-1-3

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

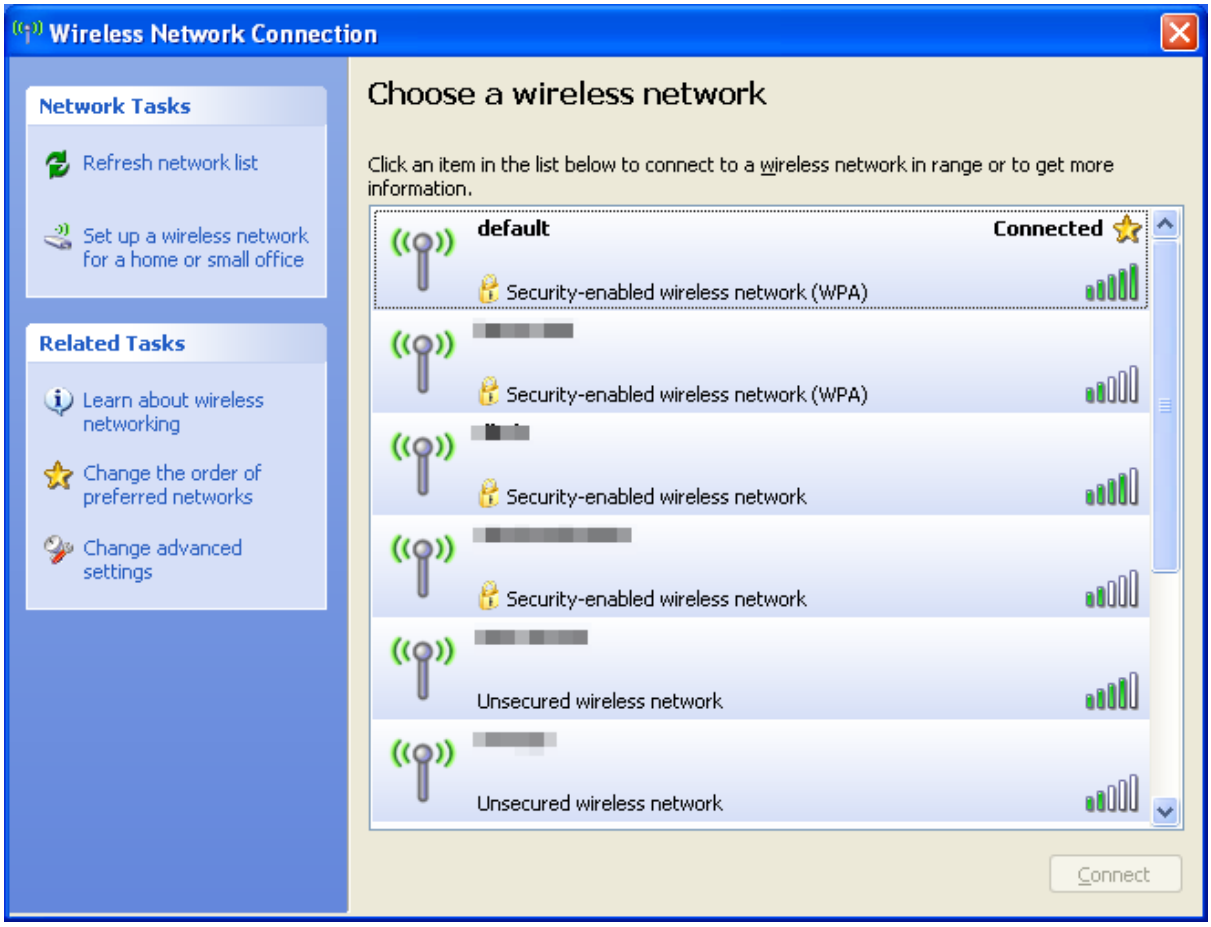


Figure 6-1-4

Note

Some laptops are equipped with a "Wireless ON/OFF" switch for the internal wireless LAN. Make sure the hardware wireless switch is switch 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 6-2-1

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

(1) Select SSID [**default**]

