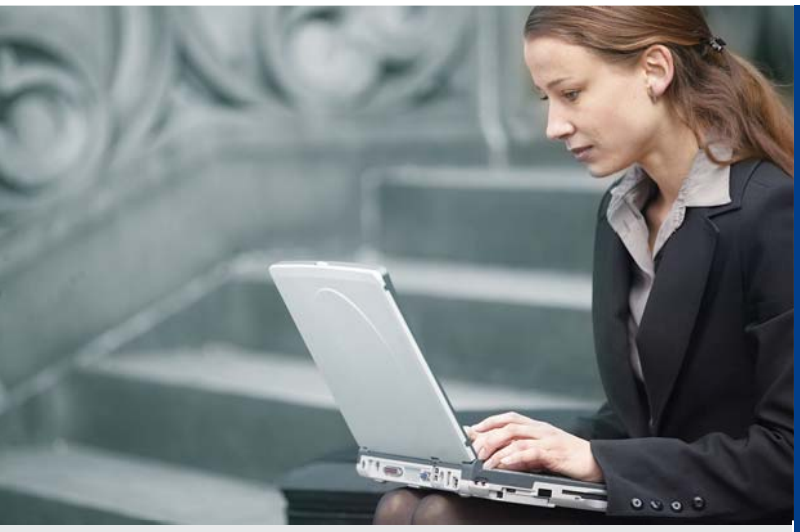
PLANET
Networking & Communication

User's Manual

802.11b/g/n Wireless Outdoor Access Point

► WNAP-6308



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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense. Any changes or modifications not expressly approved by PLANET could void the user's authority to operate this equipment under the rules and regulations of the FCC.

FCC Caution:

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions:

(1) This device may not cause harmful interference
(2) This Device must accept any interference received, including interference that may cause undesired operation.

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.

CE Mark Warning

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

Energy Saving Note of the Device

This power required device does not support Standby mode operation.

For energy saving, please remove the DC-plug to disconnect the device from the power circuit. Without remove the DC-plug, the device still consuming power from the power circuit. In the view of Saving the Energy and reduce the unnecessary power consuming, it is strongly suggested to remove the DC-plug for the device if this device is not intended to be active.

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.

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 and have to collect such WEEE separately.

Revision

User's Manual for PLANET 802.11b/g/n Wireless Outdoor Access Point

Model: WNAP-6308

Rev: 1.0 (February, 2014)

Part No. EM-WNAP-6308_v1.0 (**2081-E10570-000**)

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FIGURE

Chapter 1. Product Introduction

1.1 Package Contents

Thank you for choosing PLANET WNAP-6308. Before installing the AP, please verify the contents inside the package box.

WNAP-6308

Quick Installation Guide

CD-ROM

(User Manual included)

Plastic Strap x 2

***Straps received could be in white or black.**

PoE Injector & Power Cord

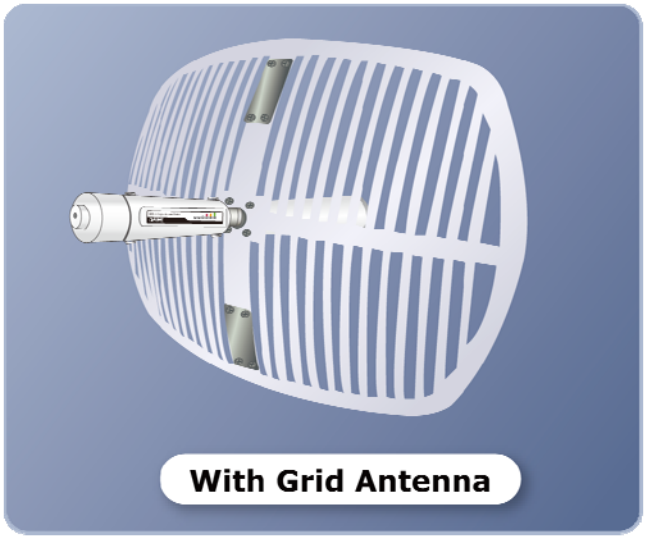
Note

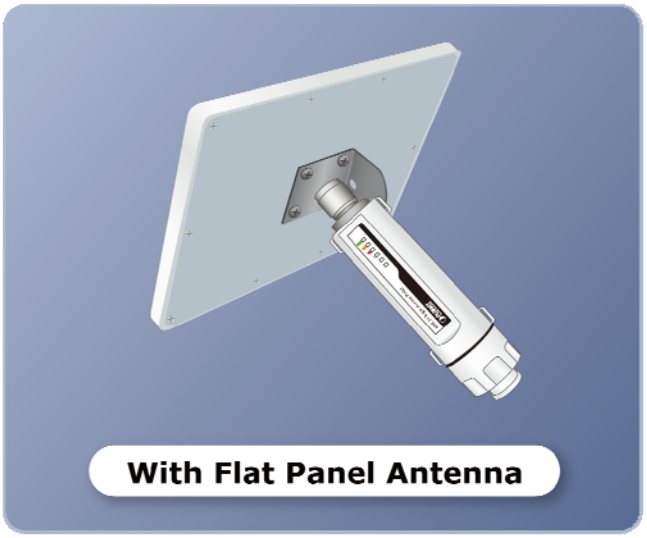
If there is any item missing or damaged, please contact the seller immediately.

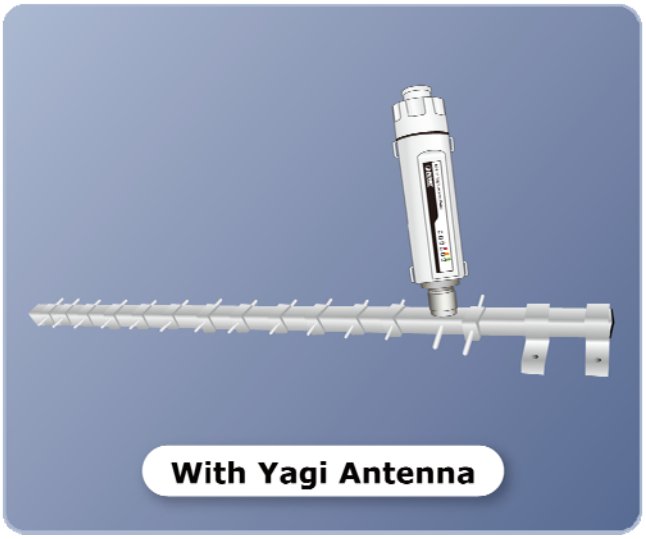
1.2 Product Description

High Power Outdoor Wireless Coverage

PLANET Technology Corp. provides a wireless solution that can be easily attached directly to the antenna, which has more flexibility to extending outdoor wireless coverage, the Wireless Outdoor Access Point -- WNAP-6308. Adopting the IEEE 802.11n advanced MIMO technology, it provides reliable wireless network coverage, and incredible improvement in the wireless performance. As an IEEE 802.11b/g/n compliant wireless device, the WNAP-6308 is able to give stable and efficient wireless performance for outdoor application, while designed with IEEE 802.11n standard and 1T1R MIMO technology, it makes it possible to deliver three times faster data rate up to 150Mbps than the normal 802.11g wireless device. With the built-in N-type antenna connector, it can directly connect with various and high gain antennas, thus it can easily cover widely range and deliver much farther wireless connection over 10Km. For WNAP-6308 is optionally following products available: ANT-OM8, ANT-OM15, ANT-FP9, ANT-FP18, ANT-SE18, ANT-YG13, ANT-YG20, and ANT-GR21.



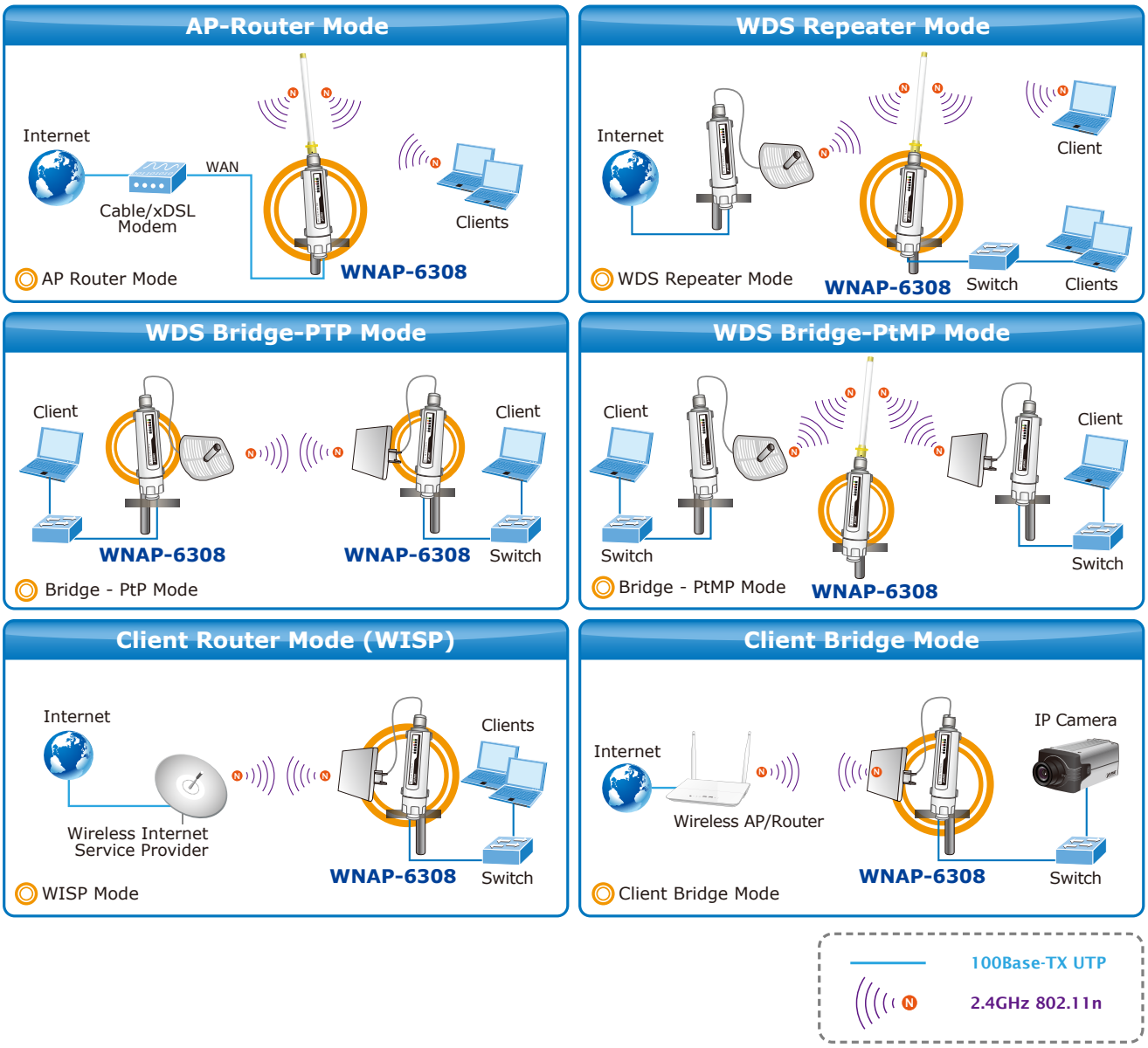




Multiple Operating & Wireless Modes

The WNAP-6308 supports multiple types of wireless communication connectivity (AP, Client CPE, WDS PtP, WDS PtMP and Repeater) allowing for various application requirements and thus it gives users more comprehensive experience when accessing through Wireless LAN. It helps users to easily build a wireless

network and extend the wireless range of the existing wireless network. The WNAP-6308 also supports WISP mode, so CPE users could easily connect to Internet via WISP provider or connect to a wired network.



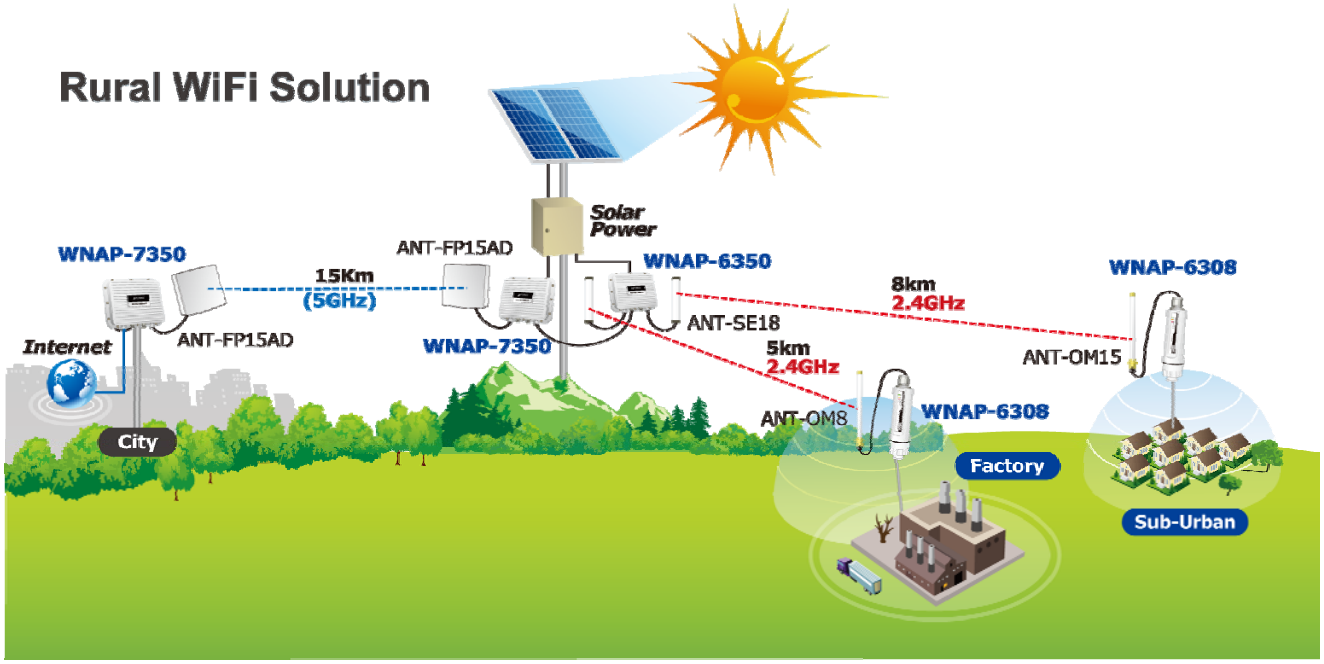
Advanced Security and Management

In aspect of security, besides 64/128- bit WEP encryption, the WNAP-6308 integrates WPA / WPA2, WPA-PSK / WPA2-PSK and 802.1x authority to secure and protect your wireless LAN. The wireless MAC filtering and SSID broadcast control consolidate the wireless network security and prevent unauthorized wireless connection. Furthermore, with the Dual-SSID feature you can set up two different wireless networks, the WNAP-6308 can therefore serve as a virtual access point for segmented networks tailored to any office or industrial need. With the SNMP-based management interface, the WNAP-6308 is convenient to be managed and configured remotely.

Highly Reliable Outdoor Device

The WNAP-6308 is perfectly suitable to be installed in outdoor environments and exposed locations. Rated to operate at the temperature from -35 to 65 degrees C and adopted IP55 and outdoor UV Stabilized Enclosure, the WNAP-6308 can perform normally under rigorous weather conditions including heavy rain and wind. With

the proprietary Power over Ethernet (PoE) design, the WNAP-6308 can be easily installed in the areas where power outlets are not available. It is the best way to use the WNAP-6308 to build outdoor wireless access applications between buildings on campuses, business, rural areas, etc.



Easy Plug-n-Link

To accomplish the concept of Plug-n-Link through an easy way for outdoor wireless network deployment, the WNAP-6308 comes with a built-in N-Type antenna connector, which is most commonly adapted with outdoor antenna. Therefore, it is easier to install via directly plugging into the mounted antenna, faster than constructing the wireless link even though a user who has never experienced in deploying a wireless network. Moreover, by using the straps through the extra ring design on the casing can fasten the WNAP-6308 to prevent from shaking or dropping caused by strong winds and earthquakes.

1.3 Product Features

- **Industrial Compliant Wireless LAN & LAN**
  - Compliant with IEEE 802.11n wireless technology capable of up to 150Mbps data rate
  - Backward compatible with 802.11b/g standard
  - Equipped with 10/100Mbps RJ-45 Ports for LAN & WAN, Auto MDI/ MDI-X supported
- **Fixed-network Broadband Router**
  - Supported connection types: Dynamic IP/ Static IP/ PPPoE/ PPTP/ L2TP / IPSec
  - Supports Virtual Server, DMZ for various networking applications
  - Supports DHCP Server, UPnP, Dynamic DNS
- **RF Interface Characteristics**
  - Built-in N-Type Male Antenna Connector
  - High Output Power Up to 200mW with multiple adjustable transmit power control
- **Outdoor Environmental Characteristics**
  - IP55 Enclosure, UV resistance
  - Passive Power Over Ethernet Design
  - Operating Temperature: -35~65 degrees C
- **Multiple Operation & Wireless Mode**
  - Multiple Operation Modes: Bridge, Gateway, WISP
  - Multiple Wireless Modes: AP, Client CPE(WISP), WDS PtP, WDS PtMP, Repeater
  - Supports Dual-SSID to allow users to access different networks through a single AP
  - Supports WMM (Wi-Fi Multimedia)
- **Secure Network Connection**
  - Supports Software Wi-Fi Protected Setup (WPS)
  - Advanced security: 64/128-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK(TKIP/AES), and 802.1x Authentication
  - Supports NAT firewall features, with SPI function to protect against DoS attacks.
  - Supports IP / Protocol-based access control and MAC Filtering
- **Easy Installation & Management**
  - Web-based UI and Quick Setup Wizard for easy configuration
  - Remote Management allows configuration from a remote site
  - SNMP-based management interface
  - System status monitoring includes DHCP Client, System Log

1.4 Product Specifications

Product	**WNAP-6308** **2.4GHz 150Mbps 802.11n Wireless Outdoor Access Point**
Hardware Specifications	
Standard	IEEE 802.11b/g/n Wireless LAN IEEE 802.11i Wireless Security IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Ethernet IEEE 802.3x Flow Control
Memory	32 Mbytes DDR SDRAM 8 Mbytes Flash
Interface	Wireless IEEE 802.11b/g/n, 1T1R LAN/WAN: 1 x 10/100Base-TX, Auto-MDI / MDIX
Antenna	Built-in N-Type (Male) Antenna Connector
Wireless RF Specifications	
Wireless Technology	IEEE 802.11b/g IEEE 802.11n
Data Rate	IEEE 802.11b: 11, 5.5, 2 and 1Mbps IEEE 802.11g: 54, 48, 36, 24, 18, 12, 9 and 6Mbps IEEE 802.11n (20MHz): up to 72Mbps IEEE 802.11n (40MHz): up to 150Mbps
Media Access Control	CSMA / CA
Modulation	Transmission/Emission Type: DSSS / OFDM Data modulation type: OFDM with BPSK, QPSK, 16-QAM, 64-QAM, DBPSK, DQPSK, CCK
Frequency Band	2.412GHz ~ 2.484GHz
Operating Channel	America/ FCC: 2.414~2.462GHz (11 Channels) Europe/ ETSI: 2.412~2.472GHz (13 Channels) Japan/ TELEC: 2.412~2.484GHz (14 Channels)
RF Output Power (Max.)	IEEE 802.11b/g: 23 ± 1.5dBm IEEE 802.11n: 23 ± 1.5dBm
Receiver Sensitivity	IEEE 802.11b/g: -95dBm IEEE 802.11n: -91dBm
Output Power Control	3~23dBm
Software Features	
LAN	Built-in DHCP server supporting static IP address distributing
	Supports 802.1d STP (Spanning Tree)
WAN	■ Static IP ■ Dynamic IP ■ PPPoE ■ PPTP ■ L2TP

	■ IPSec	
Operating Mode	■ Bridge ■ Gateway ■ WISP	
Firewall	NAT firewall with SPI (Stateful Packet Inspection)	
	Built-in NAT server supporting Virtual Server and DMZ	
	Built-in firewall with Port / IP address / MAC / URL filtering	
Wireless Mode	■ AP ■ Client ■ WDS PTP ■ WDS PTMP ■ WDS Repeater (AP+WDS)	
Channel Width	20MHz / 40MHz	
Wireless Isolation	Enables isolation of each connected wireless client from communicating with each other mutually.	
Encryption Type	64/128-bits WEP, WPA, WPA-PSK, WPA2, WPA2-PSK, 802.1X	
Wireless Security	Provides wireless LAN ACL (Access Control List) filtering	
	Wireless MAC address filtering	
	Supports WPS (Wi-Fi Protected Setup)	
	Enable / Disable SSID Broadcast	
Multiple SSID	Up to 2	
Max. Wireless Client	20	
Max. WDS AP	8	
Max. Wired Client	30	
WMM	Supports Wi-Fi Multimedia	
QoS	Supports Quality of Service for bandwidth control	
NTP	Network Time Management	
Management	Web UI, DHCP Client, Configuration Backup & Restore, Dynamic DNS, SNMP	
Diagnostic tool	System Log, Ping Watchdog	
Mechanical & Power		
IP Rate	IP55	
Material	Outdoor UV Stabilized Enclosure	
Dimensions (Φ x H)	45 x 169 mm	
Weight	128kg	
Installation	Pole mounting	
Power Requirements	LAN	12~24V DC, Passive PoE Pin 4,5 VDC+ Pin 7,8 VDC-
Power Consumption	1.5W	
Environment & Certification		
Operation Temperature	-35 ~ 65 degrees C	
Operating Humidity	5 ~ 90% non-condensing	

Regulatory	CE / FCC/ RoHS
Accessory	
Standard Accessories	■ Passive PoE injector & Power Cord x 1 ■ Plastic Strap x 2 ■ Quick Installation Guide x 1 ■ CD (User's Manual, Quick Installation Guide) x 1

Chapter 2. Hardware Installation

Please follow the instructions below to connect the WNAP-6308 to the existing network devices and your computers.