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

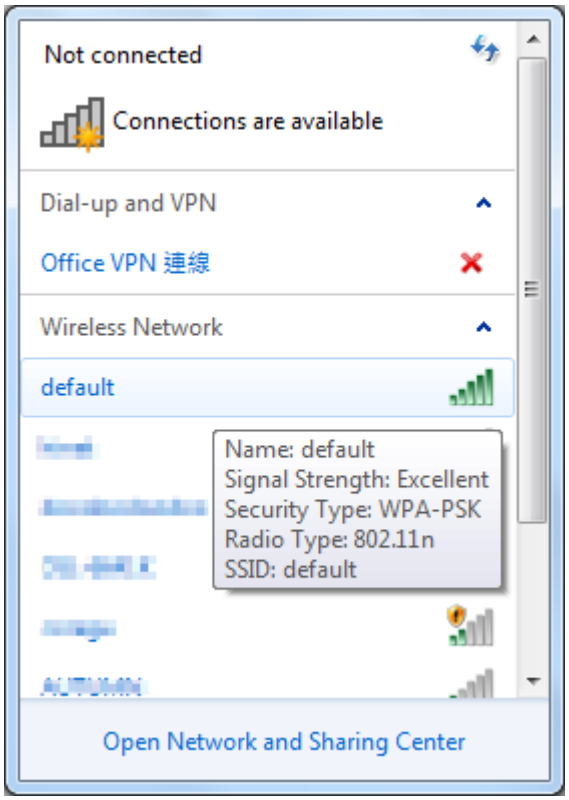


Figure 6-2-2

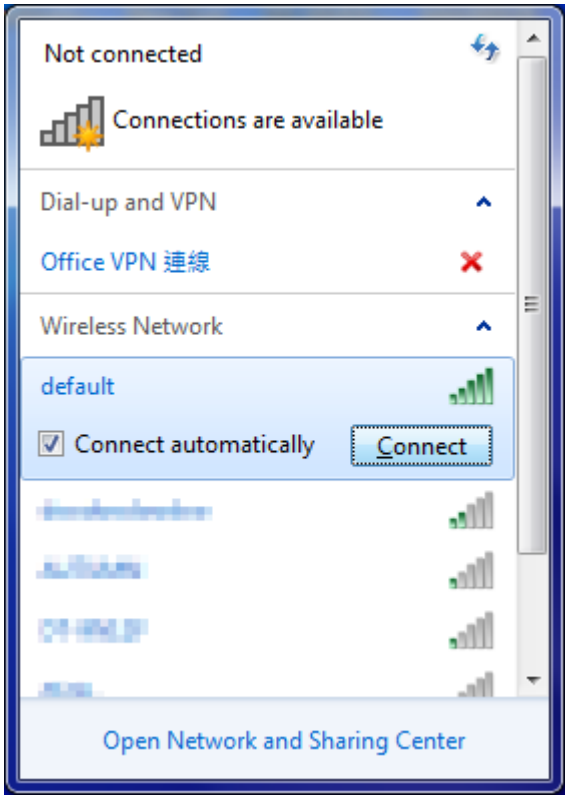


Figure 6-2-3

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) The Connection to a Network box will appear

(2) Enter the encryption key that is configured in section 5.5.3

(3) Click the [OK] button

Figure 6-2-4

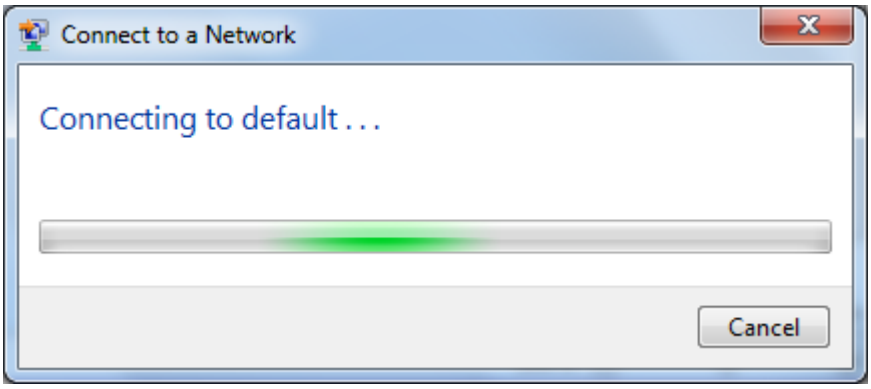


Figure 6-2-5

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

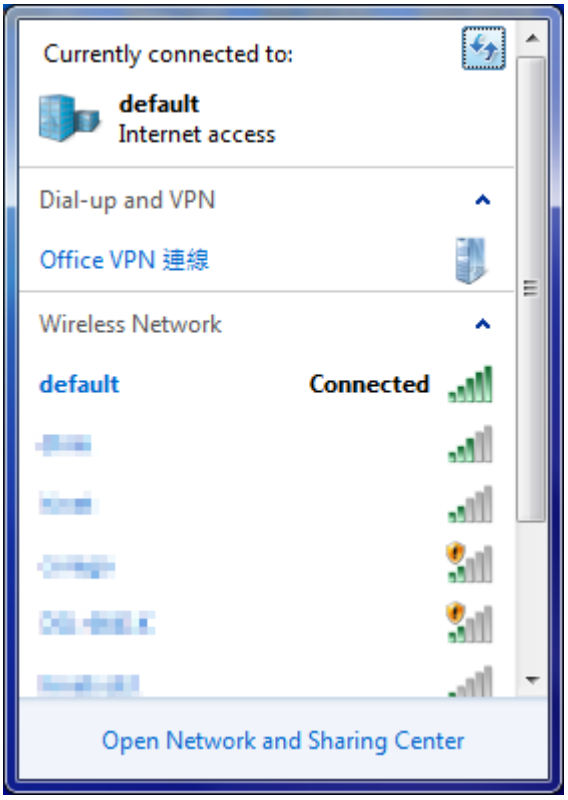


Figure 6-2-6

6.3 Mac OS X 10.x

In the following sections, the **default SSID** of the WNRT-633 is configured to "**default**".

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

The AirPort Network Connection menu will appear

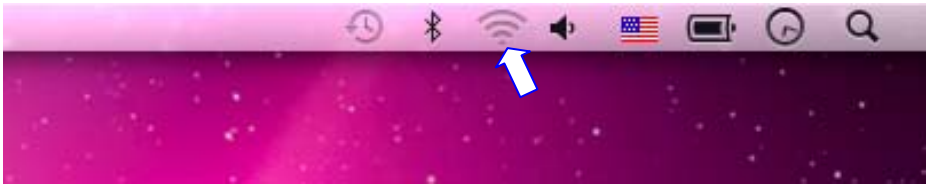


Figure 6-3-1

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

(1) Select and SSID [**default**]

(2) Double-click on the selected SSID

Figure 6-3-2

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

(4) Enter the encryption key that is configured in section 5.5.3

(1) Click the [OK] button

Figure 6-3-3

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.