2.1 Hardware Description

- **Dimensions**: 45 x 169 mm (Φ x H)

Figure 2-1 Appearance

2.1.1 The Top / Bottom Panel

The top and the bottom panels provide the physical connectors connected to the antenna, power injector and any other network device. Figure 2-2 shows the top and the bottom panels of the WNAP-6308.

Top & Bottom Panel

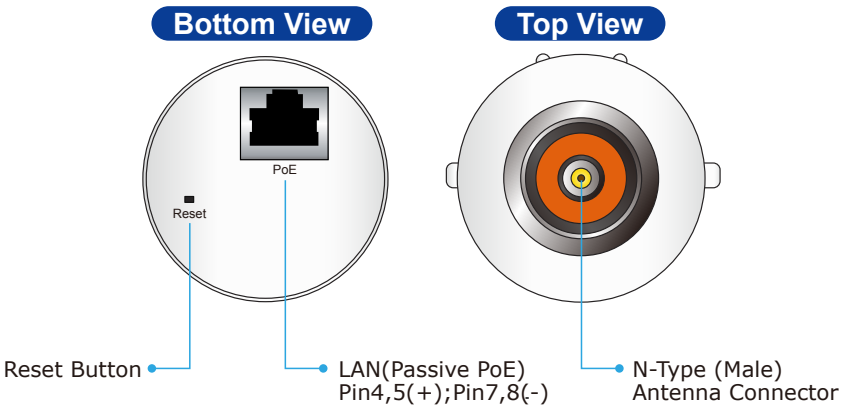


Figure 2-2 Top / Bottom Panel

Object	Description
PoE (LAN Port)	10/100Mbps RJ-45 port , Auto MDI/ MDI-X & Passive PoE supported. (Pin 4,5 VDC+; Pin 7,8 VDC-)

	Connect this port to the xDSL modem in router mode. Connect this port to the network equipment in bridge mode.
N-Type (Male) Antenna Connector	N-Type Male Antenna Connector. Connect N-Type (M) Antenna Connector with 2.4GHz Outdoor Antenna directly or through the N-male (male pin) to N-female (female pin) cable. Planet supplied RF cable Model No.: WL-MF-0.6 or WL-N-10.
Reset	Push continually the reset button about 15 seconds to reset the configuration parameters to factory defaults.

2.1.2 The Side Panel

The side panel provides the LED indicators of system status and signal strength when connected to the remote AP. Figure 2-3 shows the side panel of the WNAP-6308.

LED Indicator

Figure 2-3 The LED Indicator

LED		Status	Indication
Power		On	System On
		Off	System Off
LAN		On	Port linked.
		Off	No link.
		Blinking	Data is transmitting or receiving on the LAN interface.
Signal Indicator	LED1	On	The Signal Strength reaches the value
	LED2	On	The Signal Strength reaches the value
	LED3	On	The Signal Strength reaches the value
	LED4	On	The Signal Strength reaches the value

Chapter 3. Connecting to the AP

3.1 Preparation before Installation

3.1.1 Professional Installation Required

Please seek assistance from a professional installer who is well trained in the RF installation and knowledgeable in the local regulations.

3.1.2 Safety Precautions

1. To keep you safe and install the hardware properly, please read and follow these safety precautions.
2. If you are installing the WNAP-6308 for the first time, for your safety as well as others', please seek assistance from a professional installer who has received safety training on the hazards involved.
3. Keep safety as well as performance in mind when selecting your installation site, especially where there are electric power and phone lines.
4. When installing the WNAP-6308, please note the following things:
   - Do not use a metal ladder;
   - Do not work on a wet or windy day;
   - Wear shoes with rubber soles and heels, rubber gloves, long sleeved shirt or jacket.
5. When the system is operational, avoid standing directly in front of it. Strong RF fields are present when the transmitter is on.

3.2 Installation Precautions

- Users **MUST** use a proper and well-installed surge arrestor and grounding kit with the WNAP-6308; otherwise, a random lightning could easily cause fatal damage to the WNAP-6308. **EMD (Lightning) DAMAGE IS NOT COVERED UNDER WARRANTY.**
- Users **MUST** use the "Power cord and PoE Injector" shipped in the box with the WNAP-6308. Use of other options will cause damage to the WNAP-6308.
- Users **MUST** power off the WNAP-6308 first before connecting the external antennas to it; otherwise, damage might be caused to the WNAP-6308 itself.
- The Antenna is required, and must be purchased separately.

OUTDOOR INSTALLATION WARNING

IMPORTANT SAFETY PRECAUTIONS:

LIVES MAY BE AT RISK! Carefully observe these instructions and any special instructions that are included with the equipment you are installing.

CONTACTING POWER LINES CAN BE LETHAL. Make sure no power lines are anywhere where possible contact can be made. Antennas, masts, towers, guy wires or cables may lean or fall and contact these lines. People may be injured or killed if they are touching or holding any part of equipment when it contacts electric lines. Make sure there is NO possibility that equipment or personnel can come in contact directly or indirectly with power lines.

Assume all overhead lines are power lines.

The horizontal distance from a tower, mast or antenna to the nearest power line should be at least twice the total length of the mast/antenna combination. This will ensure that the mast will not contact power if it falls either during installation or later.

TO AVOID FALLING, USE SAFE PROCEDURES WHEN WORKING AT HEIGHTS ABOVE GROUND.

- Select equipment locations that will allow safe, simple equipment installation.
- Don't work alone. A friend or co-worker can save your life if an accident happens.
- Use approved non-conducting lasers and other safety equipment. Make sure all equipment is in good repair.
- If a tower or mast begins falling, don't attempt to catch it. Stand back and let it fall.
- If anything such as a wire or mast does come in contact with a power line, **DON'T TOUCH IT OR ATTEMPT TO MOVE IT**. Instead, save your life by calling the power company.
- Don't attempt to erect antennas or towers on windy days.

MAKE SURE ALL TOWERS AND MASTS ARE SECURELY GROUNDED, AND ELECTRICAL CABLES CONNECTED TO ANTENNAS HAVE LIGHTNING ARRESTORS. This will help prevent fire damage or human injury in case of lightning, static build-up, or short circuit within equipment connected to the antenna.

- The base of the antenna mast or tower must be connected directly to the building protective ground or to one or more approved grounding rods, using 10 AWG ground wire and corrosion-resistant connectors.
- Refer to the National Electrical Code for grounding details.

IF A PERSON COMES IN CONTACT WITH ELECTRICAL POWER, AND CANNOT MOVE:

- **DON'T TOUCH THAT PERSON, OR YOU MAY BE ELECTROCUTED.**
- Use a non-conductive dry board, stick or rope to push or drag them so they no longer are in contact with electrical power.

Once they are no longer contacting electrical power, administer CPR if you are certified, and make sure that emergency medical aid has been requested.

3.3 Installing the AP

Please install the AP according to the following steps. Don't forget to pull out the power plug and keep your hands dry.

Step 1. Connect the Antenna to the top of the WNAP-6308.

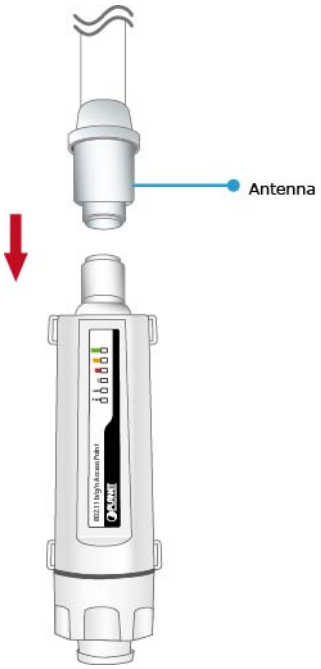


Figure 3-1 Connect the Antenna

Step 2. (1) Open the bottom of the WNAP-6308.
(2) Plug the RJ-45 Ethernet cable into the LAN port through the Cap and Gasket. Then seal the bottom of the WNAP-6308 with the Cap and Gasket.

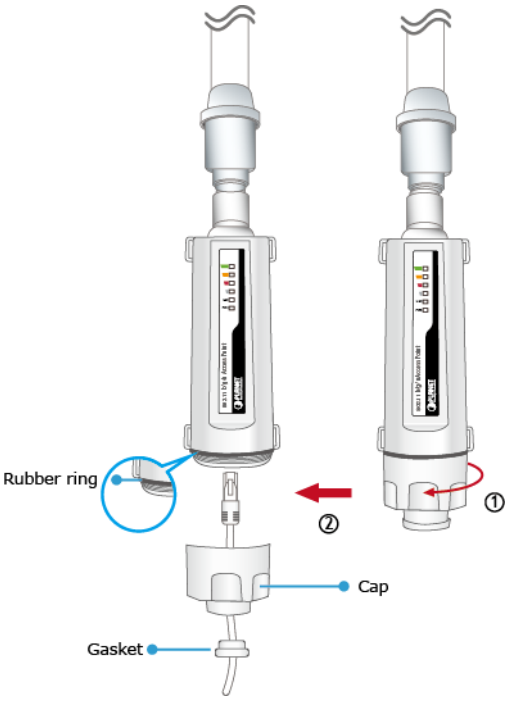


Figure 3-2 Connect the Ethernet cable

Step 3. Take out the power cord and PoE injector. Plug the power cord into the DC port and plug the other side of the RJ-45 cable like Step 2 into the POE port of the PoE injector.

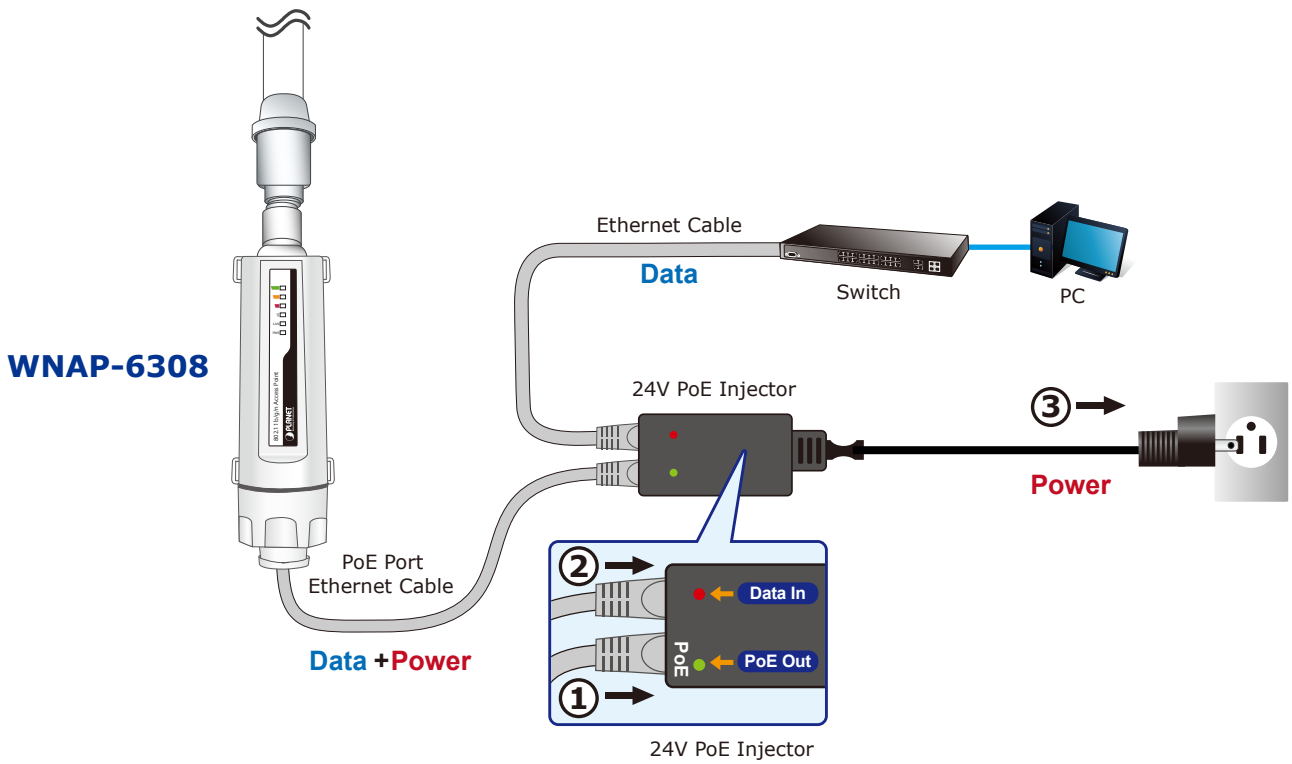


Figure 3-3 Connect the PoE injector

Step 4. Pole Mounting:

Place the straps through the slots on the sides of the WNAP-6308 and then around the pole. Tighten the straps to secure the WNAP-6308.

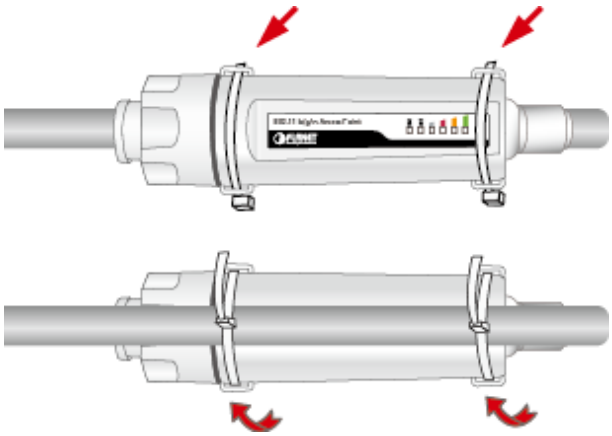


Figure 3-4 Pole Mounting

Chapter 4. Quick Installation Guide

This chapter shows you how to configure the basic functions of your AP using **Easy Setup** within minutes.

Note

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

4.1 Manual Network Setup - TCP/IP Configuration

The default IP address of the WNAP-6308 is **192.168.1.1**. And the default Subnet Mask is 255.255.255.0. These values can be changed as you desire. In this guide, we use all the default values for description.

Connect the WNAP-6308 with your PC by an Ethernet cable plugging in the LAN port of the PoE injector on one side and in the LAN port of the PC on the other side. Please power on the WNAP-6308 by PoE from PoE injector or PoE switch.

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 manual if needed.

4.1.1 Configuring the IP Address Manually

Summary:

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

1 Select **Use the following IP address** radio button.

2 If the AP's LAN IP address 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 Select **Use the following DNS server addresses** radio button. In the **Preferred DNS Server** field, you can enter the DNS server IP address which has been provided by your ISP

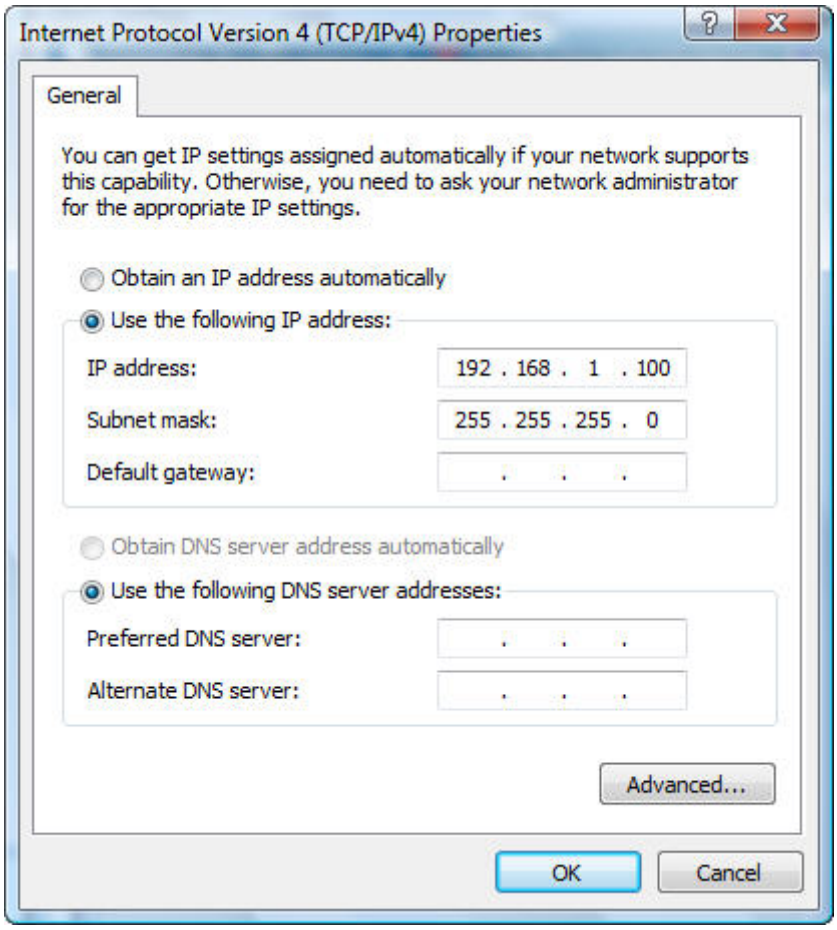


Figure 4-1 TCP/IP Setting

Now click **OK** to save your settings.

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

1. Click on **Start > Run**.

2. Type "**cmd**" in the Search box.

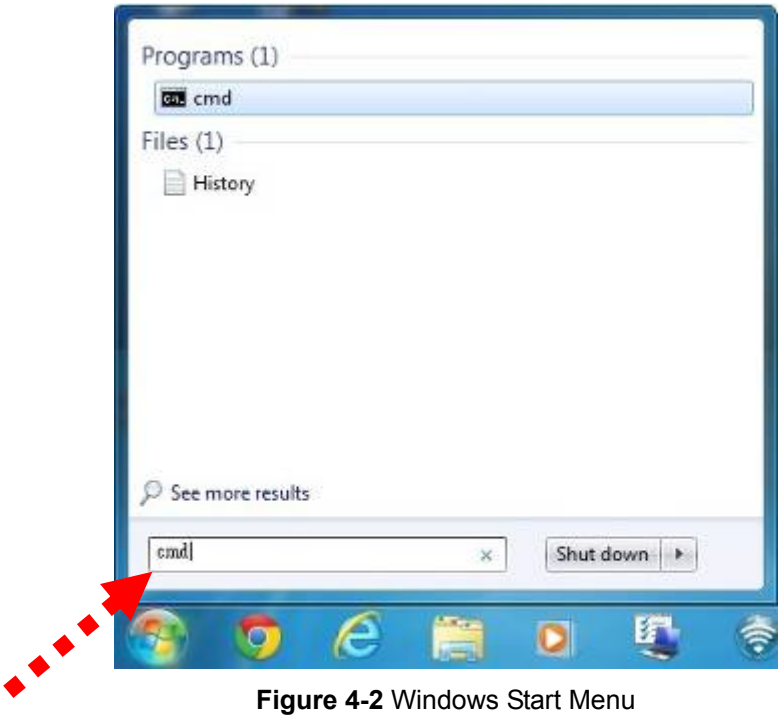


Figure 4-2 Windows Start Menu

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

- If the result displayed is similar to **Figure 4-3**, it means the connection between your PC and the AP has been established well.