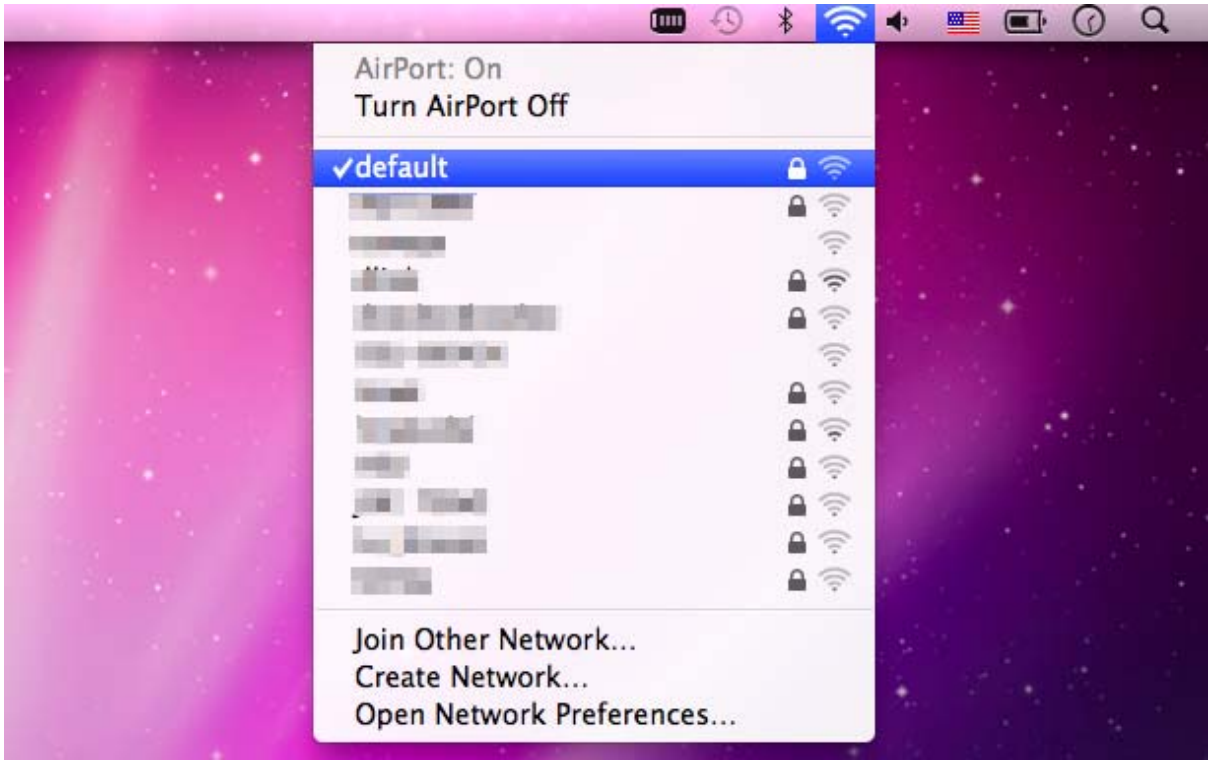


Figure 6-3-4

There is another way to configure the MAC OS X Wireless settings:

Step 1: Click and open the [**System Preferences**] by going to **Apple** > **System Preference** or **Applications**

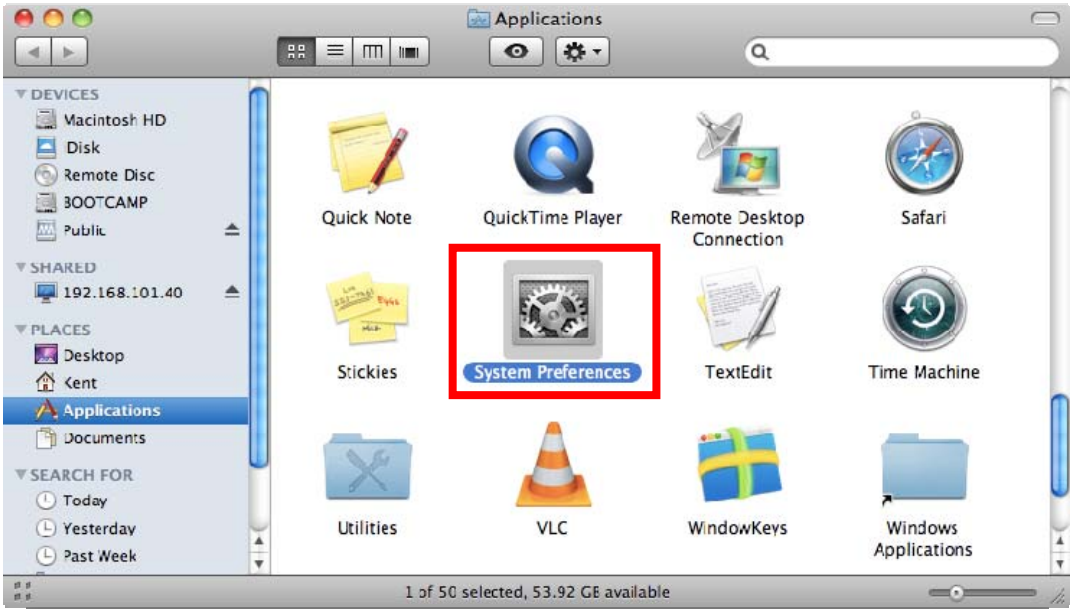


Figure 6-3-5

Step 2: Open **Network Preference** by clicking on the [**Network**] icon

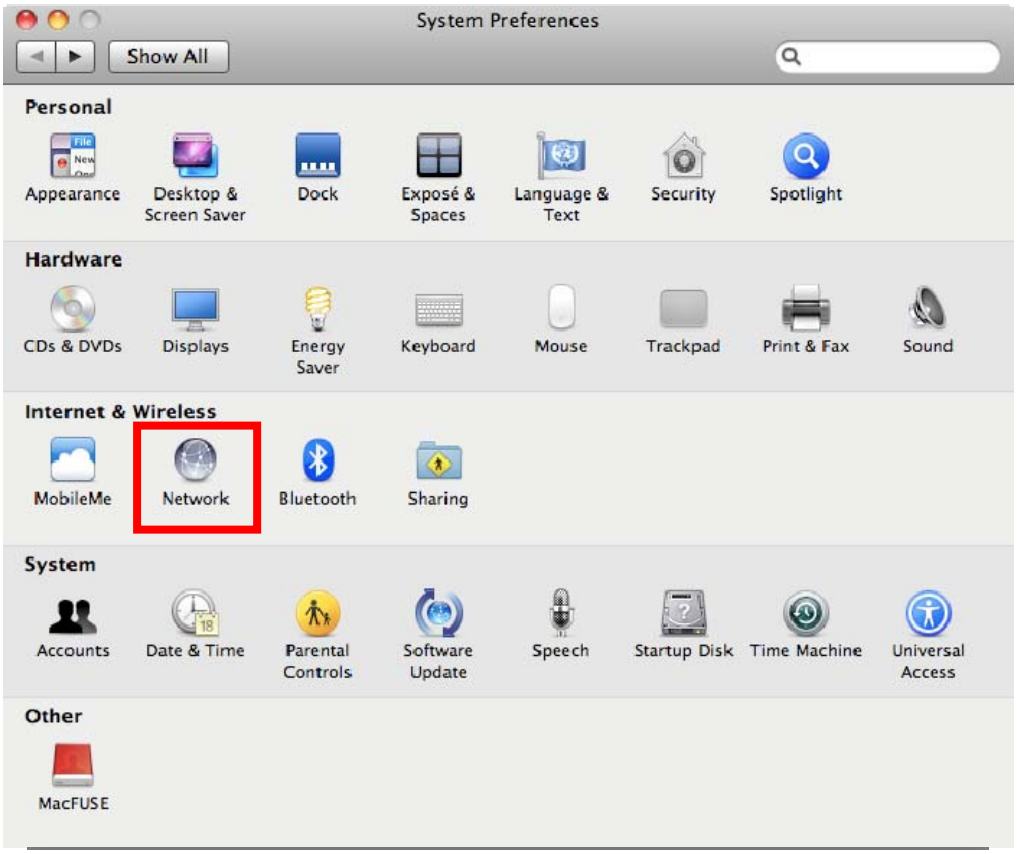


Figure 6-3-6

Step 3: Check Wi-Fi setting and select the available wireless network

(1) Choose the **AirPort** on the left-menu (make sure it is ON)

(2) Select Network Name [default] here

If this is the first time to connect to the Wireless Router, it should show "Not network selected".