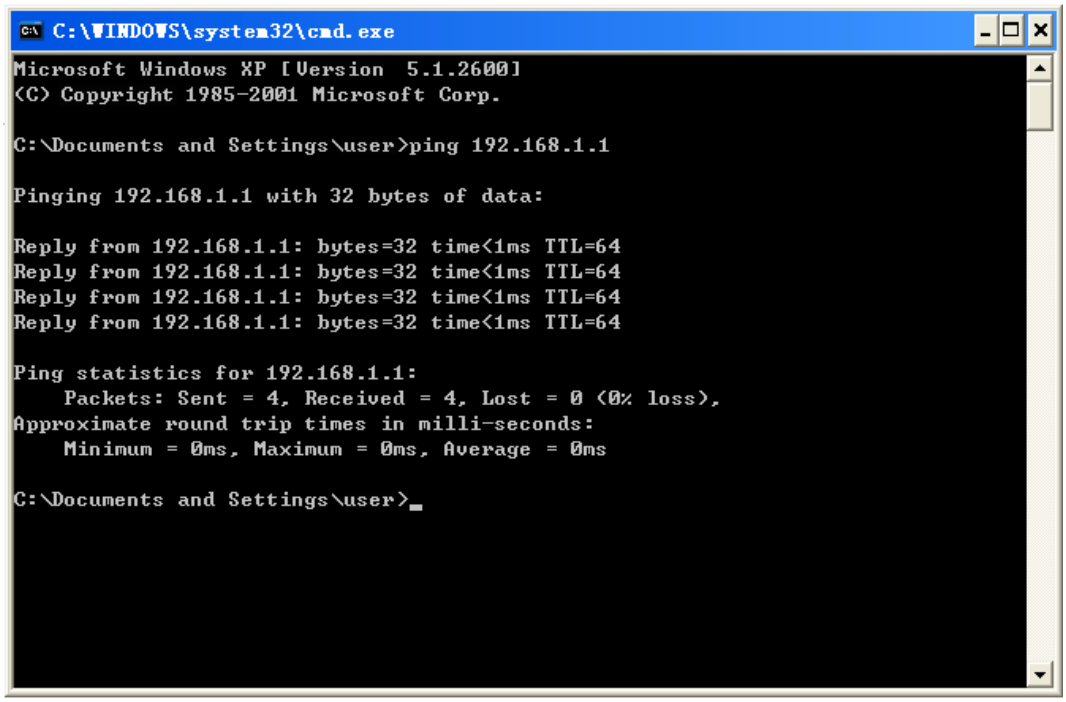


Figure 4-3 Successful result of Ping command

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

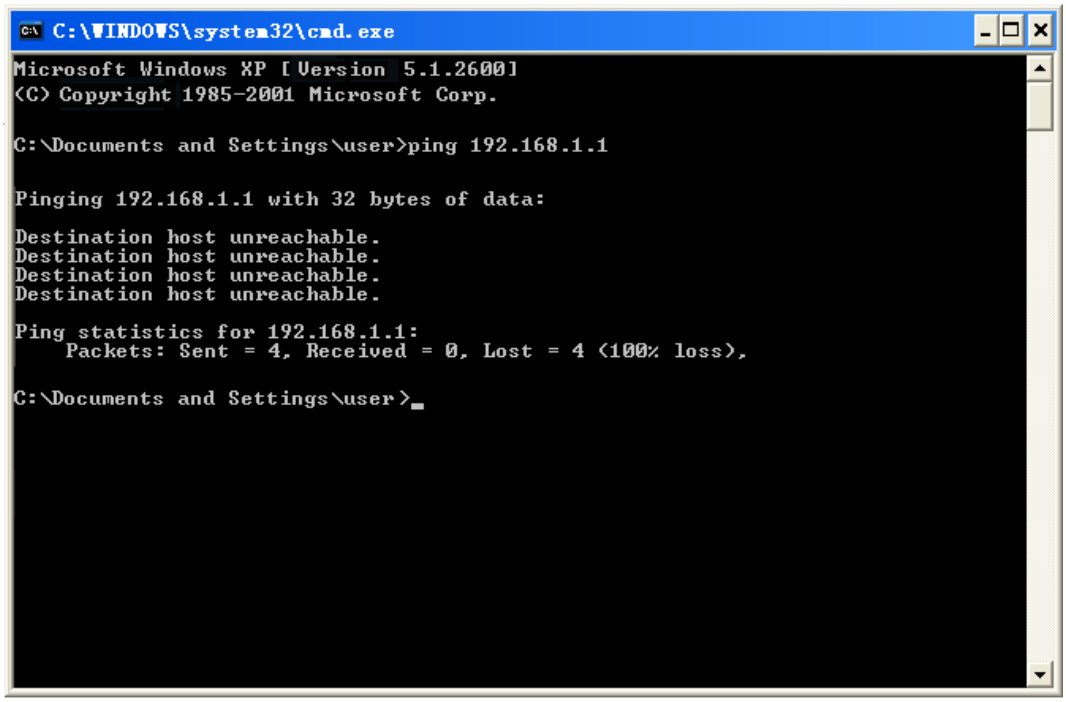


Figure 4-4 Failed result of Ping command

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

4.2 Starting Setup in the Web UI

It is easy to configure and manage the WNAP-6308 with the web browser.

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

Figure 4-5 Login by default IP address

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

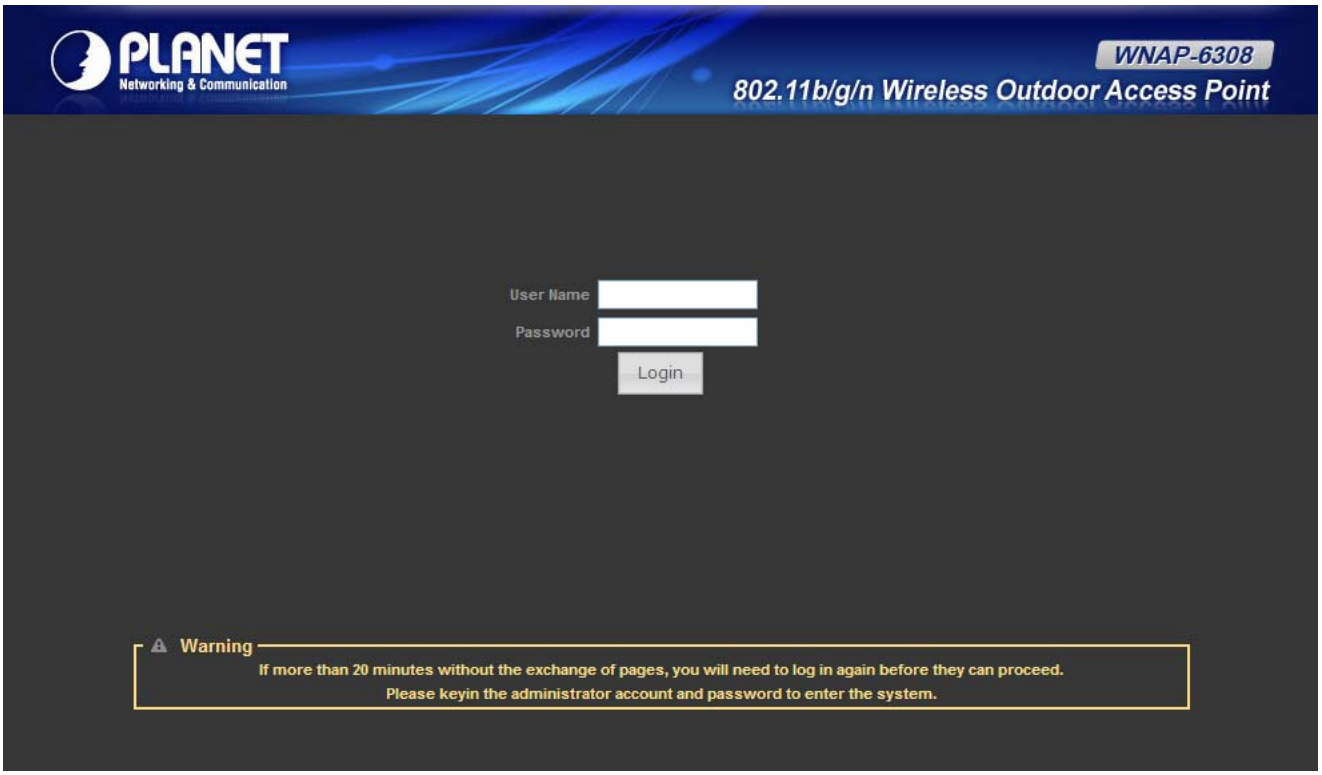


Figure 4-6 Login Window

Default IP Address: **192.168.1.1**

Default User name: **admin**

Default Password: **admin**

Note

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

After entering the username and password, the **Status** page screen appears as Figure 4-8

Figure 4-7 WNAP-6308 Web UI Screenshot

Step 2. Go to "**Easy Setup**" to choose an Operation Mode. Please refer to the instructions in the next chapter for configuring the other Operation Mode.

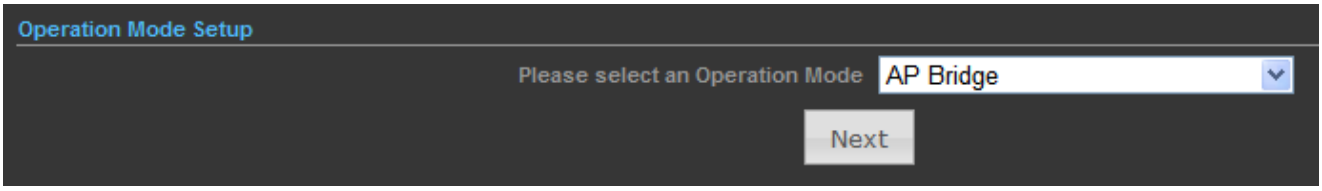


Figure 4-8 Choose Operation Mode

Step 3. Please enter the SSID, configure your Encryption Settings, Pre-Shared Key, etc. Then click **Done** button to make the configuration take effect immediately.

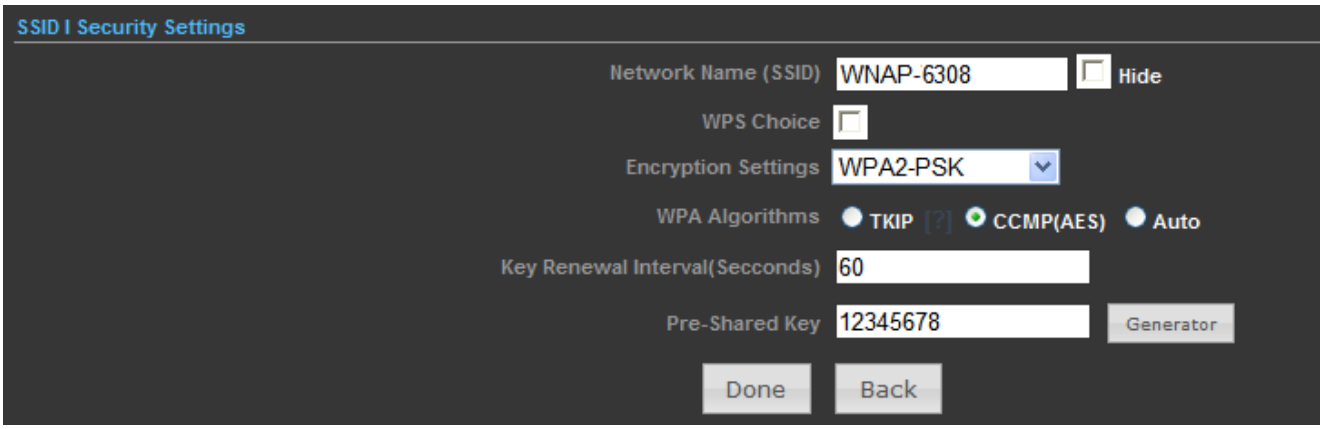


Figure 4-9 Configure Wireless Settings

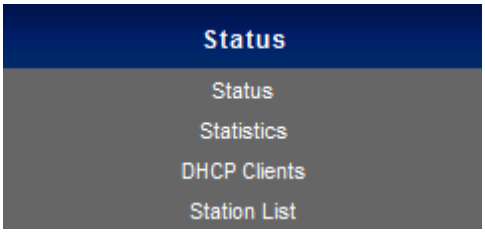
Chapter 5. Configuring the AP

This chapter delivers a detailed presentation of AP's functionalities and features under 3 main menus (**Status**, **Easy Setup**, and **Advanced**) below, allowing you to manage the AP with ease.

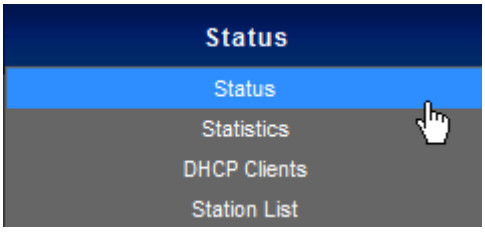
Figure 5-1 Main Menu

5.1 Status

On this page, you can view information about the current running status of the WNAP-6308, including WAN interface, LAN interface, wireless interface, and firmware version information.



■ Status



This section allows you to view the AP's system info listed below:

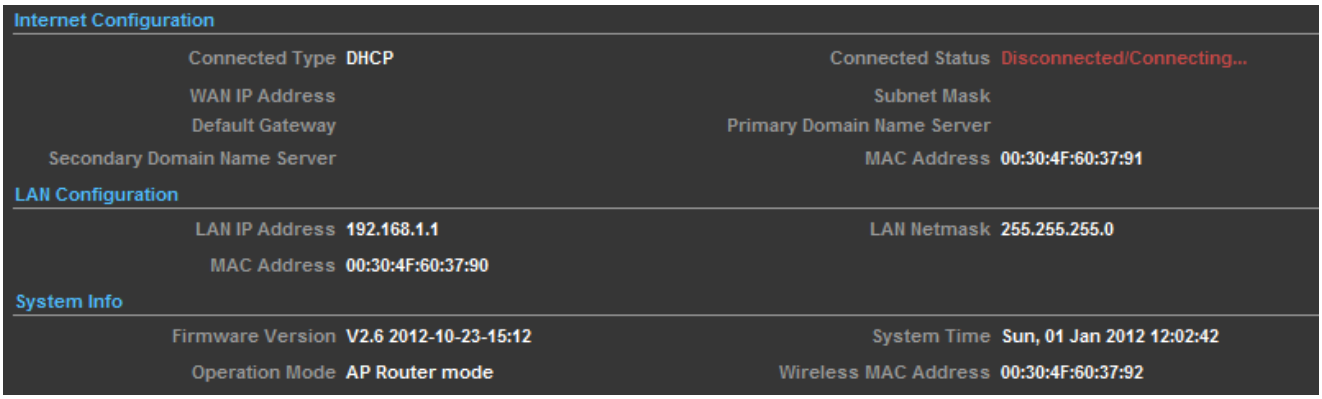
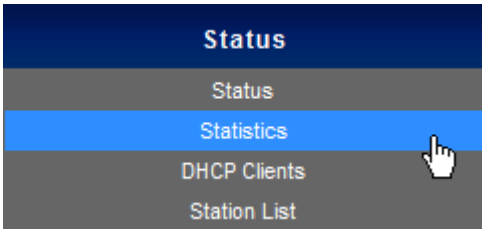


Figure 5-2 Status

Object	Description
Internet Configuration	
• **Connected Type**	Displays current Internet connection type.
• **Connected Status**	• **Disconnected:** Indicates that the Ethernet cable from your ISP side is / is not correctly connected to the WAN port on the AP or the AP is not logically connected to your ISP. • **Connecting:** Indicates that the WAN port is correctly connected and is requesting an IP address from your ISP. • **Connected:** Indicates that the AP has been connected to your ISP.
• **WAN IP**	Displays WAN IP address.
• **Subnet Mask**	Displays WAN subnet mask.
• **Default Gateway**	Displays WAN gateway address.
• **Primary Domain Name Server**	Displays WAN DNS address.
• **Secondary Domain Name Server**	Displays WAN DNS address.
• **MAC Address**	Displays AP's WAN MAC address.
LAN Configuration	
• **LAN IP Address**	Displays LAN IP address.
• **LAN Netmask**	Displays LAN subnet mask.
• **MAC Address**	Displays AP's LAN MAC address.
System Info	
• **Firmware Version**	Displays current F/W version.
• **System Time**	Displays the System Time.
• **Operation Mode**	Displays current Operation Mode.
• **Wireless MAC Address**	Displays AP's Wireless MAC address.

■ Statistics



This section allows you to view the AP's statistics listed below:

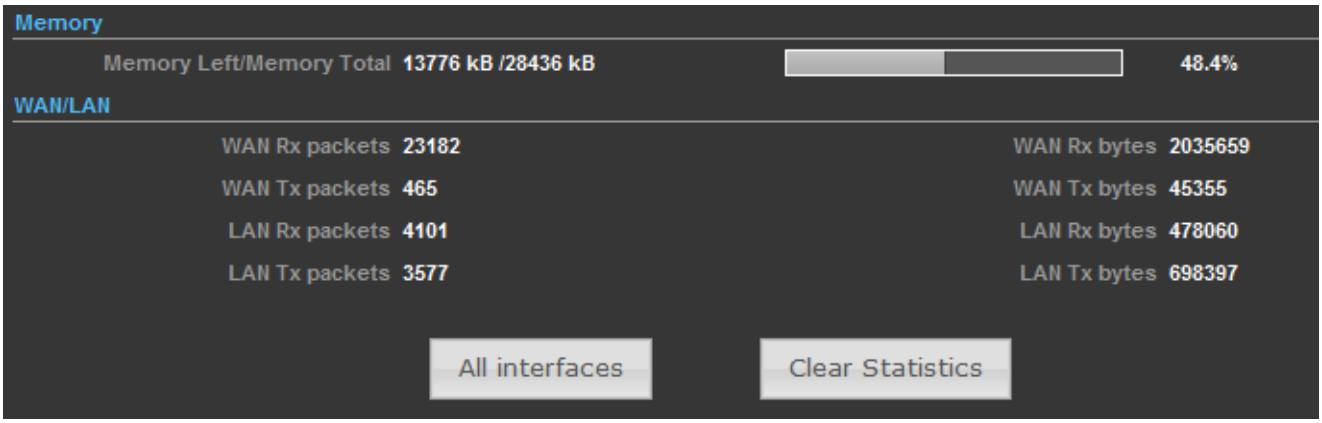
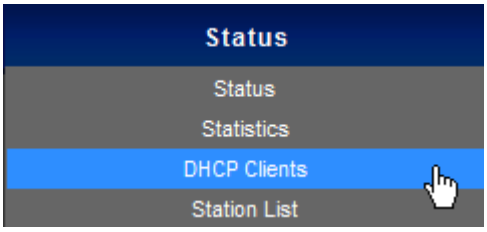


Figure 5-3 Statistics

Object	Description
Memory	
• **Memory Left/ Memory Total**	Displays the retain memory and total memory.
WAN/LAN	
• **WAN Rx packets**	Displays the real-time packets received from WAN port.
• **WAN Rx bytes**	Displays the real-time bytes received from WAN port.
• **WAN Tx packets**	Displays the real-time packets transmitted from WAN port.
• **WAN Tx bytes**	Displays the real-time bytes transmitted from WAN port.
• **LAN Rx packets**	Displays the real-time packets received from LAN port.
• **LAN Rx bytes**	Displays the real-time bytes received from LAN port.
• **LAN Tx packets**	Displays the real-time packets transmitted from LAN port.
• **LAN Tx bytes**	Displays the real-time bytes transmitted from LAN port.

■ DHCP Clients



This section displays a DHCP dynamic client list, which includes MAC address, IP address, and lease time info.

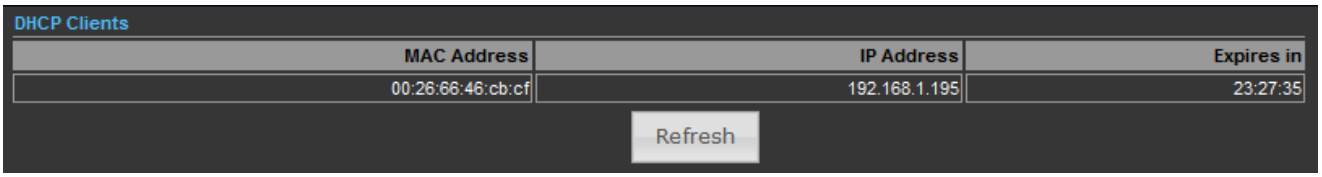
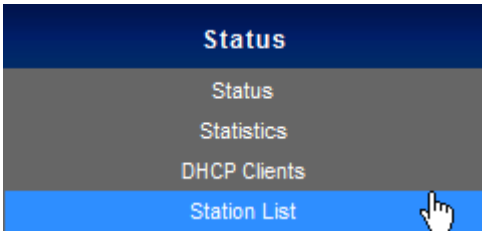


Figure 5-4 DHCP Client List

Object	Description
• **MAC address**	Displays MAC address of a given host.
• **IP Address**	Displays IP address(es) that client(s) obtained from the DHCP server.
• **Expires in**	Remaining time for a corresponding IP address lease.

■ Station List



This section allows you to view the Station List. The Station List submenu is only available in AP mode.

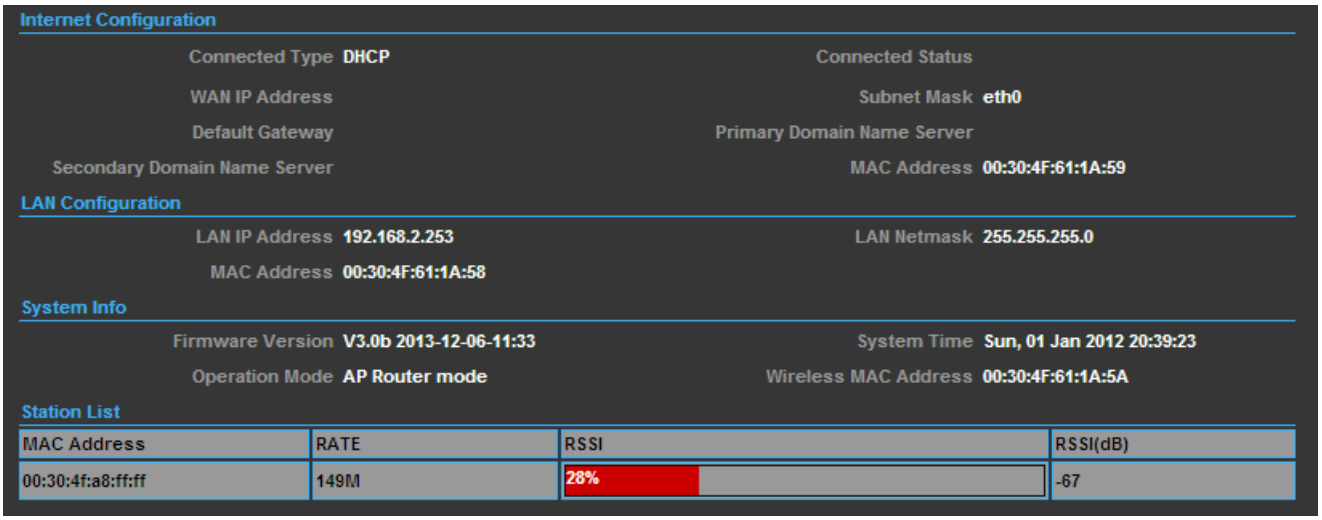


Figure 5-5 Station List

Object	Description
• **MAC address**	Displays MAC address of a connected client.
• **Rate**	Displays connection speed of a connected client.
• **Expires in**	Displays the signal strength of a connected client.