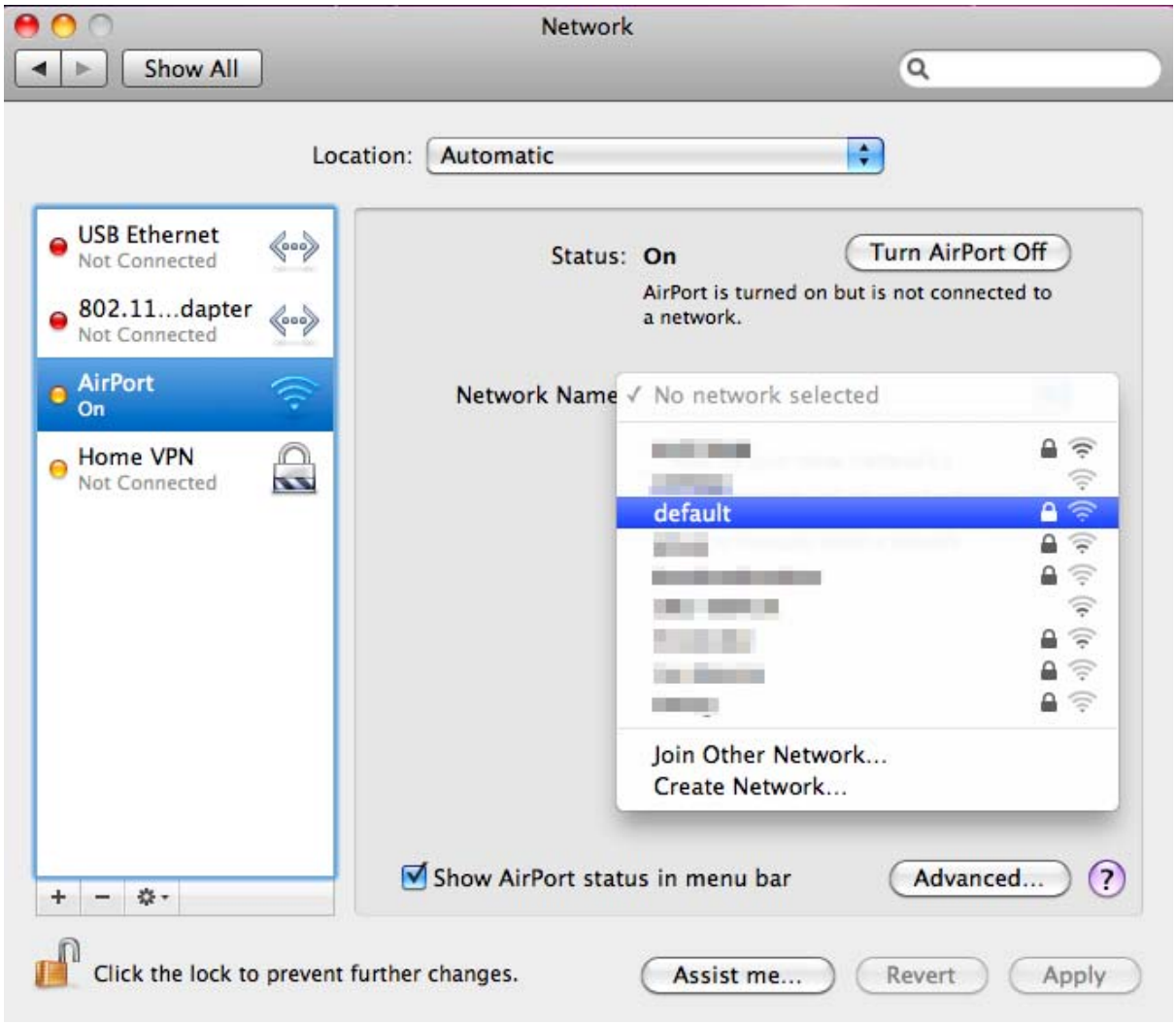


Figure 6-3-7

6.4 iPhone / iPod Touch / iPad

In the following sections, the **default SSID** of the WNRT-633 is configured to "**default**".

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

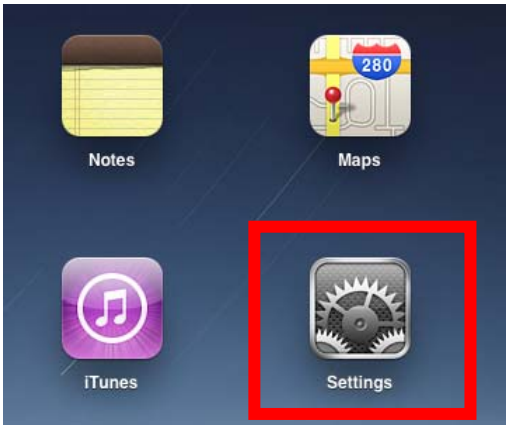


Figure 6-4-1

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

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

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

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

Figure 6-4-2

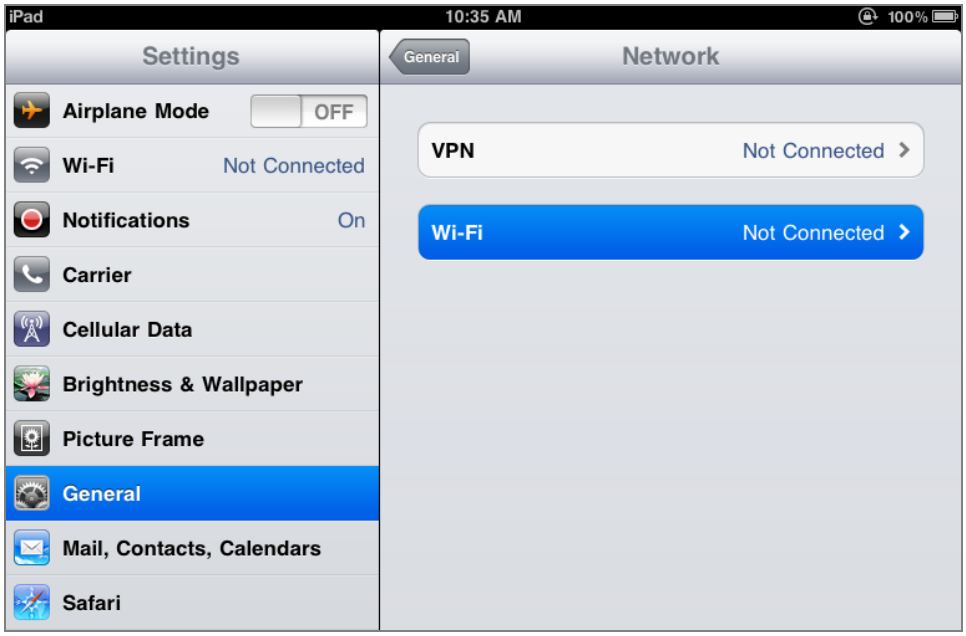


Figure 6-4-3

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

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

(2) Select SSID [**default**]