5.2 Easy Setup

The Easy Setup helps you configure the basic functions of your AP within minutes.

Please refer to the Step 2 in the section "**4.2 Starting Setup in the Web UI**" for the detailed procedure.

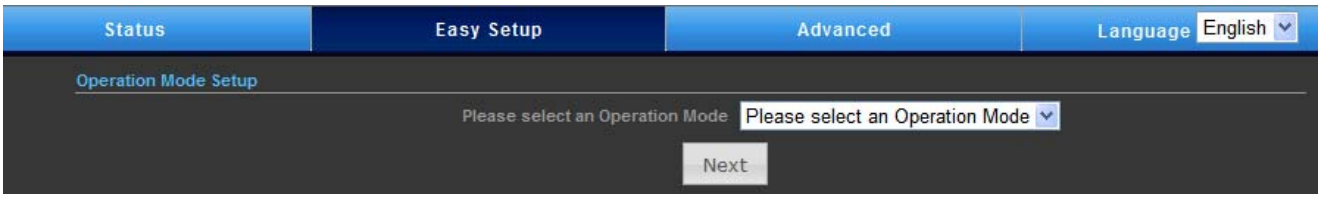


Figure 5-6 Easy Setup

5.3 Advanced

"**Advanced**" includes the following four submenus (Advanced, Firewall Settings, Network Settings, and Wireless Settings). Clicking any of them enters corresponding interface for configuration. Below explains, in details, each such feature.

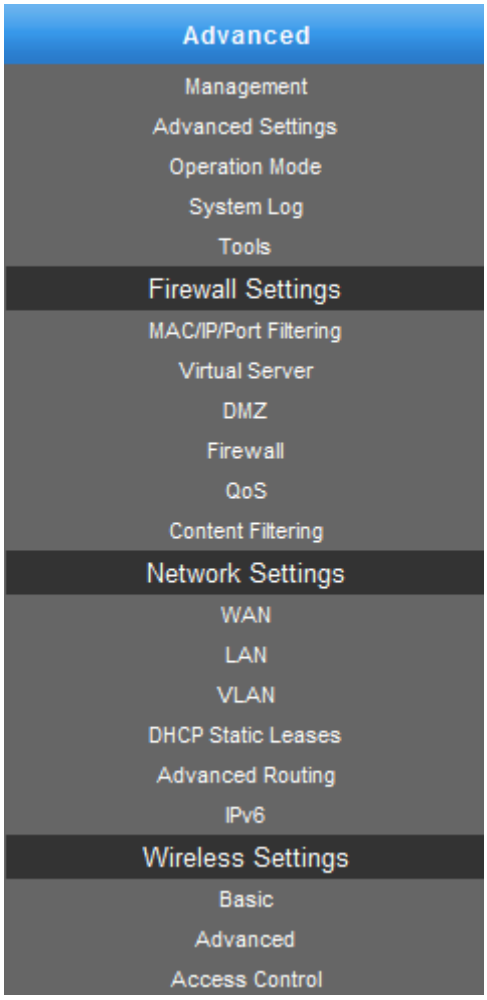
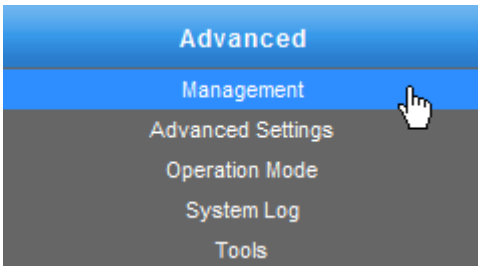


Figure 5-7 Advanced Menu

5.3.1 Advanced - Management



This section allows you to manage the Wireless AP.

5.3.1.1. Web Interface Settings (Password)

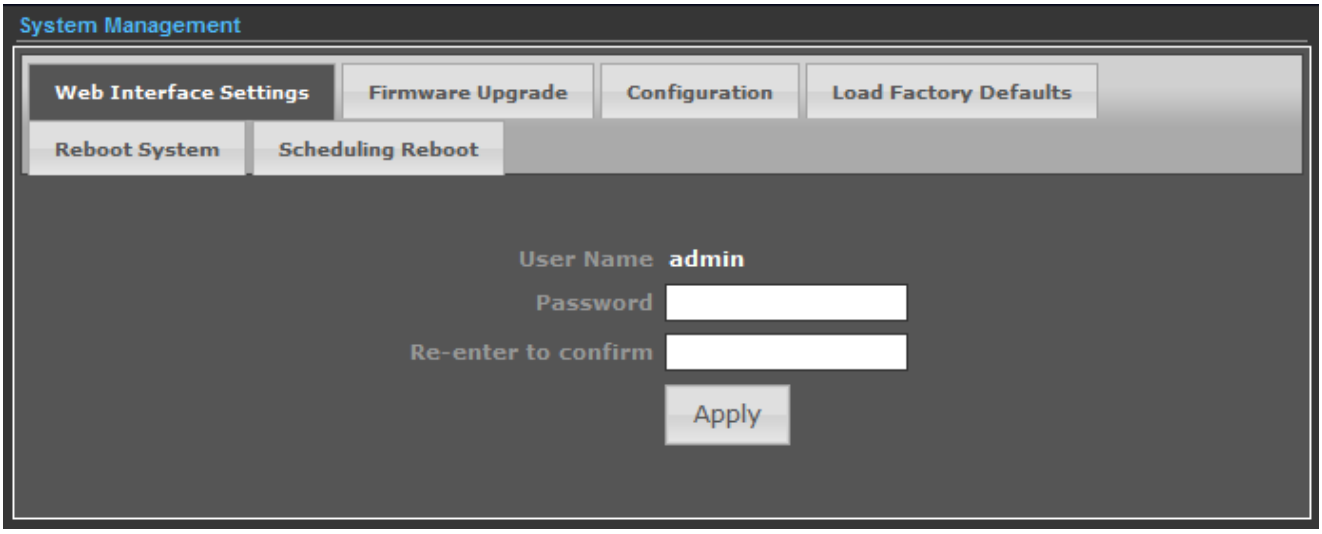


Figure 5-8 Web Interface Settings

Object	Description
• **User Name**	Display the User Name info.
• **Password**	Enter the new password that you prefer for login.
• **Re-enter to confirm**	Re-enter the new password to confirm.

If you change the login password, you must enter the new one in the next login.

5.3.1.2. Firmware Upgrade

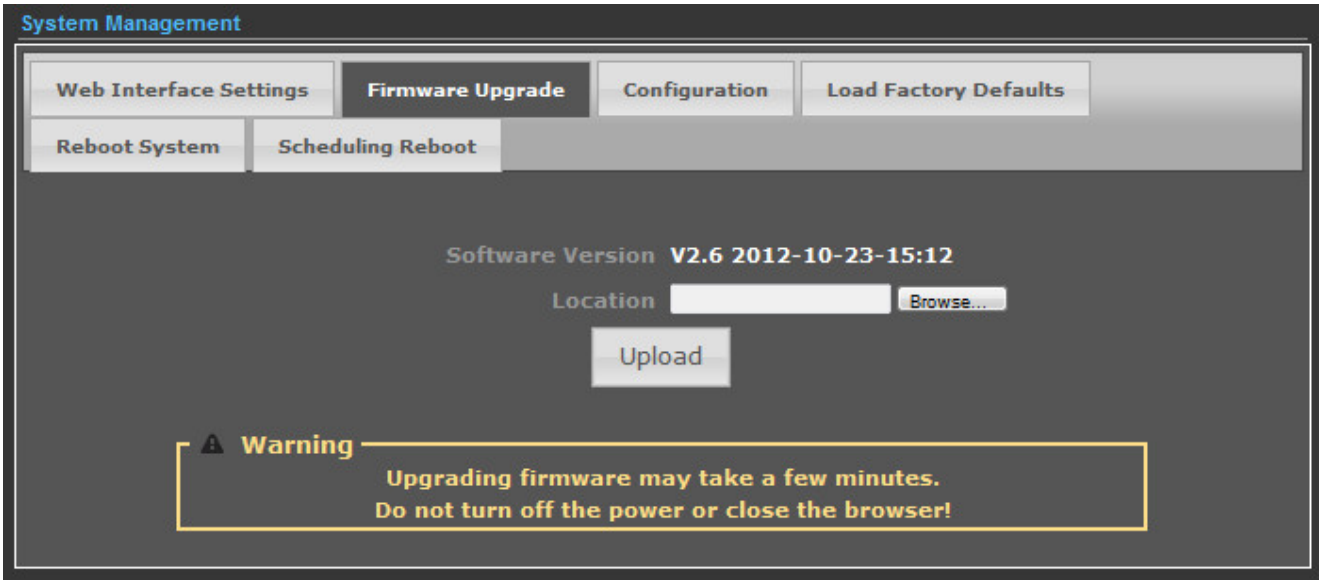


Figure 5-9 Firmware Upgrade

Click the "**Browse…**" button to select the new firmware for upgrading.

Object	Description
• **Software Version**	Display the current Software Version info.
• **Location**	Click the "Browse…" button to select the new firmware in this field.
• **Upload**	Click the "Upload" button to upgrade the new firmware.

!	**IMPORTANT SAFETY PRECAUTIONS:** Do Not Turn off the power or close the browser during upgrade process!

5.3.1.3. Configuration

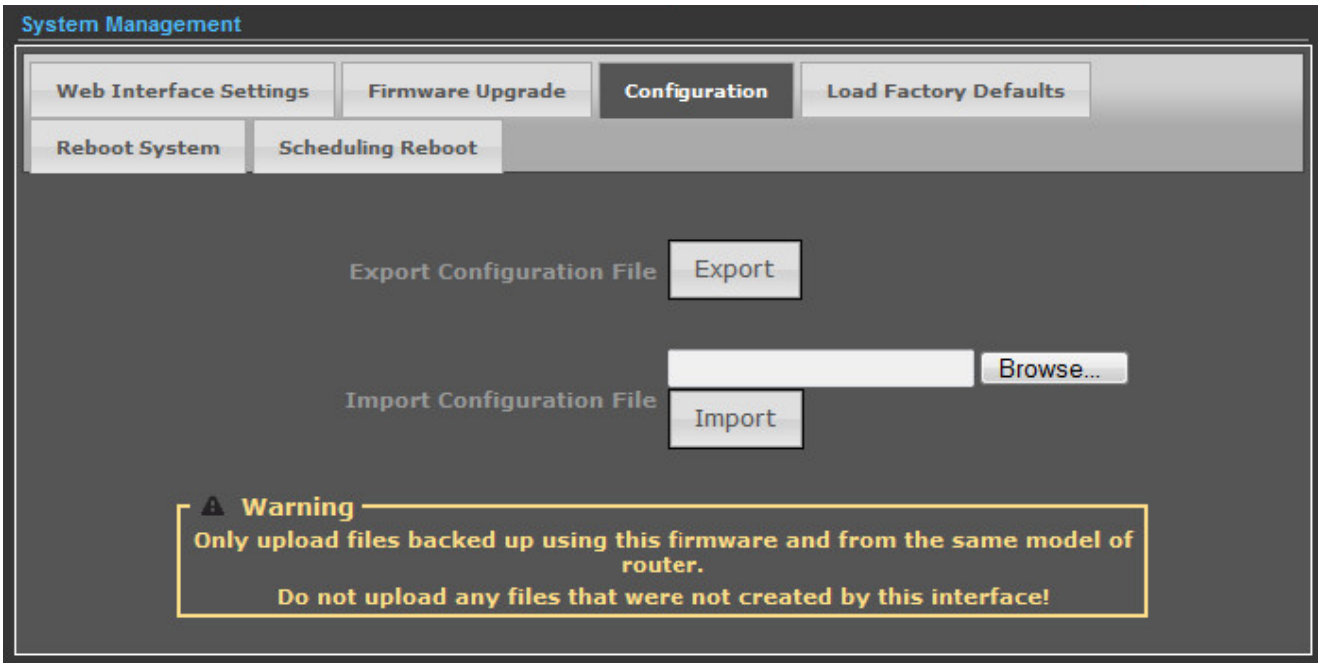


Figure 5-10 Configuration Backup/Restore

Click the "**Export"** button to back up the configuration of the Wireless AP, and click "**Import**" to restore the configuration.

Object	Description
• **Export**	Click the "Export" button to back up the configuration.
• **Browse…**	Click the "Browse…" button to select the configuration file in this field for restoring settings.
• **Import**	Click the "Import" button to restore the configuration.

5.3.1.4. Load Factory Defaults

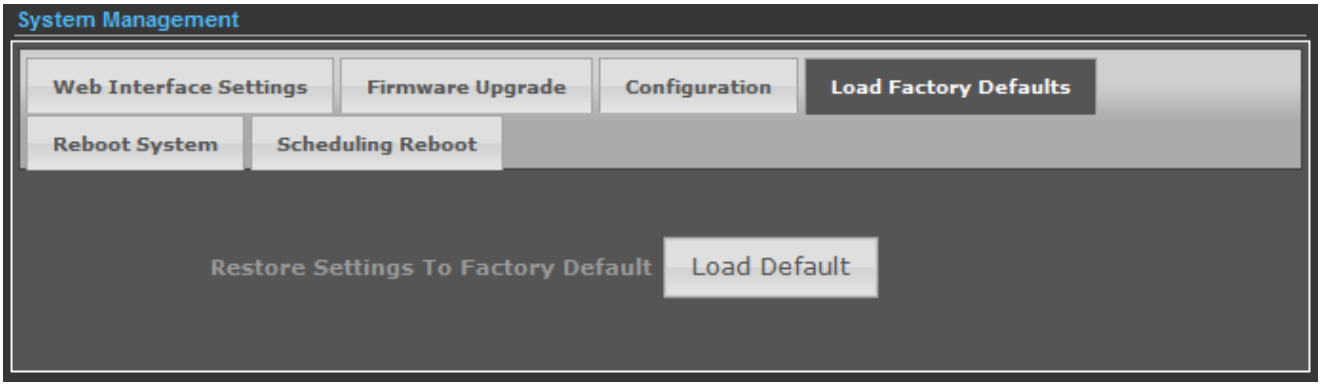


Figure 5-11 Load Factory Defaults

Click the "**Load Default"** button to reset it to factory default settings.

5.3.1.5. Reboot System

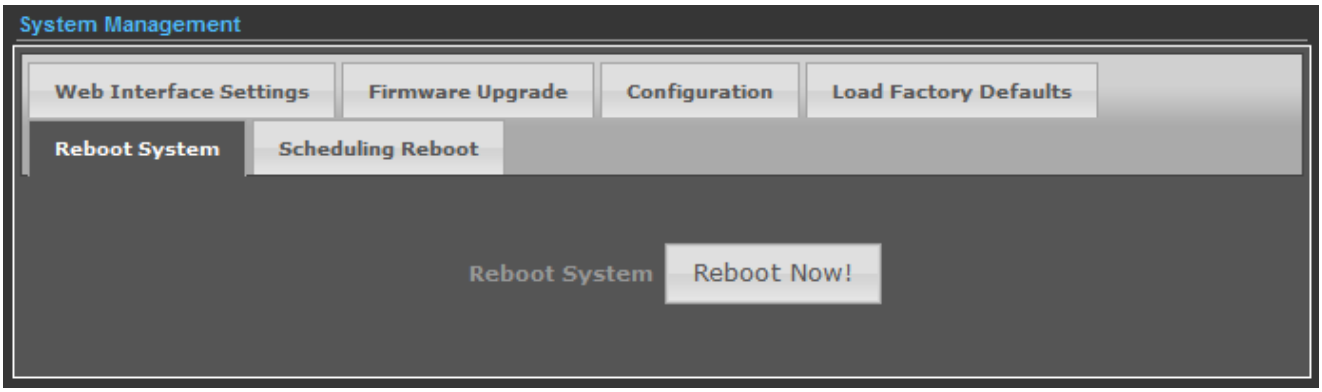


Figure 5-12 Reboot System

Click the "**Reboot Now!**" button to restart the Wireless AP.

5.3.1.6. Scheduling Reboot

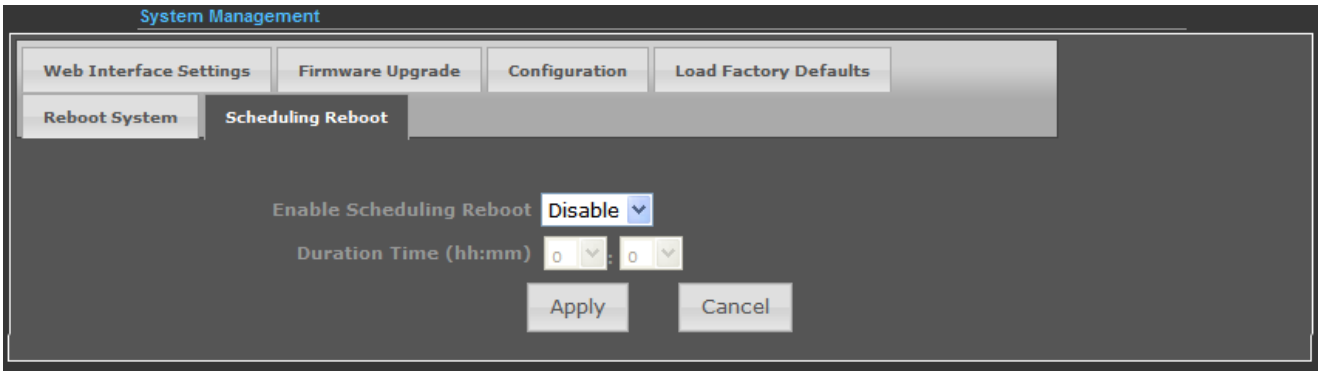
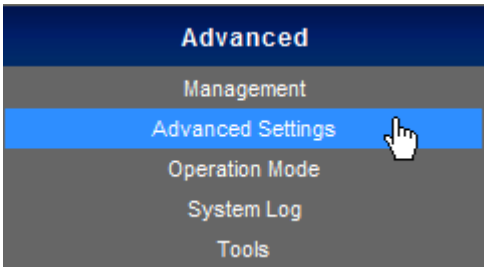


Figure 5-13 Scheduling Reboot

Select "**Enable**" to configure the system auto reboot according to the Duration Time (Time interval).

Object	Description
• **Enable Scheduling Reboot**	**Enable:** select it to enable the Scheduling Reboot. **Disable:** select it to disable the Scheduling Reboot.
• **Duration Time (hh:mm)**	Configure the particular time interval for the system auto reboot. **hh:** means hours **mm:** means minutes

5.3.2 Advanced – Advanced Settings



This section allows you to configure advanced settings of the Wireless AP.

5.3.2.1. Time Zone Settings

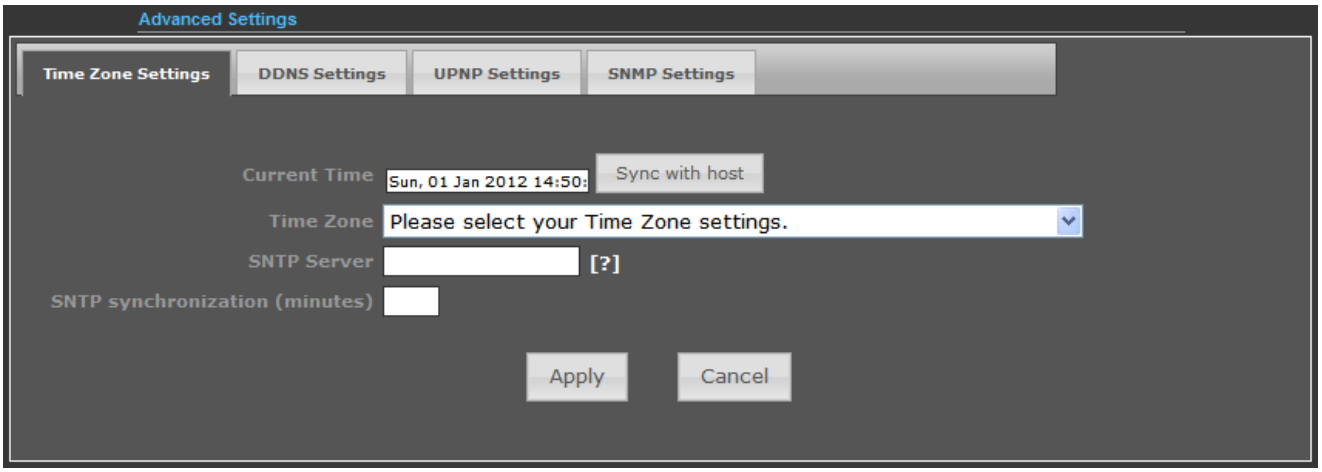


Figure 5-14 Time Zone Settings

The page includes the following fields:

Object	Description
• **Current Time**	Display the current time.
• **Sync with host**	Click it to sync your PC's time to the device.
• **Time Zone**	Select your current time zone.
• **SNTP Server**	Configure your SNTP Server.
• **SNTP Synchronization (minutes)**	Determines a time length when device periodically updates its time and date info from Internet.

5.3.2.2. DDNS Settings

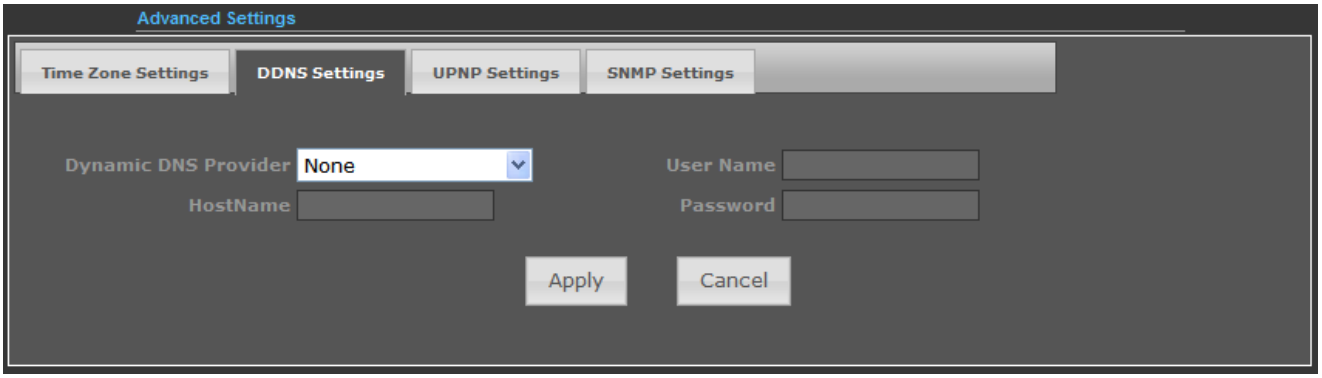


Figure 5-15 DDNS Settings

The page includes the following fields:

Object	Description
• **Dynamic DNS Provider**	Select your Dynamic DNS Provider.
• **Host Name**	Enter the host name or domain name provided by your DDNS service provider.
• **User Name**	Enter the name of your DDNS account.
• **Password**	Password: Enter the password of the DDNS account.

Example of Planet DDNS Settings:

Note

Please go to http://www.planetddns.com/ to register a Planet DDNS account.

Please refer to the FAQ (http://www.planetddns.com/index.php/faq) on how to register a free account.

Please refer to the procedure listed as follows to configure using Planet DDNS service.

Step 1. Select "planetddns.com" to choose Planet DDNS service.

Step 2. Configure the DDNS account that has been registered on Planet DDNS website.

Host Name: Enter your DDNS host (format: xxx.planetddns.com, xxx is the registered domain name)

User Name: Enter your DDNS account

Password: Enter your DDNS account's password

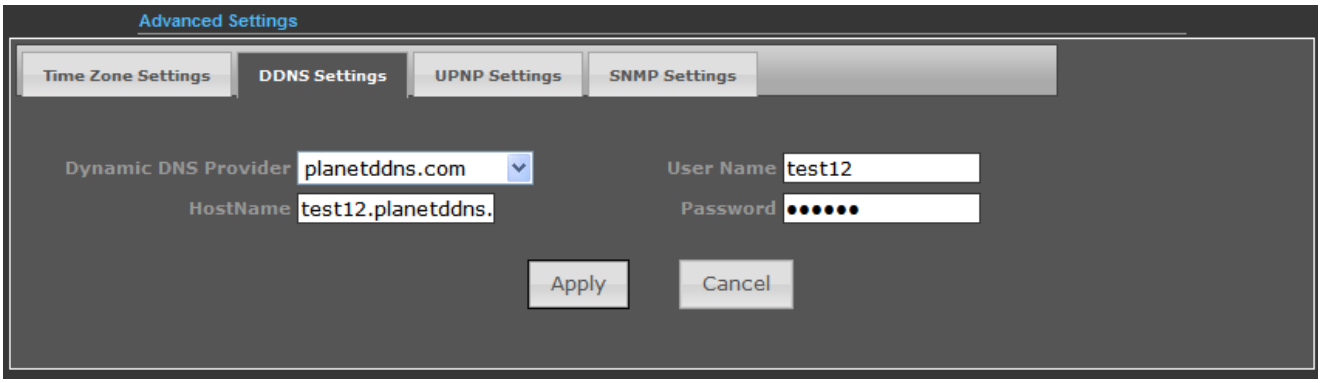


Figure 5-16 Planet DDNS Settings

Step 3. Go to "**Advanced-> Firewall Settings-> Firewall**" to allow remote access from WAN port.

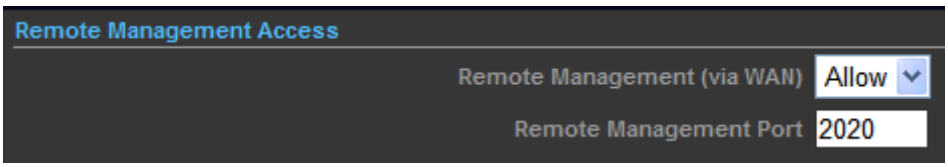


Figure 5-17 Remote Management Access Setting

Step 4. Go to "**Advanced-> Network Settings-> WAN**" to configure WAN Connection using Static (Fixed IP).

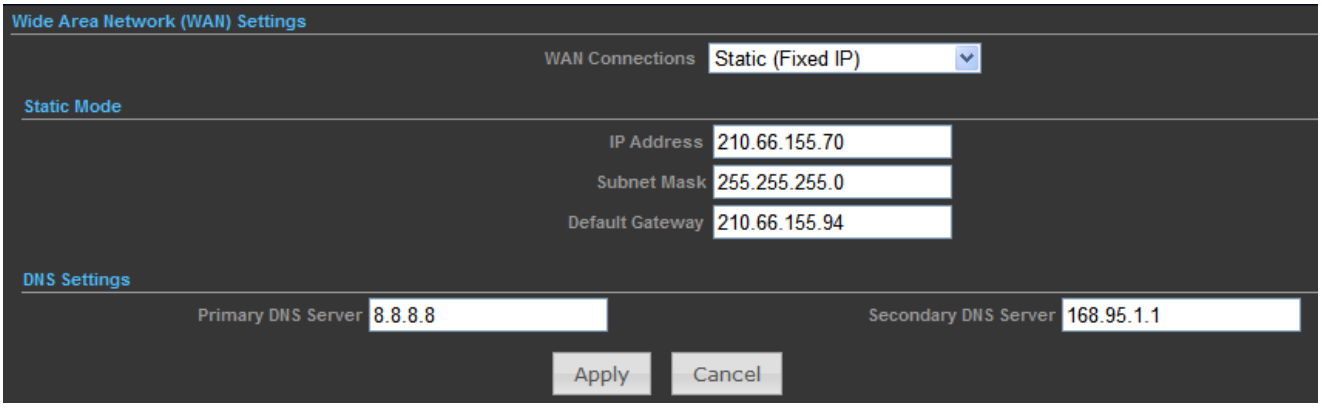


Figure 5-18 WAN - Static

Step 5. Apply the settings, and connect your WAN port of the Wireless AP to the internet by Ethernet cable.

Step 6. In a remote computer, enter the DDNS host name as the figure is shown below. Then, you should be able to login the WNAP-6308 remotely.

Please remember to enter the remote management port number that you have configured in Step 3.

Figure 5-19 Remote Login through DDNS domain

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.

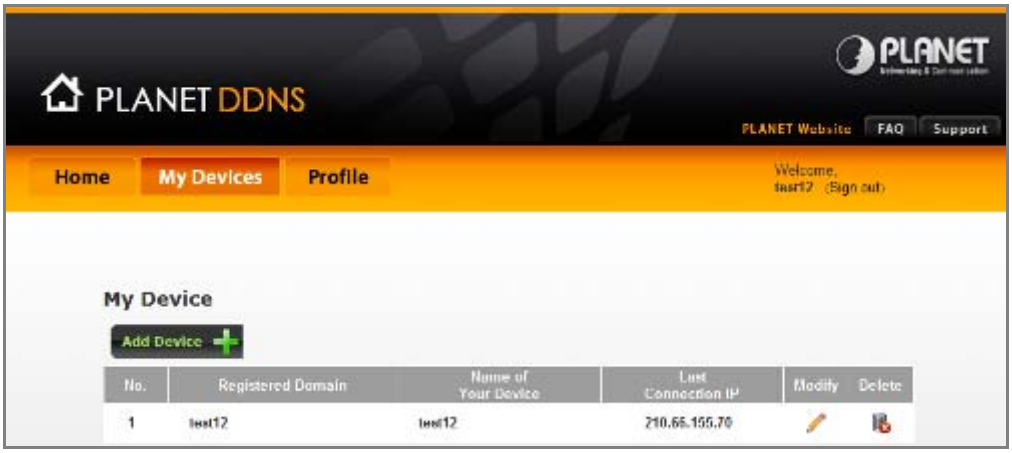


Figure 5-20 Planet DDNS – My Device

5.3.2.3. UPNP Settings

Select "**Enable**" to enable the UPNP function.

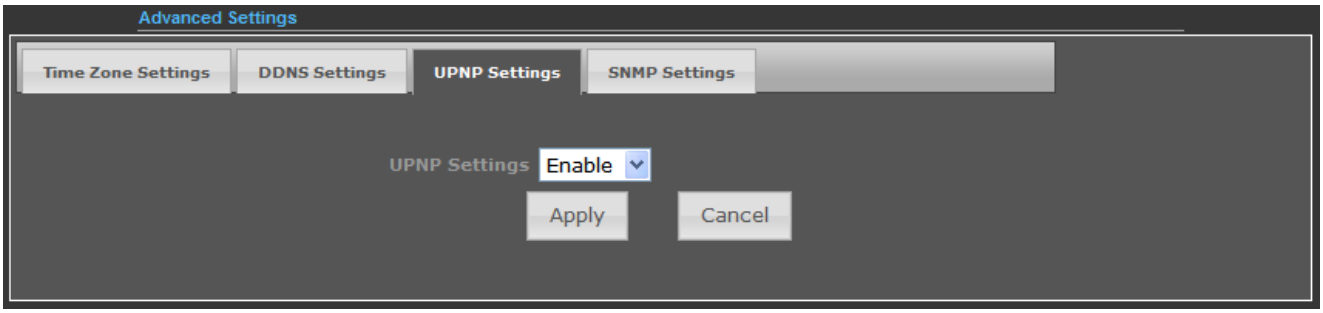


Figure 5-21 UPnP Settings

In the computer connected with the WNAP-6308, go to "**Network**" to check whether the WNAP-6308 is displayed on the list.

Double-click it to logon the Web UI of the WNAP-6308.

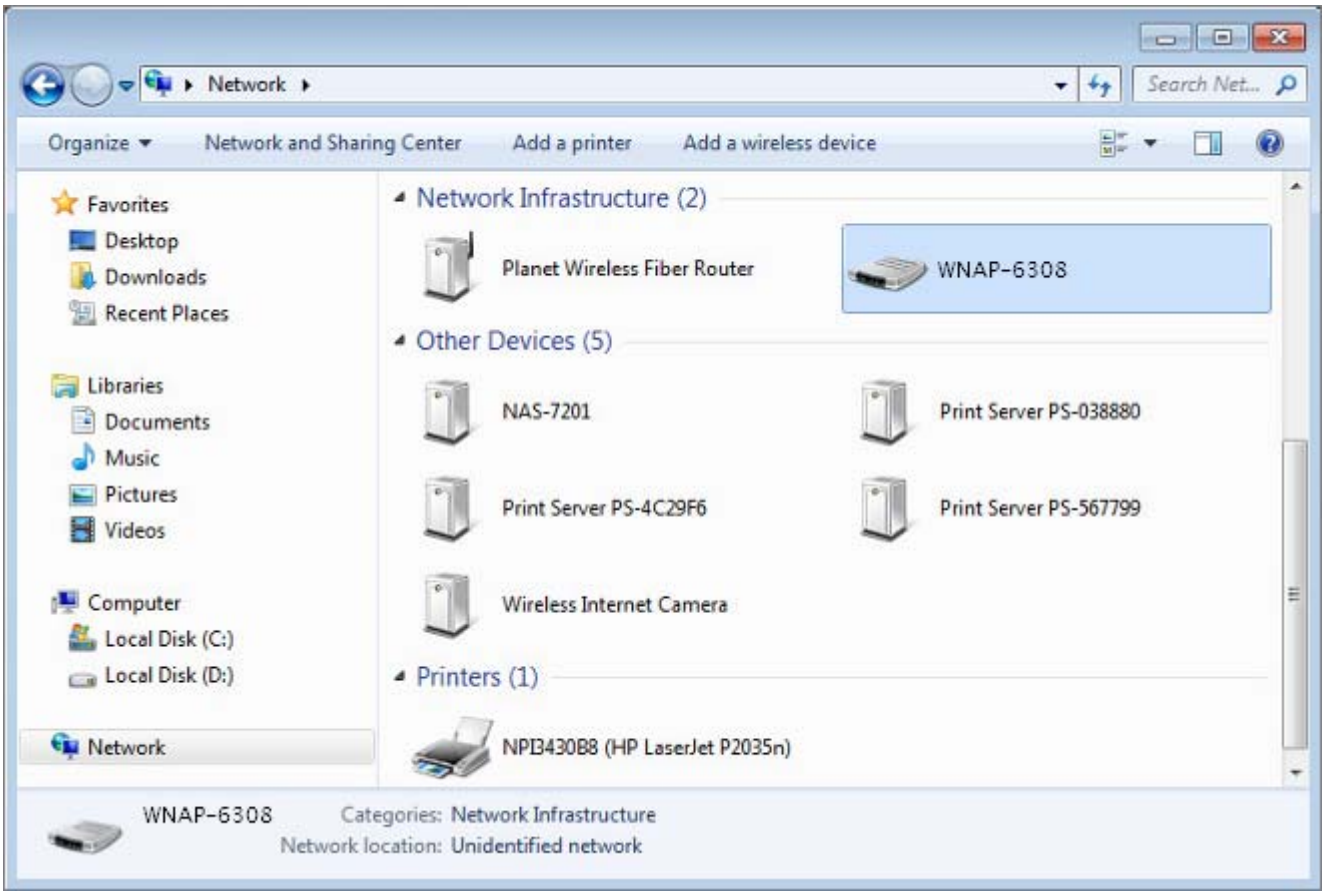


Figure 5-22 UPnP – Network Location

5.3.2.4. SNMP Settings

Enabling **SNMP** function will allow the network management station to retrieve statistics and status from the SNMP Agent in the device.

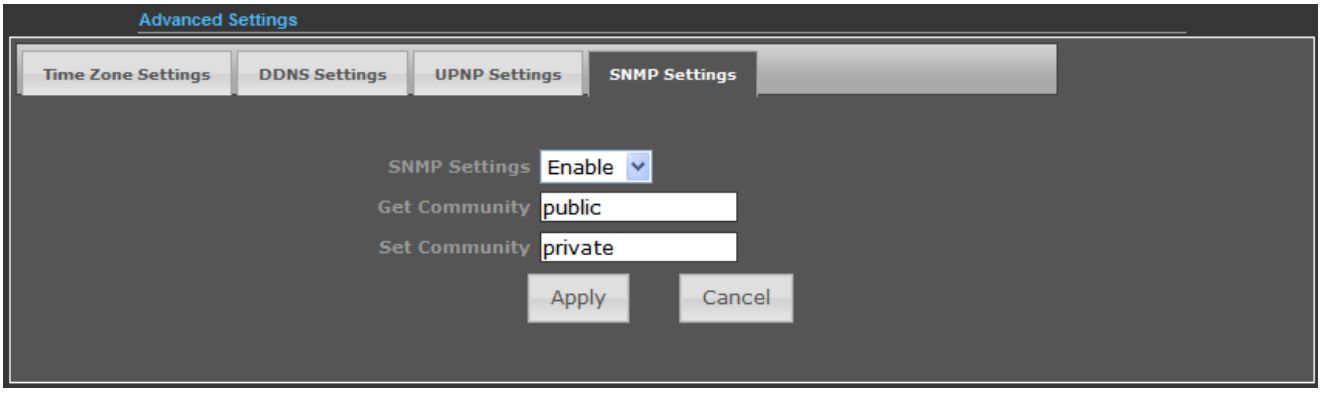


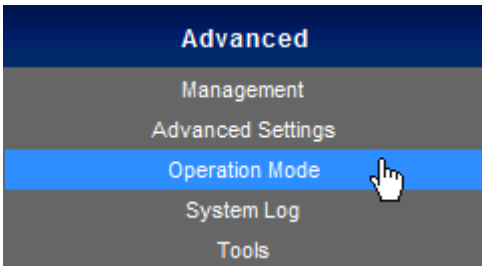
Figure 5-23 SNMP Settings

The page includes the following fields:

Object	Description
• **SNMP Settings**	Choose **Enable** to open this function if you want to have remote control through SNMPv1/v2 agent.

	Choose Disable to close this function.
• **Get Community**	Enter the community name that allows Read-Only access to the Device's SNMP information. The community name can be considered a group password. The default setting is public.
• **Set Community**	Enter the community name that allows Read/Write access to the Device's SNMP information. The community name can be considered a group password. The default setting is private.

5.3.3 Advanced – Operation Mode



There are 4 operation modes (**AP Router**, **AP Bridge**, **Client Router, Client Bridge**) that can be configured to meet various applications.

5.3.3.1. AP Router (AP+Router)

In the Access Point Mode with Router Function, the **WNAP-6308** acts as a central connection point, which wireless clients can connect to. The DHCP & NAT is enabled, so the clients are wirelessly connected to the WNAP-6308 that can share the internet connection by connecting the WNAP-6308 to a DSL/cable modem.

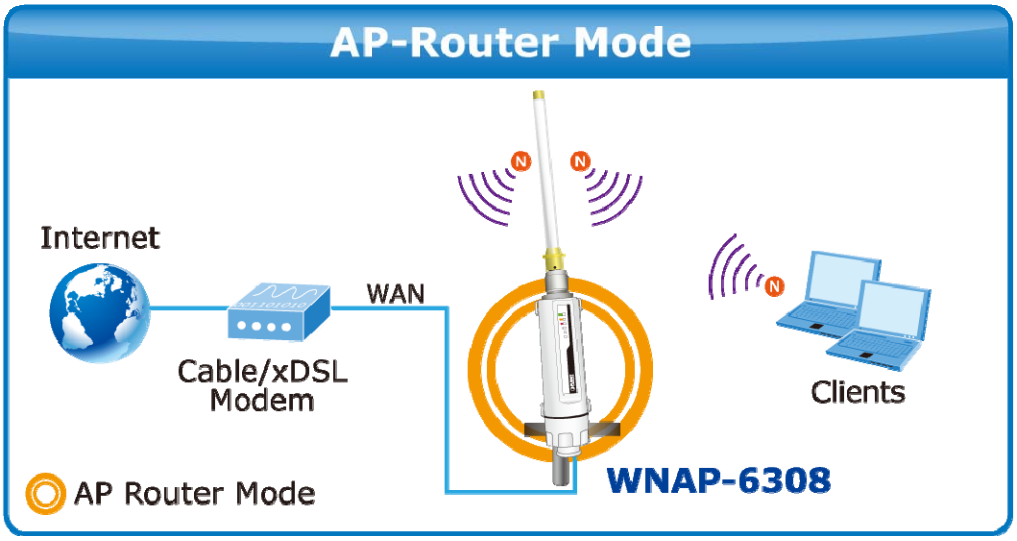


Figure 5-24 Topology – AP Router Mode

1. Connect the LAN port of the WNAP-6308 to the POE port of the PoE Injector over an Ethernet cable.
2. Connect the DSL/cable modem to the WAN port of the WNAP-6308.

3. Plug one end of the power cord into the PoE Injector, and the other end in electrical socket.
4. Go to "**Advanced-> Operation Mode**" to configure it in **AP Router** Mode.

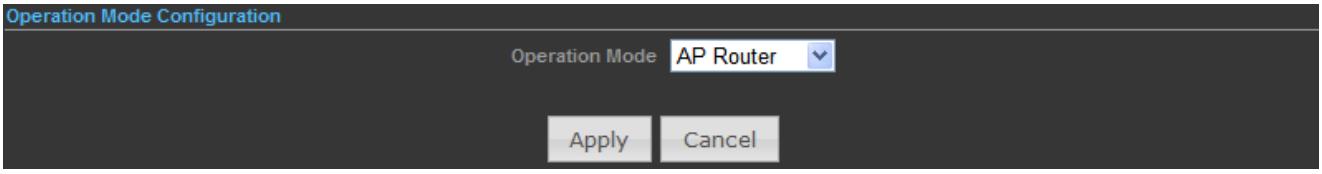


Figure 5-25 Operation Mode – AP Router

Note

In this mode, the LAN2 of the WNAP-6308 works as the WAN port.

To configure the Wireless Settings of AP Router Mode, please refer to the section **5.6 Wireless Settings**.

5.3.3.2. AP Bridge (AP+WDS)

In the Access Point mode with WDS function, the **WNAP-6308** functions like a central connection for any stations or clients. Stations and clients must configure the same SSID and Security Password to associate within the range. The WNAP-6308 supports 2 different SSIDs to separate different clients at the same time.