Figure 6-4-4

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 4.4.3

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

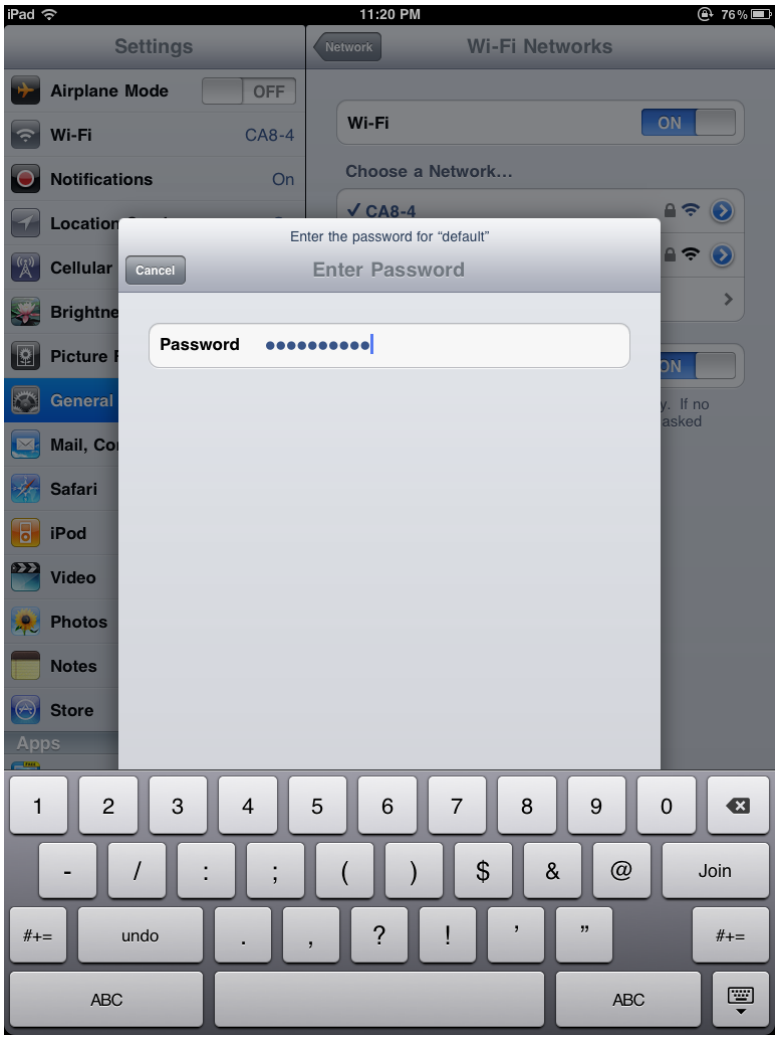


Figure 6-4-5

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 6-4-6

Appendix A: Troubleshooting

If you find 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 period of time.

Malfunction	Solution
The WNRT-633 is not responding to me when I want to access it via web browser	Please check the connection of power cord and network cable of the WNRT-633. All cords and cables should be correctly and firmly inserted to the device. If all LEDs on the WNRT-633 are off, please check the status of power adapter, and make sure it is correctly powered. You must configure your PC to the same IP address section as that of the WNRT-633. Are you using MAC or IP address filter? Try to connect the WNRT-633 by another computer and see if it works; if not, please restore the WNRT-633 to factory default settings (Press "reset" button for over 10 seconds). Shift the hardware switch to Router Mode, and set your computer to obtain an IP address automatically (DHCP), and see if your computer can get an IP address. If you just did firmware upgrade and this happens, contact the dealer for help. a. If all the above solutions don't work, contact the dealer for help.
Unable to get connected with the Internet	a. Go to "Management → Status" submenu, and check the WAN configuration status. Please be patient, sometimes Internet is just that slow. b. If you connect your computer to the Internet directly before, try to do that again. And check if you can get connected to the Internet with your computer directly via the device provided by your local Internet service provider. c. Check the WAN access type (Static IP / Dynamic IP / PPPoE / PPTP / L2TP), user name, password, and the other parameters provided by your local ISP again. d. Call your Internet service provider and check if there is something wrong with their service. e. If you just can't connect to one or more website, but you can still use other internet services, please check URL filter in the web UI. f. Reset the WNRT-633 to the factory default settings and

	try again later. g. Reset the device provided by your Internet service provider as well. h. Try to use IP address instead of host name. If you can access a remote server by an IP address but not by a host name, please check the DNS setting.
Unable to be found by the wireless clients	a. Check if the "Broadcast SSID" is disabled. b. Are you too far from the WNRT-633? Try to get closer. c. Please remember that you have to enter SSID to your wireless client device manually, if SSID broadcast is disabled.
File download is very slow or breaks frequently	a. Are you using QoS function? Please disable it and try again. Please be patient, sometime Internet is just that slow. b. Reset the WNRT-633 to the factory default settings and see if it is better after that. c. Try to know what other computers are doing in your local area network. If someone is transferring big files, other people will think Internet is really slow. d. If this never happens before, call your Internet service provider to check if there is something wrong with their network.
Unable to login the web management UI: password is wrong	a. Make sure you are connecting to the correct IP address of the WNRT-633. b. Password is case-sensitive. Make sure the "Caps Lock" light is not illuminated. c. If you really forget the password, please do hardware reset.
The device is getting hot.	a. This is not a malfunction if you can keep your hand on the case of the WNRT-633. b. If you smell something wrong or see the smoke coming out from the WNRT-633 or power adapter, please disconnect the device and power adapter from power (make sure it's safe before you're doing this!), and call your dealer for help.
The date and time of all event logs are wrong	a. Adjust the internal clock of the WNRT-633.