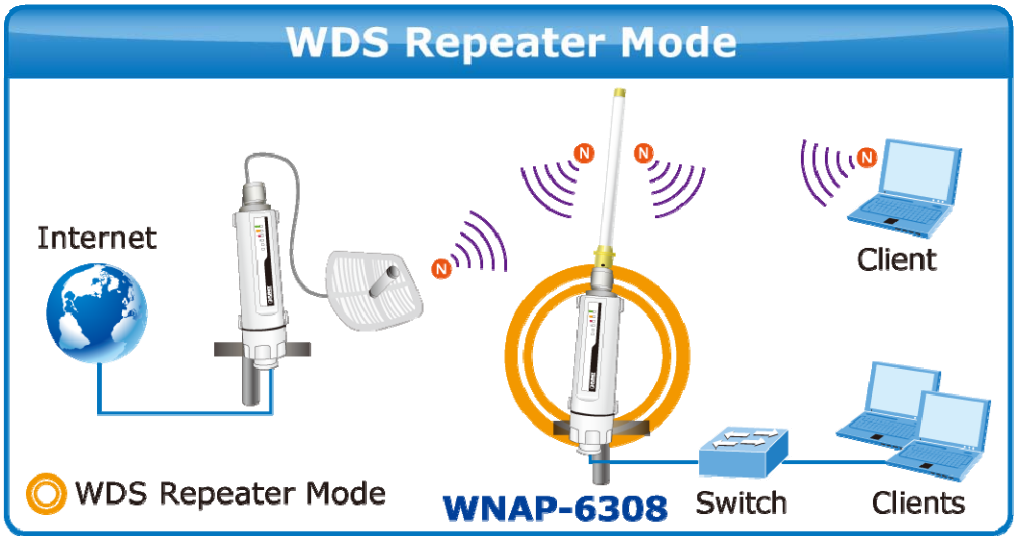


Figure 5-26 Topology – WDS Repeater Mode

1. Connect the LAN port of the WNAP-6308 to the POE port of the PoE Injector over an Ethernet cable.
2. Connect the PC to the LAN port of the PoE Injector over an Ethernet cable.
3. Plug one end of the power cord into the PoE Injector, and the other end in electrical socket.
4. Go to "**Advanced-> Operation Mode**" to configure it to **AP Bridge** mode.

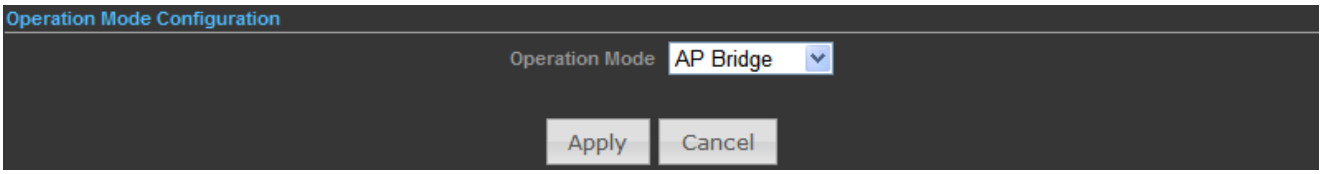


Figure 5-27 Operation Mode – AP Bridge

Note

In this mode, the wireless interface of the WNAP-6308 works as the WAN port.

To configure the Wireless Settings of AP Bridge Mode, please refer to the section **5.6 Wireless Settings**.

5.3.3.3. Client Router (WISP)

In the Client Router mode, the WNAP-6308 has DHCP Server built inside that allows many LANs automatically generate an IP address to share the same Internet. Connect an AP/WISP wirelessly and connect to LANs via wired. The Client Router mode acts completely opposite to the AP Router mode.

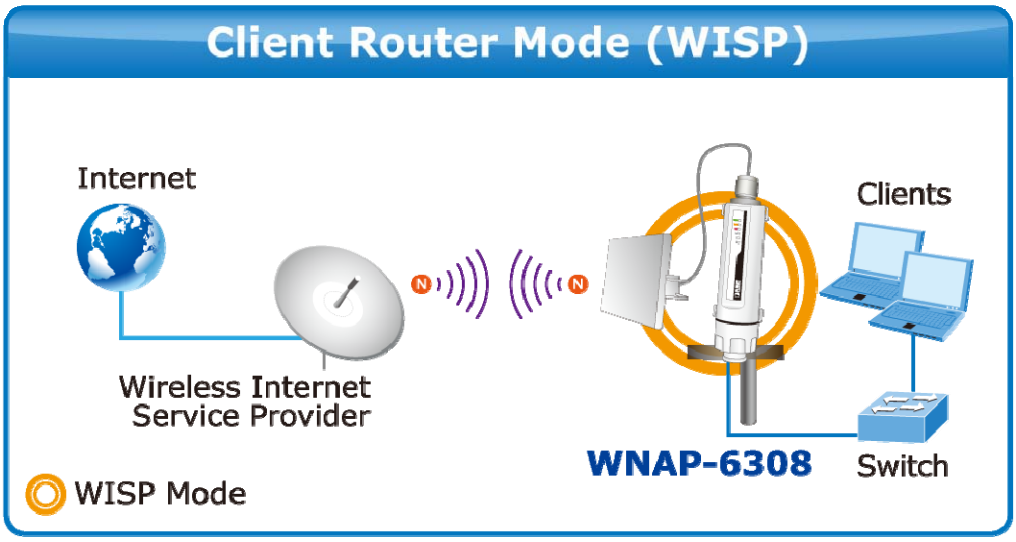


Figure 5-28 Topology – Client Router (WISP) Mode

1. Connect the LAN port of WNAP-6308 to the POE port of the PoE Injector over an Ethernet cable.
2. Connect the PC to the LAN port of the PoE Injector over an Ethernet cable.
3. Plug one end of the power cord into the PoE Injector, and the other end in electrical socket.
4. Go to "**Advanced-> Operation Mode**" to configure it to **Client Router** mode.

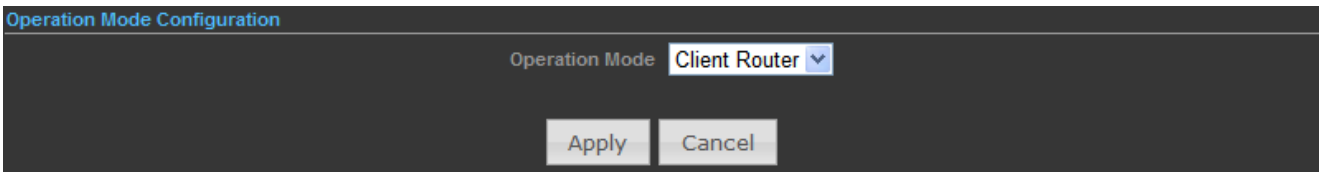


Figure 5-29 Operation Mode – Client Router

WISP Setup Procedure:

Step 1. Go to Advanced-> Wireless Settings-> Profile Settings.

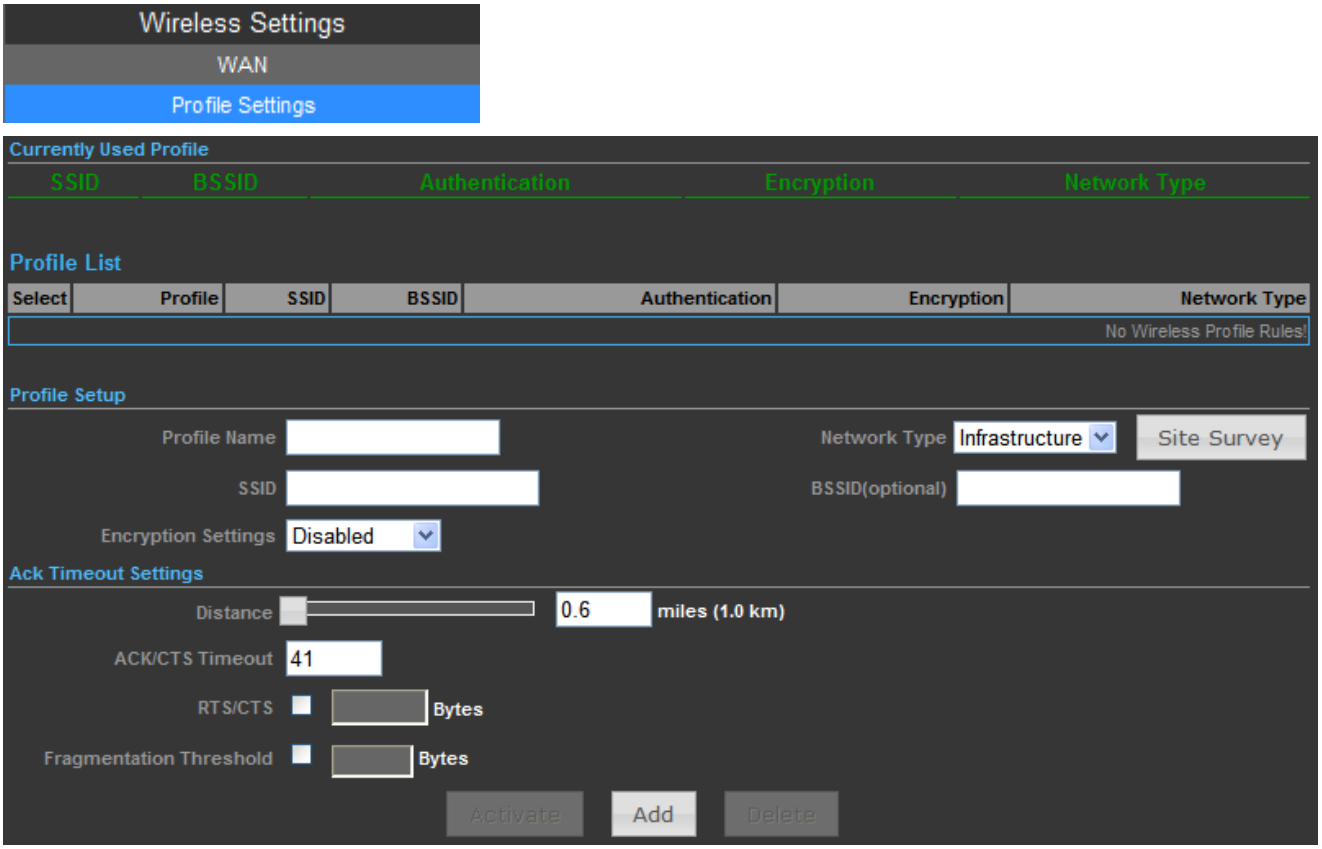


Figure 5-30 WISP Step-1

Step 2. Click "**Site Survey**" to discover the Wireless Internet Service Provider.

Step 3. Select the WISP's AP, and the click "**Select**".

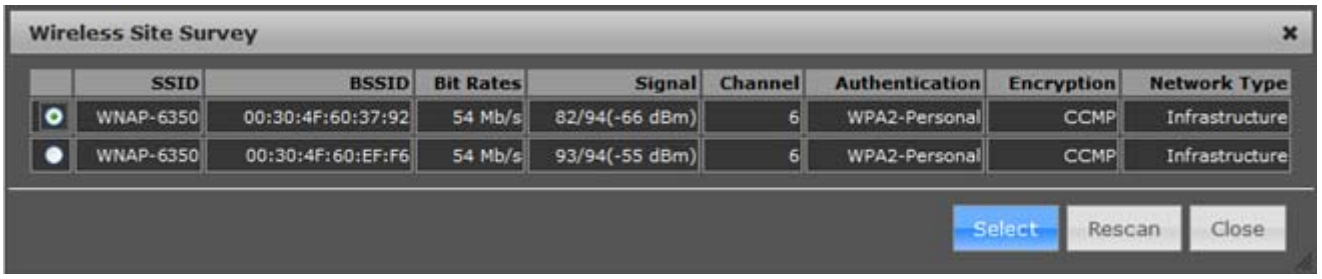


Figure 5-31 WISP Step-2

Step 4. Enter the Passphrase, and then click "**Add**" to add this setting to the profile.

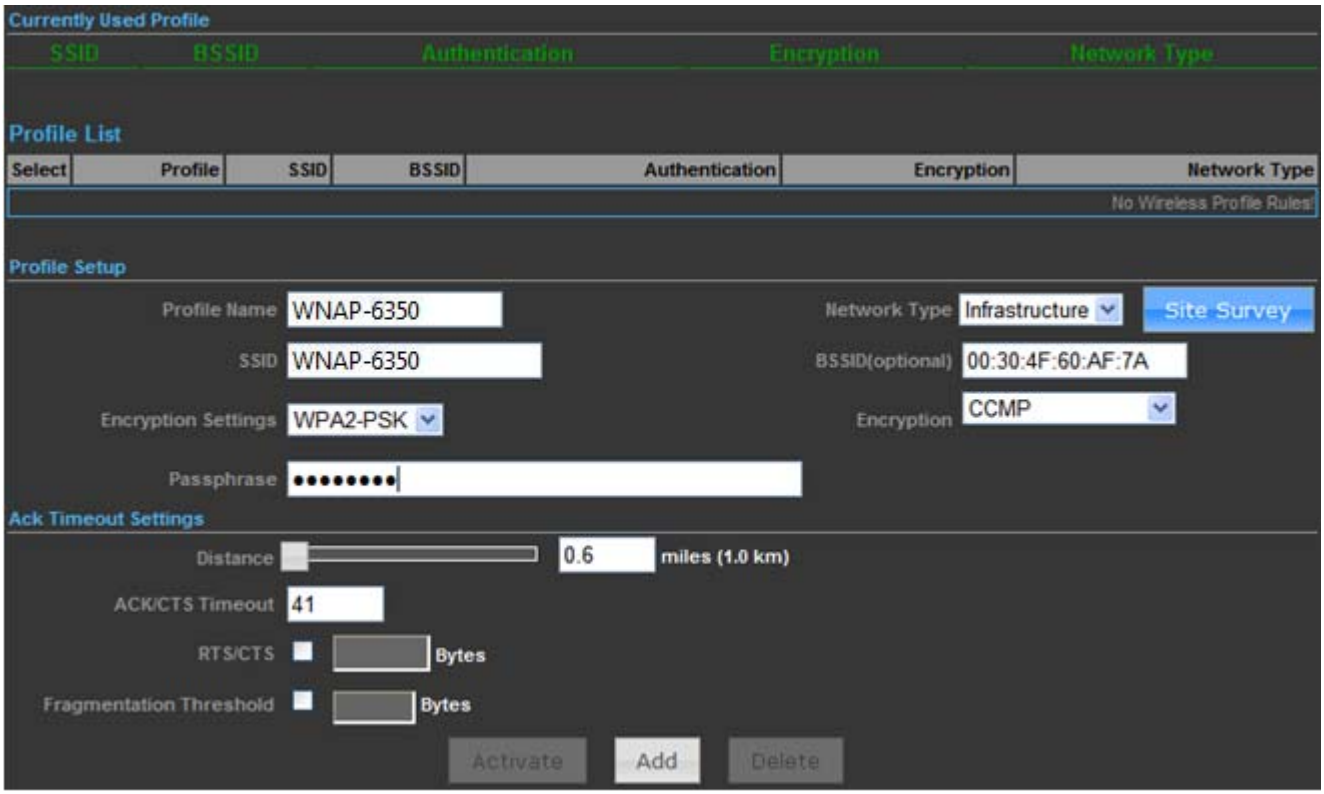


Figure 5-32 WISP Step-3

Step 5. The profile should be listed on the Profile List as the figure is shown below.

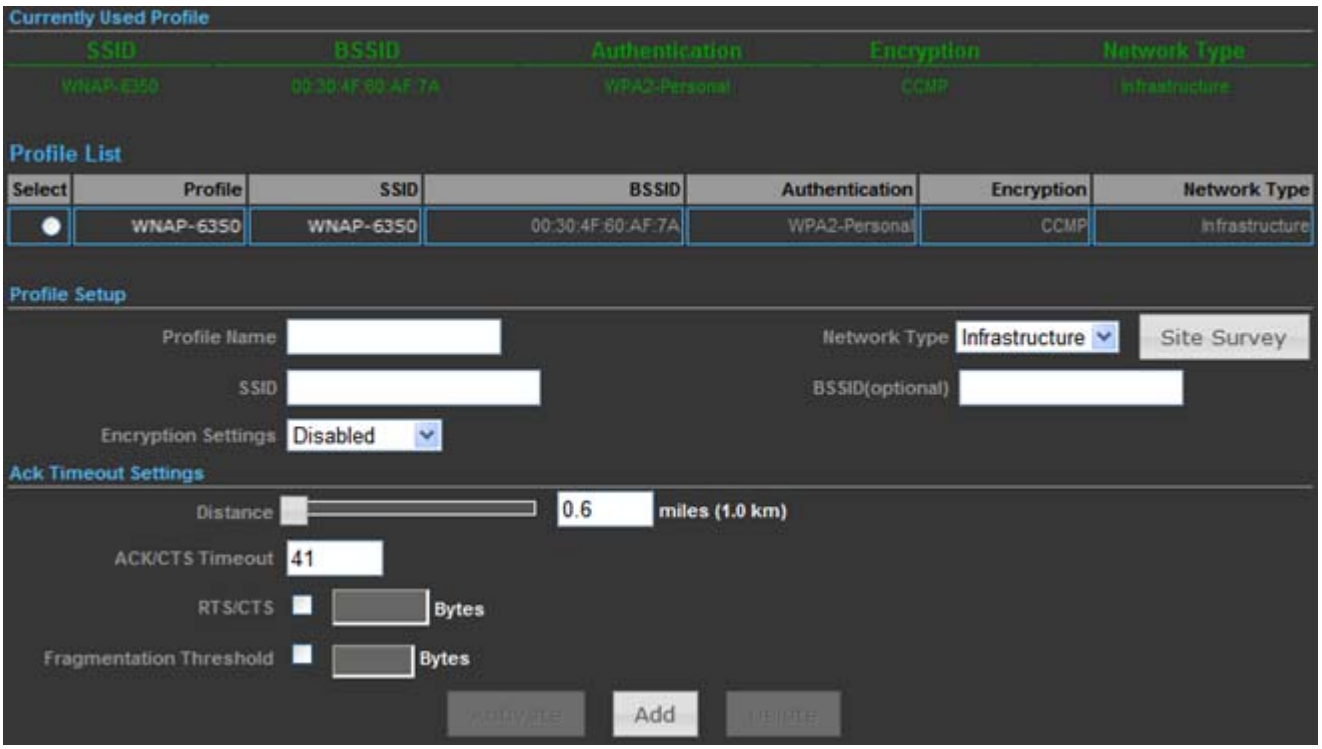


Figure 5-33 WISP Step-4

Step 6. Go to "**Advanced-> Network Settings-> LAN**" to enable **DHCP Server**.

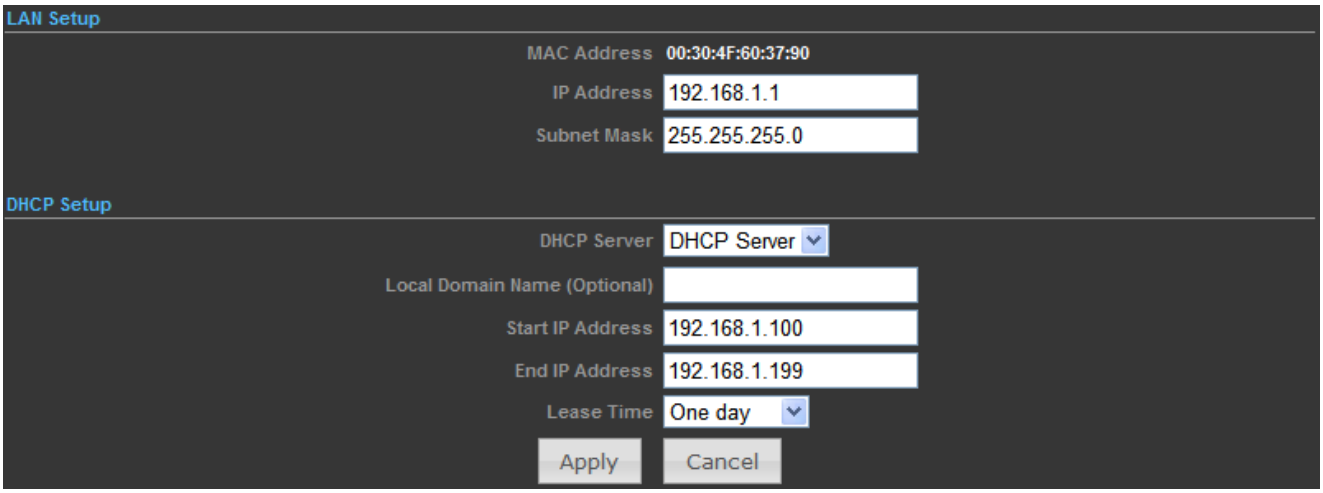


Figure 5-34 WISP Step-5

Step 7. Go to "**Advanced-> Network Settings-> WAN**" to configure the WAN Connection.

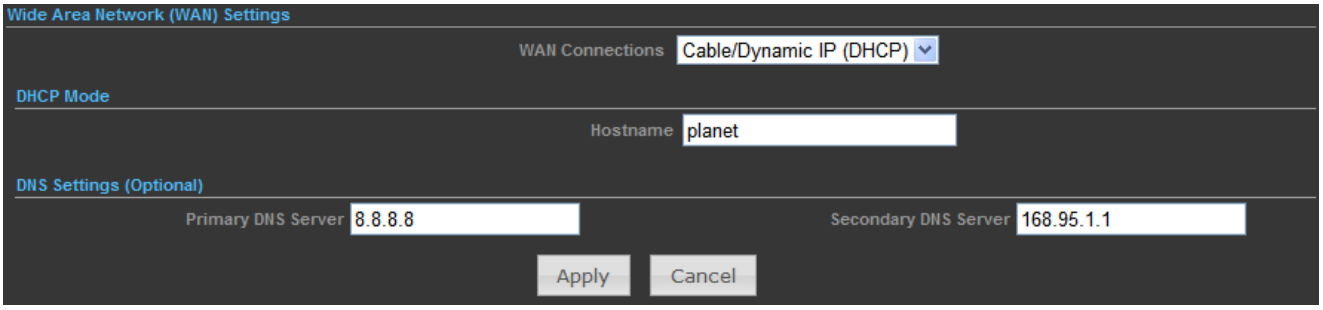


Figure 5-35 WISP Step-6

Step 8. Configure the wired client's TCP/IP setting to "**Obtain an IP address automatically**".

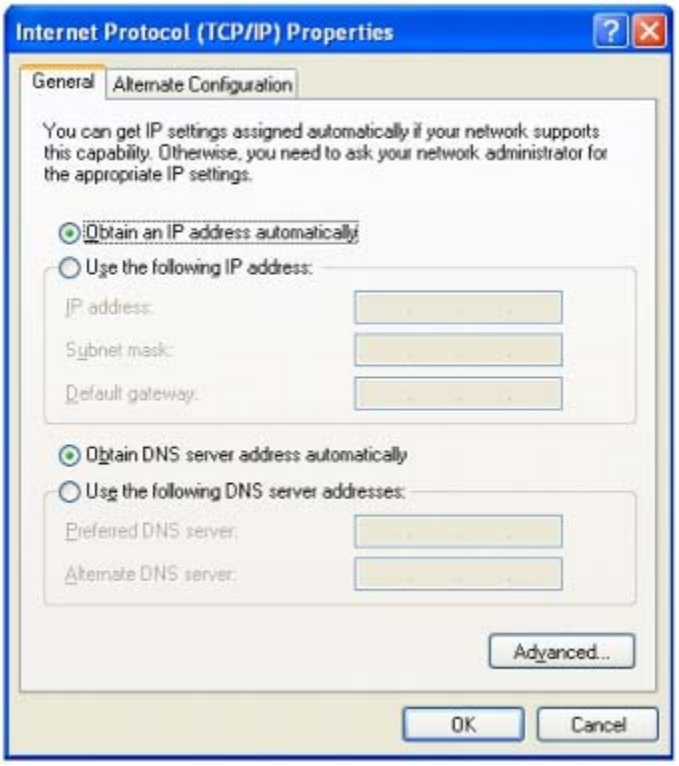


Figure 5-36 WISP Step-7

After getting the IP assigned by the WNAP-6308, ping the DNS server to check whether internet connection is reachable.

5.3.3.4. Client Bridge (Slave AP Bridge)

In the Client Bridge mode, the WNAP-6308 functions like a wireless adapter. Connect to an Access Point wirelessly and surf Internet whenever you want. Using Site Survey to scan all the Access Points within the range and configure its SSID and Security Password to associate with it.

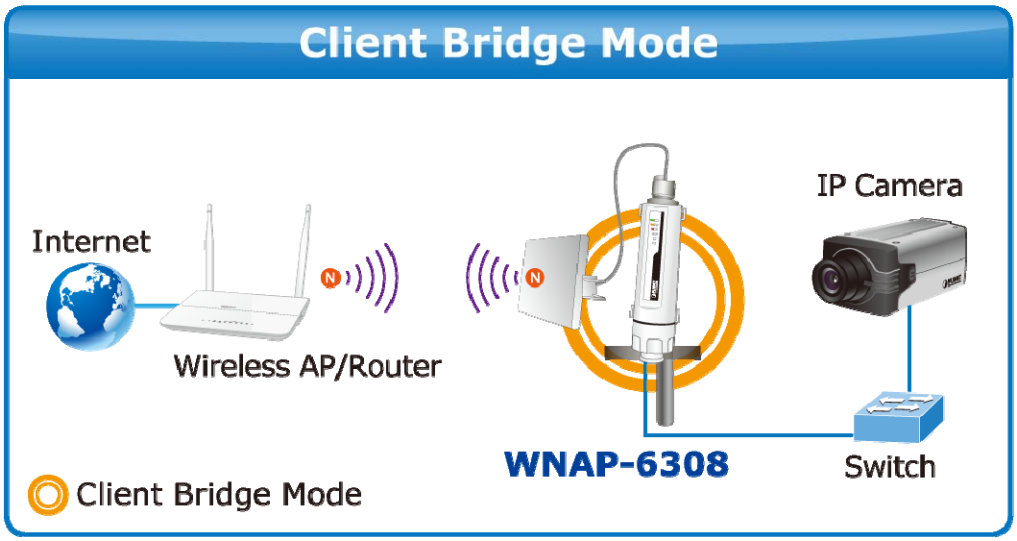


Figure 5-37 Topology – Client Bridge Mode

1. Connect the LAN port of WNAP-6308 to the POE port of the PoE Injector over an Ethernet cable.
2. Connect the PC to the LAN port of the PoE Injector over an Ethernet cable.
3. Plug one end of the power cord into the PoE Injector, and the other end in electrical socket.
4. Go to "**Advanced-> Operation Mode**" to configure it to **Client Bridge** mode.

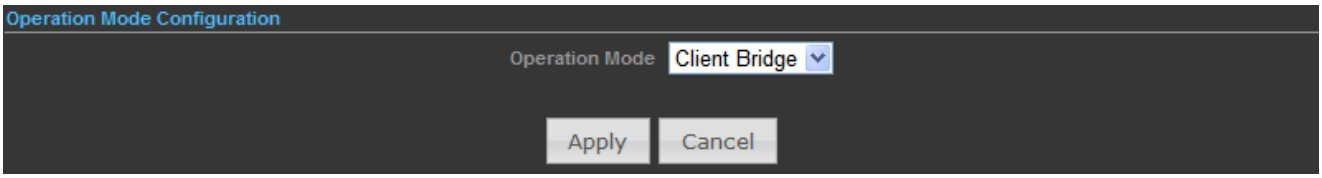
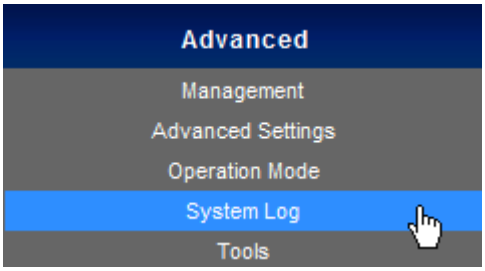


Figure 5-38 Operation Mode – Client Bridge

To configure the Wireless Settings of Client Bridge Mode, please refer to the section **5.6 Wireless Settings**.

5.3.4 Advanced – System Log

Choose menu "**Advanced-> System Log**" to view the logs of the Wireless AP.



Click "**Refresh**" to update the system log.

Click "**Clear**" to erase the current system log.

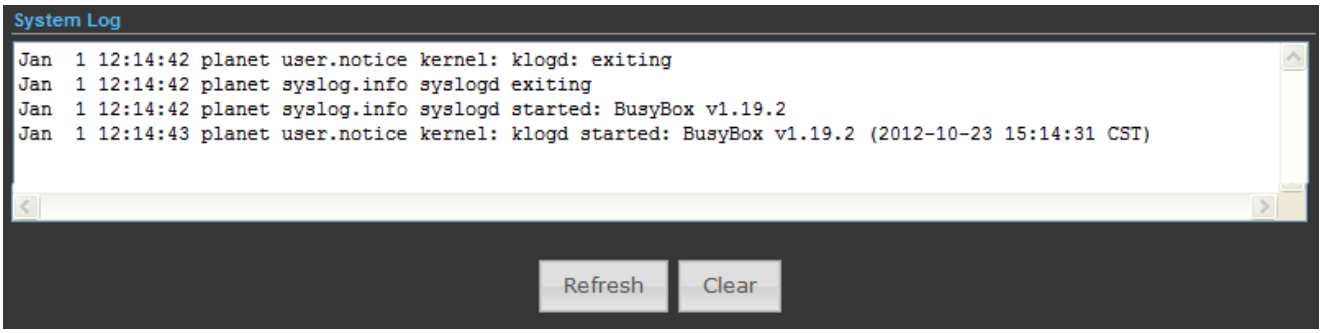
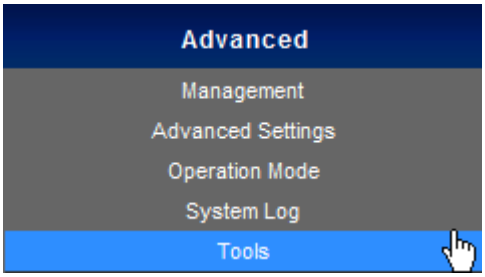


Figure 5-39 System Log

5.3.5 Advanced – Tools

The Tools included **Ping, Traceroute, and Throughput** can help user diagnostic the network connection.



5.3.5.1. Ping

Ping is a network tool used to test whether a particular host is reachable across an IP network.

Enter the IP, Ping Count, and click "**Start**" to diagnostic your internet connection.

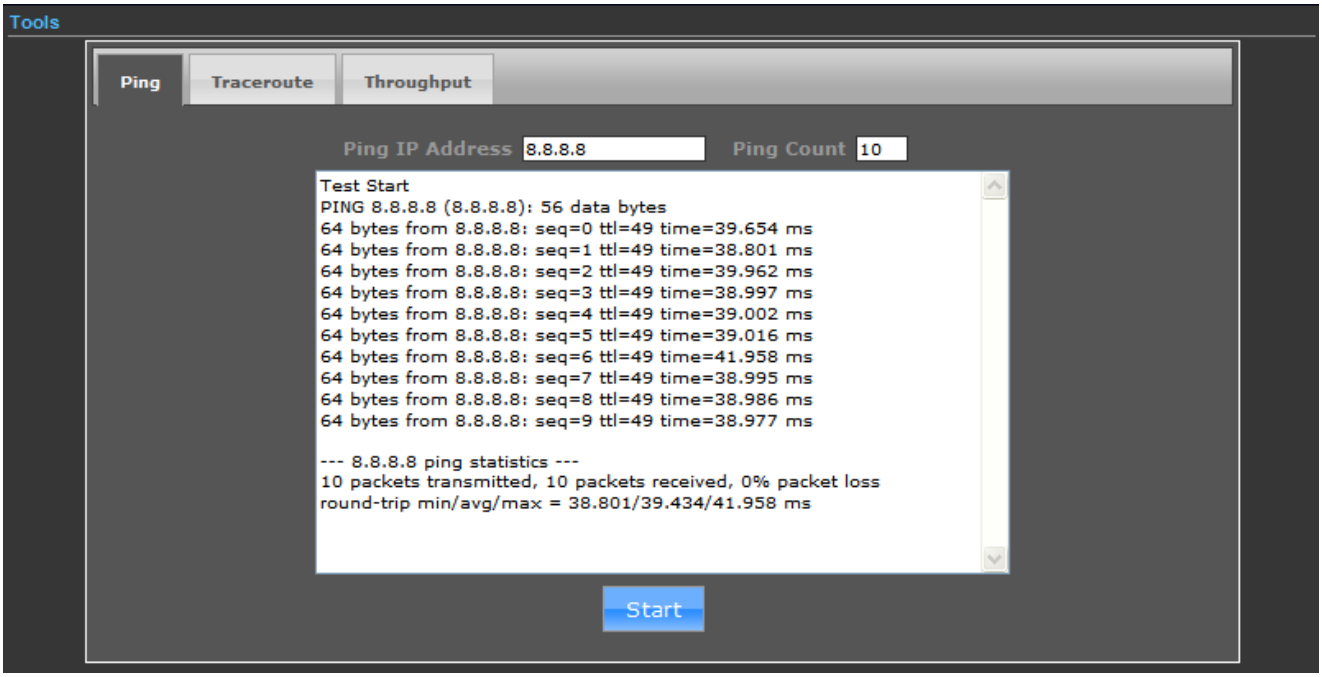


Figure 5-40 Ping

5.3.5.2. Traceroute

Traceroute is a computer network diagnostic tool for displaying the route (path) and measuring transit delays of packets across an Internet Protocol (IP) network. It can help identify connection problems.

Enter the IP or Host Name, and click "**Start**" to diagnostic your internet connection.

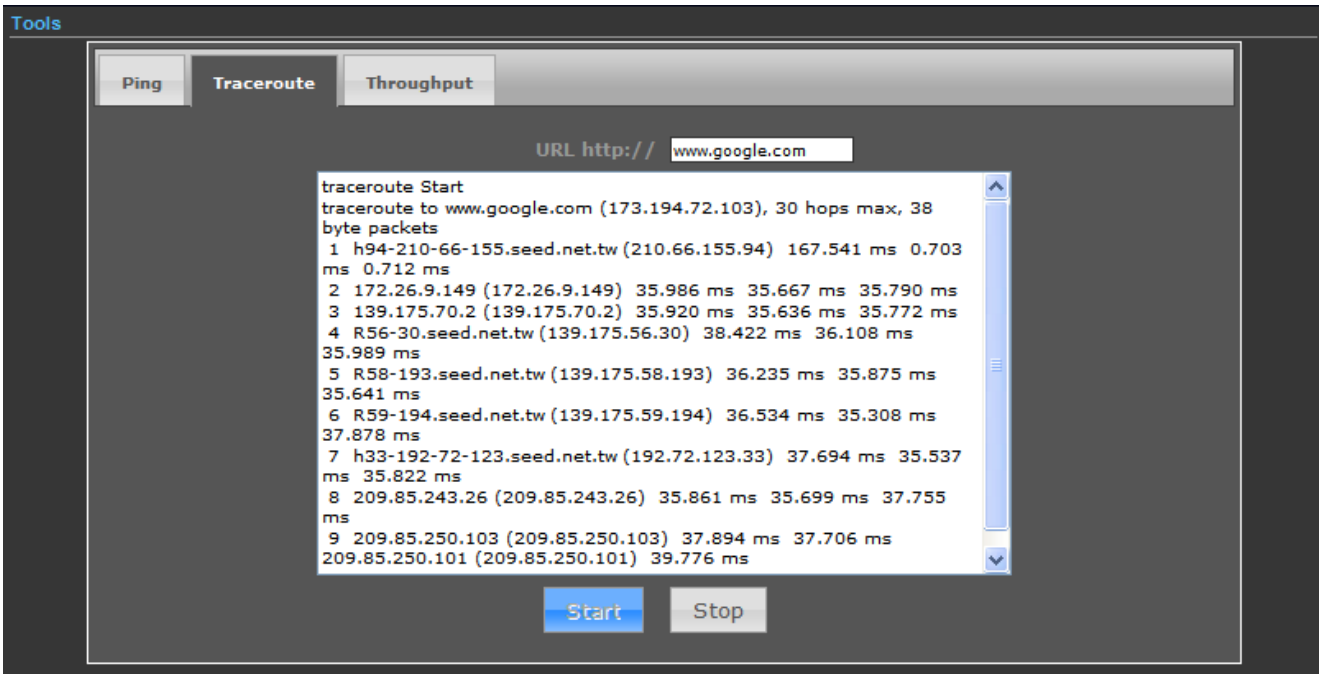


Figure 5-41 Traceroute

5.3.5.3. Throughput

Click “VISIT THE SITE TO TEST SPEED” button to go to http://www.speedtest.net/ to test the Internet connection speed.

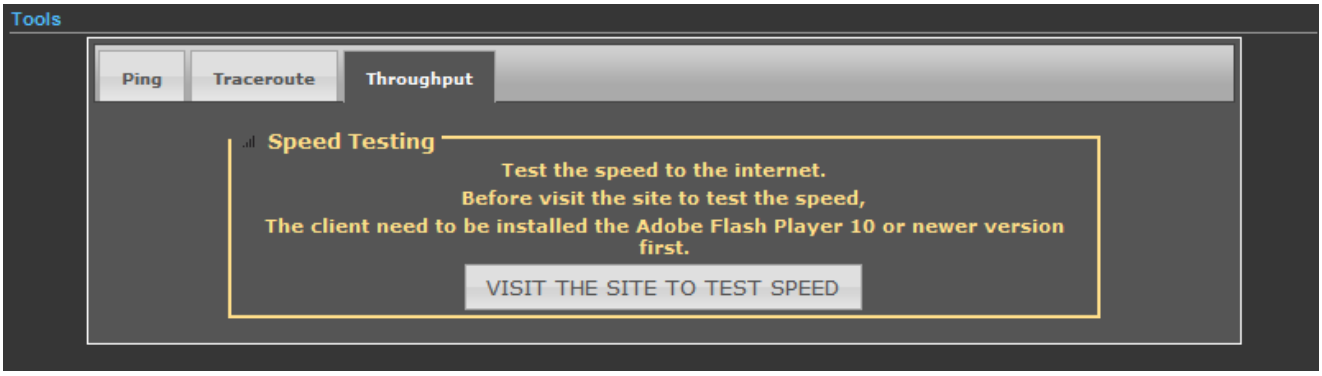
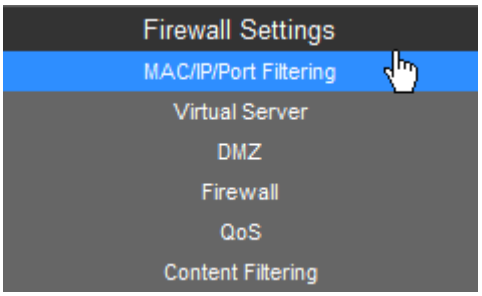


Figure 5-42 Speed Test

5.4 Firewall Settings

5.4.1 MAC/IP/Port Filtering



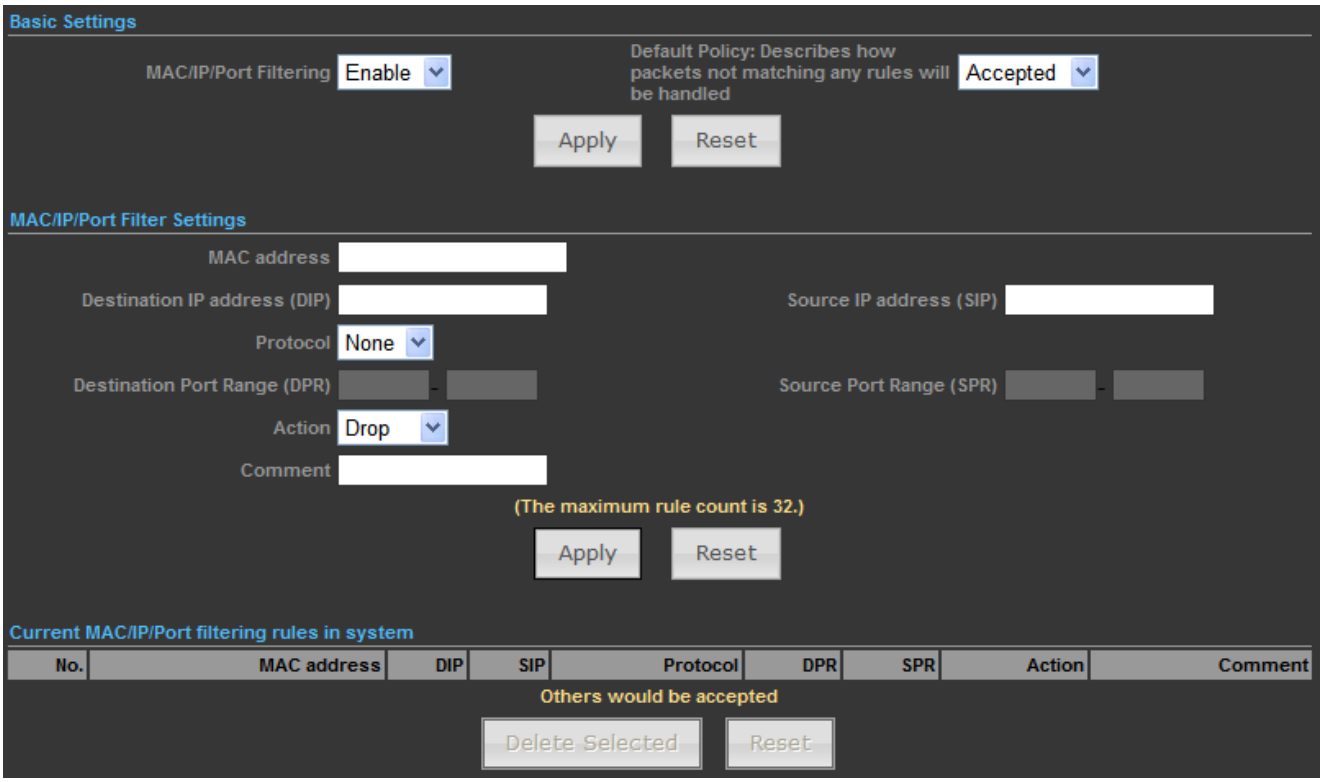
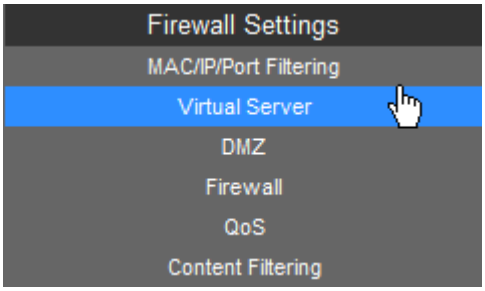


Figure 5-43 MAC/IP/Port Filtering

The page includes the following fields:

Object	Description
• **MAC/IP/Port Filtering**	Select **Enable** to enable the MAC/IP/Port Filtering function.
• **Default Policy**	Select a policy for filtering rule.
• **MAC Address**	Fill in the MAC address of source NIC, to restrict data transmission.
• **Destination IP address (DIP)**	Fill in the IP address of destination, to restrict data transmission.
• **Source IP address (SIP)**	Fill in the IP address of source, to restrict data transmission.
• **Protocol**	Select the protocol that you want to restrict. There are four options: None, TCP, UDP and ICMP.
• **Destination Port Range**	Fill in the start-port and end-port number of destination, to restrict data transmission.
• **Source Port Range**	Fill in the start-port and end-port number of source, to restrict data transmission.
• **Action**	Select Accept or Drop to specify the action of filtering policies.
• **Comment**	Make a comment for the filtering policy.