Appendix B: Hardware Specifications

Product	**WNRT-633** 300Mbps 802.11n Wireless Gigabit Router	
Hardware Specifications		
Interface	WAN	1 x 10/100/1000Mbps Auto MDI/MDI-X RJ45 port
	LAN	4 x 10/100/1000Mbps Auto MDI/MDI-X RJ45 ports
	Wireless	2 x detachable RP-SMA Connectors
Antenna	Gain:	2 x 5dBi antennas
	Orientation:	Omni-directional
WPS / Reset Button	Reset / WPS button at rear panel ■ Press for about 7 seconds to reset the device to factory default. ■ Press for 1 second to activate WPS function.	
LED Indicators	PWR, WPS, WLAN, WAN/LAN with green light	
Material	Plastic	
Dimensions (W x D x H)	154 x 106 x 27 mm (without antenna) 154 x 136 x 27 mm (with antenna)	
Weight	212g	
Power Adapter	AC Input: 100~240V AC (50/60Hz) DC Output: 12V, 1A	
Wireless Interface Specifications		
Standard	Compliance with IEEE 802.11b/g/n	
Frequency Band	2.4~2.4835GHz	
Extend Frequency	DSSS	
Modulation Type	DBPSK, DQPSK, QPSK, CCK and OFDM (BPSK/QPSK/16-QAM/ 64-QAM)	
Data Transmission Rates	802.11n(40MHz):270/243/216/162/108/81/54/27Mbps 135/121.5/108/81/54/40.5/27/13.5Mbps (Dynamic) 802.11n(20MHz):130/117/104/78/52/39/26/13Mbps 65/58.5/52/39/26/19.5/13/6.5Mbps (Dynamic) 802.11g:54/48/36/24/18/12/9/6Mbps (Dynamic) 802.11b:11/5.5/2/1Mbps (Dynamic)	
Transmission Distance	Indoor up to 100m outdoor up to 300m (it is limited to the environment)	
Channel	America/ FCC: 2.412~2.462GHz (11 Channels) Europe/ ETSI: 2.412~2.472GHz (13 Channels) Japan/ TELEC: 2.412~2.484GHz (14 Channels)	
Max. RF Power	20 dBm max. (EIRP)	
Receive Sensitivity	270M: -68dBm@10% PER 130M: -68dBm@10% PER 54M: -68dBm@10% PER 11M: -85dBm@8% PER	
Operation Mode	■ Gateway(default) ■ Bridge ■ WSP	
Wireless Mode	■ AP ■ WDS	■ Repeater (WDS+AP) ■ Universal Repeater (AP+Client)

Encryption Security	■ WEP (64/128-bit) encryption security ■ WPA-Enterprise / WPA2-Enterprise (TKIP/AES) ■ WPA-Personal / WPA2-Personal (TKIP/AES) ■ 802.1x Authentication
Wireless Security	Provides wireless LAN ACL (Access Control List) filtering
	Wireless MAC address filtering
	Supports WPS (Wi-Fi Protected Setup)
	Enables/Disables SSID Broadcast
Wireless Advanced	WMM(Wi-Fi Multimedia): 802.11e Wireless QoS
	IAPP(Inter Access Point Protocol): 802.11f Wireless Roaming
	Provides Wireless Statistics
Router Features	
Internet Connection Type	Shares data and Internet access for users, supporting the following internet accesses: ■ PPPoE ■ Dynamic IP ■ Static IP ■ PPTP ■ L2TP
Firewall	NAT firewall with SPI (Stateful Packet Inspection)
	Built-in NAT server supporting Port Forwarding, and DMZ
	Built-in firewall with IP address/ MAC address/ Port/ URL filtering
	Supports ICMP-FLOOD, UDP-FLOOD, TCP-SYN-FLOOD filter, DoS protection
Routing Protocol	Static / Dynamic (RIP1 and 2) Routing
VPN Pass-through	PPTP, L2TP, IPSec, IPv6
LAN	Built-in DHCP server supporting static IP address distributing
	Supports UPnP, Dynamic DNS
	Supports IGMP Proxy
	Supports 802.1d STP (Spanning Tree)
	IP / MAC-based Bandwidth Control
System Management	Web-based (HTTP) management interface
	SNTP time synchronize
	Easy firmware upgrade
	System Log supports Remote Log
Standards Conformance	
IEEE Standards	IEEE 802.11n (2T2R, up to 300Mbps) IEEE 802.11g IEEE 802.11b IEEE 802.11i IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3x Flow Control
Other Protocols and Standards	CSMA/CA, CSMA/CD, TCP/IP, DHCP, ICMP, NAT, PPPoE, SNTP
Environment	
Temperature	Operating: 0 ~ 40 degrees C Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (Non-Condensing) Storage: 5 ~ 90% (Non-Condensing)

Appendix C: Planet Smart Discovery Utility

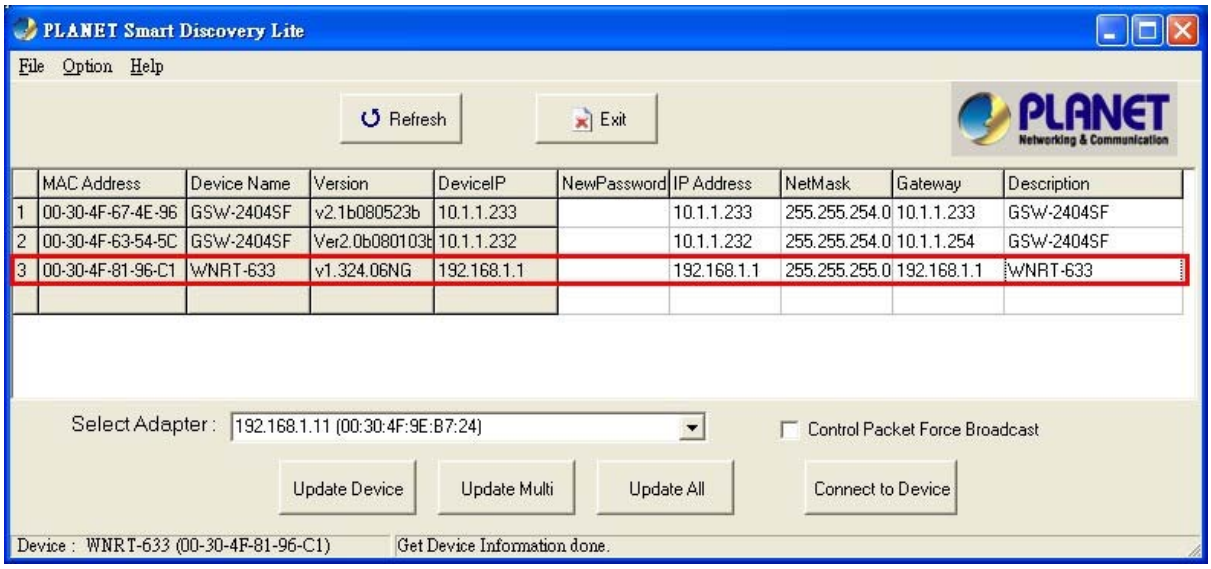
To easily list the WNRT-633 in your Ethernet environment, the Planet Smart Discovery Utility from user's manual CD-ROM is an ideal solution.

The following installation instructions guide you to running the Planet Smart Discovery Utility.

Step 1: Deposit the **Planet Smart Discovery Utility** in administrator PC.

Step 2: Run this utility and the following screen appears.

Step 3: Press **"Refresh"** button for current connected devices in the discovery list as shown in the following screen:



Step 3: Press **"Connect to Device"** button and then the Web login screen appears.

Note

The fields in white background can be modified directly, and then you can apply the new setting by clicking the "**Update Device**" button.

Appendix D: Glossary

- **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.
- **802.11b -** 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

For the following equipment:

*Type of Product: 300Mbps 802.11n Wireless Gigabit Broadband Router
*Model Number: WNRT-633

* Produced by:
Manufacturer's Name : **Planet Technology Corp.**
Manufacturer's Address: 10F., No.96, Minquan Rd., Xindian Dist.,
New Taipei City 231, Taiwan (R.O.C.)

is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to 1999/5/EC R&TTE.
For the evaluation regarding the R&TTE the following standards were applied:

EN 300 328 V1.7.1	(2006-10)
EN 301 489-17 V2.1.1	(2009-05)
EN 301 489-1 V1.9.2	(2011-09)
EN 55022	(2010)
EN 61000-3-2	(2006 + A1:2009 + A2:2009)
EN 61000-3-3	(2008)
EN 55024	(2010)
EN 61000-4-2	(2008)
EN 61000-4-3	(2010)
EN 61000-4-4	(2004 + A1:2010)
EN 61000-4-5	(2005)
EN 61000-4-6	(2008)
EN 61000-4-8	(2009)
EN 61000-4-11	(2004)
EN 60950-1	(2006 + A11:2009)

Responsible for marking this declaration if the:

☒ **Manufacturer** ☐ **Authorized representative established within the EU**

Authorized representative established within the EU (if applicable):

Company Name: **Planet Technology Corp.**

Company Address: **10F., No.96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)**

Person responsible for making this declaration

Name, Surname **Kent Kang**

Position / Title : **Product Manager**

Taiwan	**17st June, 2013**	Kent Kang
Place	*Date*	*Legal Signature*

EC Declaration of Conformity

Full version of our declaration and detailed regulatory information can be found at planet.com.tw

English	Hereby, **PLANET Technology Corporation,** declares that this **802.11n Wireless Gigabit Router** is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.	**Lietuviškai**	Šiuo **PLANET Technology Corporation,**, skelbia, kad **802.11n Wireless Gigabit Router** tenkina visus svarbiausius 1999/5/EC direktyvos reikalavimus ir kitas svarbias nuostatas.
Česky	Společnost **PLANET Technology Corporation,** tímto prohlašuje, že tato **802.11n Wireless Gigabit Router** splňuje základní požadavky a další příslušná ustanovení směrnice 1999/5/EC.	**Magyar**	A gyártó **PLANET Technology Corporation**, kijelenti, hogy ez a **802.11n Wireless Gigabit Router** megfelel az 1999/5/EK irányelv alapkövetelményeinek és a kapcsolódó rendelkezéseknek.
Dansk	**PLANET Technology Corporation,** erklærer herved, at følgende udstyr **802.11n Wireless Gigabit Router** overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF	**Malti**	Hawnhekk, **PLANET Technology Corporation,** jiddikjara li dan **802.11n Wireless Gigabit 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 **802.11n Wireless Gigabit 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 **802.11n Wireless Gigabit 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 **802.11n Wireless Gigabit Router** vastab Euroopa Nõukogu direktiivi 1999/5/EC põhinõuetele ja muudele olulistele tingimustele.	**Polski**	Niniejszym firma **PLANET Technology Corporation,** oświadcza, że **802.11n Wireless Gigabit Router** spełnia wszystkie istotne wymogi i klauzule zawarte w dokumencie „Directive 1999/5/EC".
Ελληνικά	*ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ* , **PLANET Technology Corporation,** *ΔΗΛΩΝΕΙ ΟΤΙ ΑΥΤΟ* **802.11n Wireless Gigabit Router***ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ* *ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ*	**Português**	**PLANET Technology Corporation**, declara que este **802.11n Wireless Gigabit 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 **802.11n Wireless Gigabit 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 **802.11n Wireless Gigabit 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 **802.11n Wireless Gigabit 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 **802.11n Wireless Gigabit Router** skladen/a z osnovnimi zahtevami in ustreznimi določili Direktive 1999/5/EC.
Italiano	Con la presente , **PLANET Technology Corporation,** dichiara che questo **802.11n Wireless Gigabit Router** è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.	**Suomi**	**PLANET Technology Corporation,** vakuuttaa täten että **802.11n Wireless Gigabit 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 **802.11n Wireless Gigabit Router** atbilst Direktīvas 1999/5/EK pamatprasībām un citiem atbilstošiem noteikumiem.	**Svenska**	Härmed intygar, **PLANET Technology Corporation,** att denna **802.11n Wireless Gigabit Router** står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.