5.4.2 Virtual Server



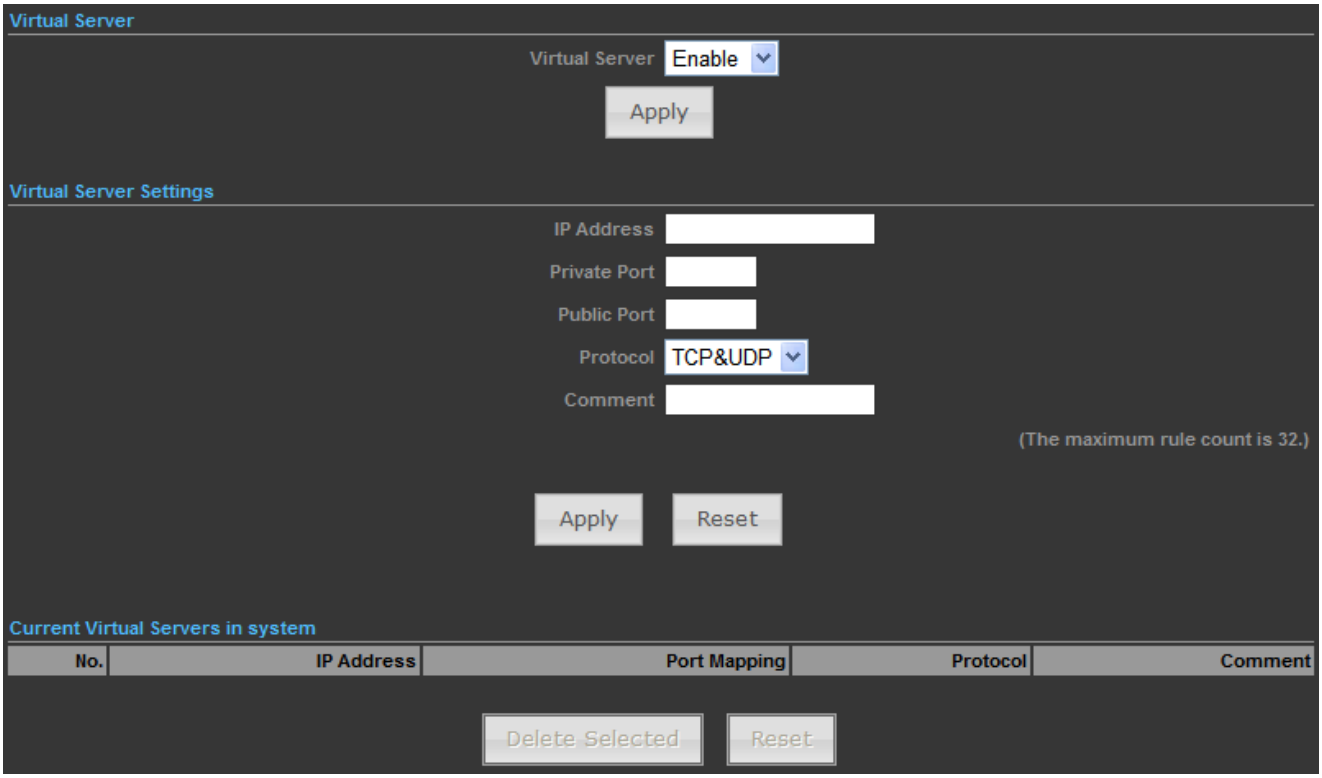
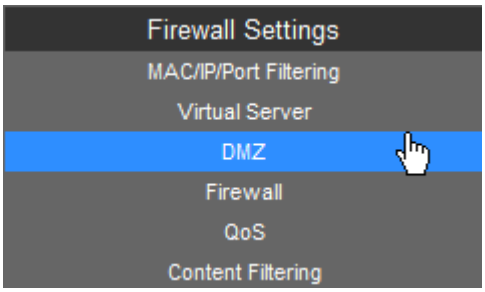


Figure 5-44 Virtual Server

The page includes the following fields:

Object	Description
• **Virtual Server**	Select **Enable** to enable the Virtual Server function.
• **IP address**	To forward data packets coming from WAN to a specific IP address that hosted in local network behind the NAT firewall, fill in the IP address.
• **Private Port**	To forward data packets coming from WAN to a specific IP address that hosted in local network behind the NAT firewall, fill in the private port.
• **Public Port**	To forward data packets coming from WAN to a specific IP address that hosted in local network behind the NAT firewall, fill in the public port.
• **Protocol**	The protocol used for this application, either TCP, UDP, or TCP&UDP (all protocols are supported by the Device.).
• **Comment**	Make a comment to help identify the setting.

5.4.3 DMZ



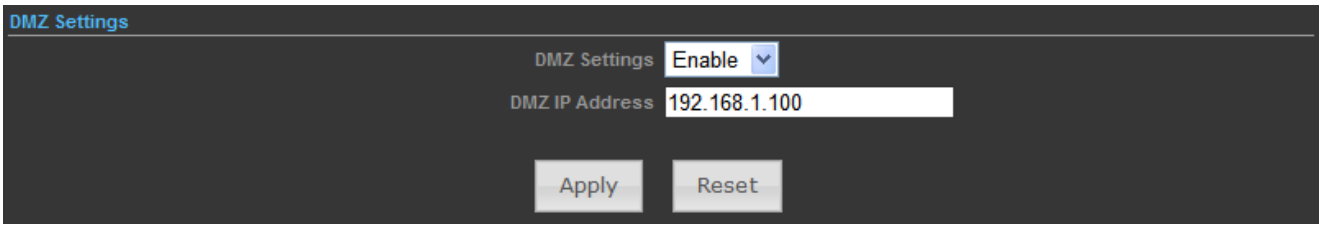
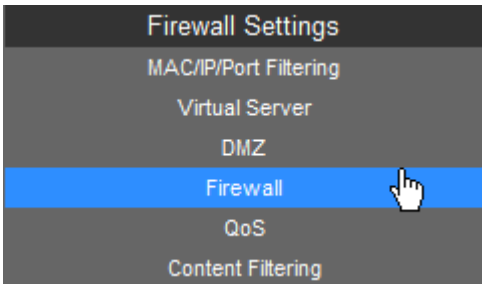


Figure 5-45 DMZ

The page includes the following fields:

Object	Description
• **DMZ Settings**	Select **Enable** to enable the DMZ function.
• **DMZ IP Address**	To support DMZ in your firewall design, fill in the IP address of DMZ host that can be accessed from the WAN interface.

5.4.4 Firewall



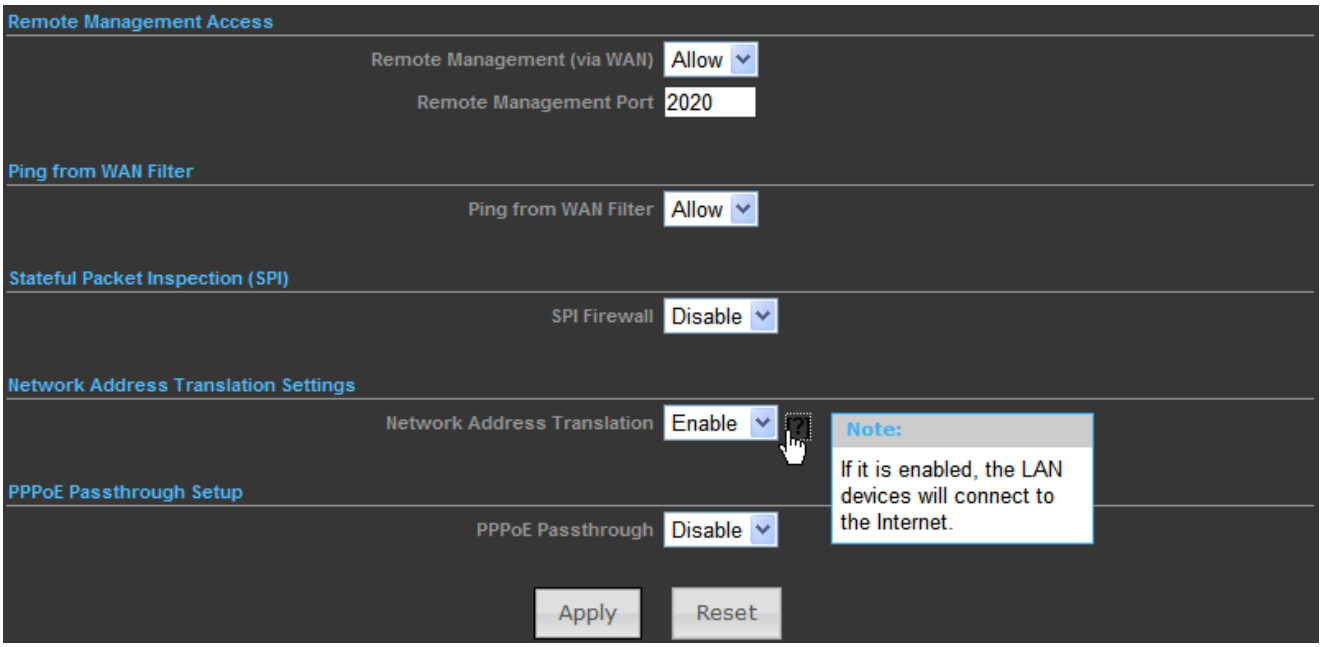


Figure 5-46 NAT Option

The page includes the following fields:

Object	Description
• **Remote Management (via WAN)**	Select **Deny** or **Allow** for remote management function.
• **Remote Management Port**	Configure the port for remote management.
• **Ping from WAN Filter**	Select **Deny** or **Allow** for Ping permit from WAN.
• **SPI Firewall**	Select **Disable** or **Enable** for SPI firewall function.
• **Network Address Translation**	Enable it to let the LAN devices connect to the Internet. All computers must be assigned with a public IP address to get connected to the Internet without NAT. However, Internet Service Providers only provide very few IP addresses to every user. Therefore it is necessary to use NAT to share a single public IP address to multiple computers on local network, so everyone can get

	connected to the Internet.
• **PPPoE Passthrough**	Enable it to allow Multiple PPP connections on remote hosts.

5.4.5 QoS

Quality of Service provides an efficient way for clients on the network to share the bandwidth with a promised quality of Internet service. Without QoS, all computers and devices on the network will compete with each other to get the bandwidth, and some applications which require guaranteed bandwidth (like video streaming and network telephone) will be affected. With this function, you can limit the maximum bandwidth or give a guaranteed bandwidth for a specific computer, to avoid such unpleasing result from happening.

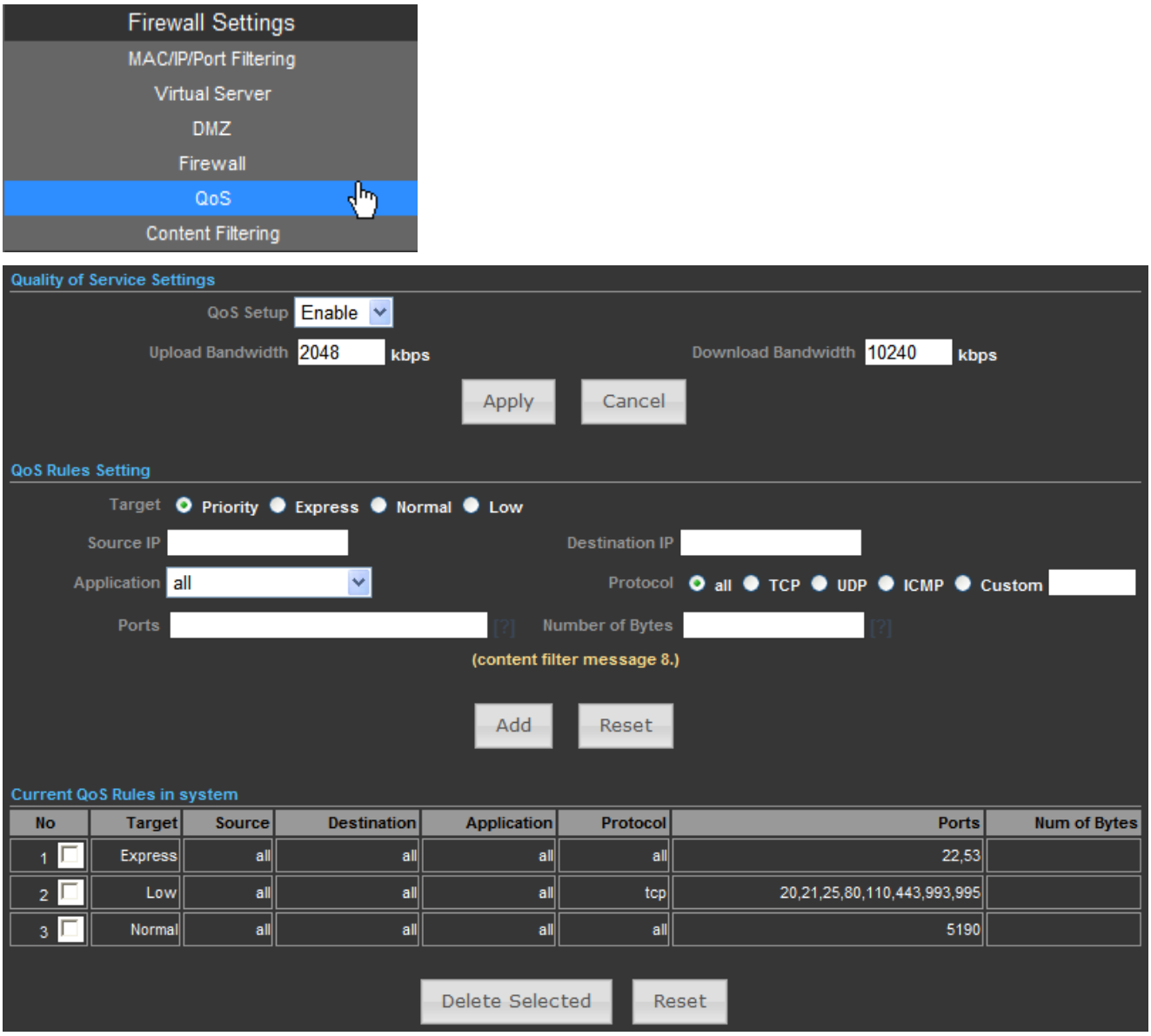
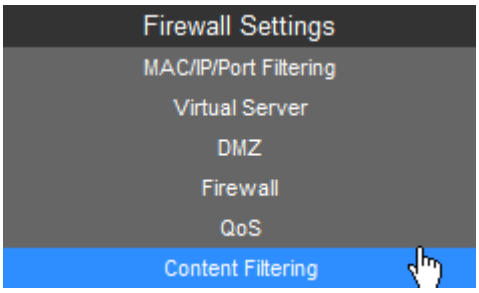


Figure 5-47 QoS

The page includes the following fields:

Object	Description
• **QoS Setup**	Select **Enable** to enable the QoS function.
• **Upload Bandwidth**	Set the limit of total upload bandwidth in kbits. To disable upload bandwidth limitation, input '0' here.
• **Download Bandwidth**	Set the limit of total download bandwidth in kbits. To disable download bandwidth limitation, input '0' here.
• **Target**	Set the target of QoS rule.
• **Source IP**	Specify the local (source) IP address that will be affected by this rule. Please input the starting IP address in the left field, and input the end IP address in the right field to define a range of IP addresses, or just input the IP address in the left field to define a single IP address.
• **Destination IP**	Specify the remote (destination) IP address that will be affected by this rule. Please input the starting IP address in the left field, and input the end IP address in the right field to define a range of IP addresses, or just input the IP address in the left field to define a single IP address.
• **Application**	Select the pre-defined application for this rule.
• **Protocol**	Please select the protocol type of this rule. If you don't know what protocol your application uses, please try '**TCP**' first, and switch to '**UDP**' if this rule doesn't seems to work.
• **Ports**	Fill out the ports for this rule.
• **Number of Bytes**	Fill out the maximum number of bytes for this rule.

5.4.6 Content Filtering



There are two types (Webs URL Filter Settings and Web Host Filter Settings) of content filtering.

5.4.6.1. Webs URL Filter Settings

The Webs URL Filter option allows you to set up a list of Web sites you would like to deny through your network. Please enter a URL for filtering.

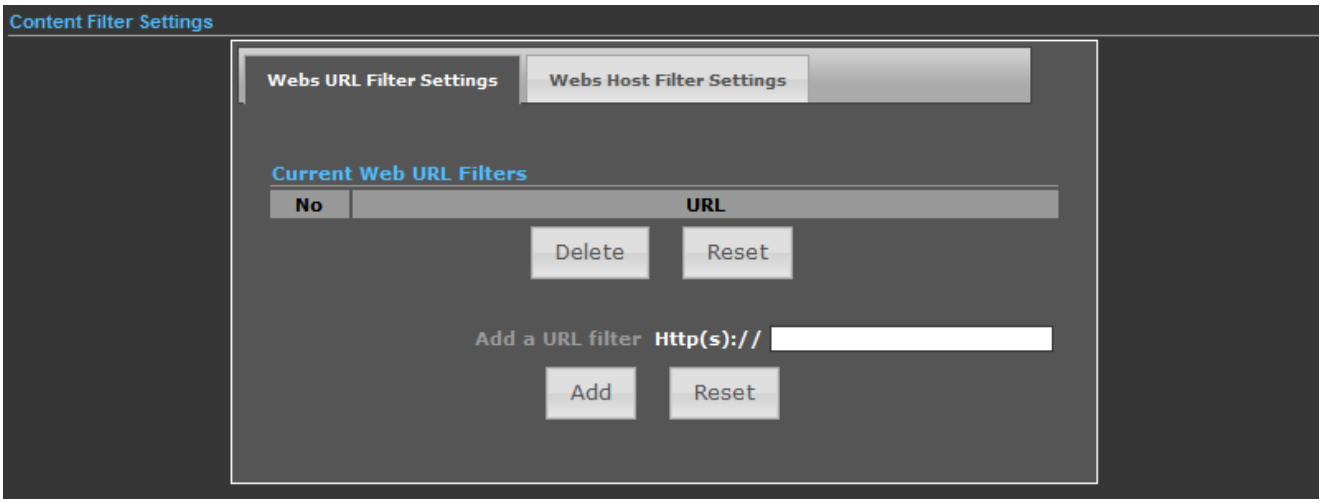


Figure 5-48 Webs URL Filter Settings

5.4.6.2. Web Host Filter Settings

The Web Host Filter option allows you to set up a list of keywords you would like to deny through your network. Please enter a Host (keyword) for filtering.

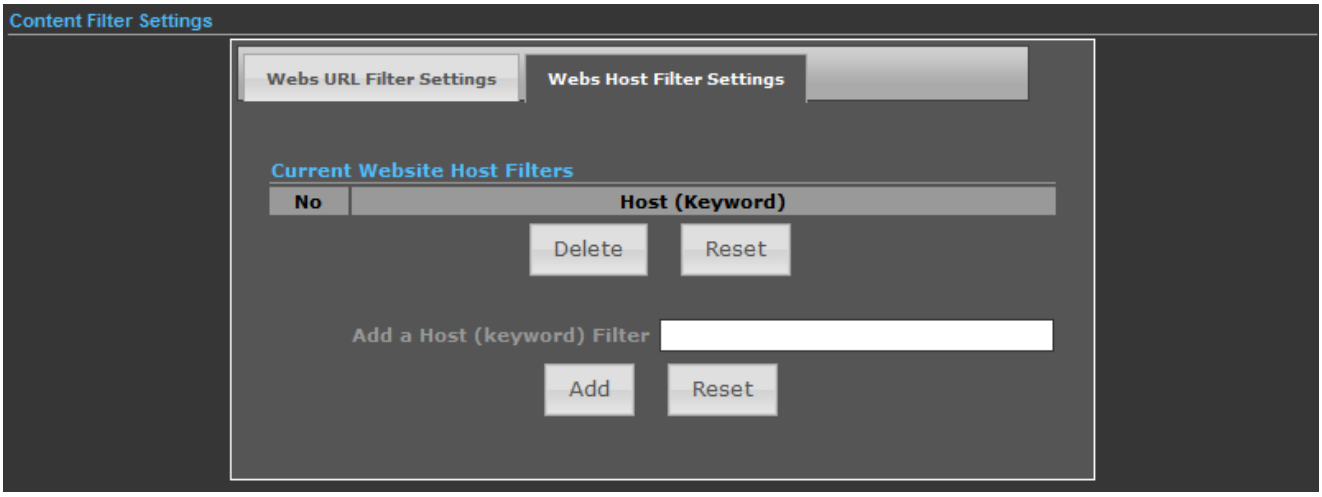
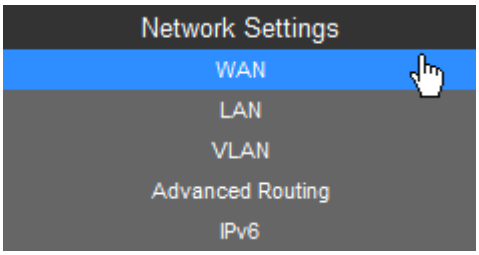


Figure 5-49 Webs Host Filter Settings

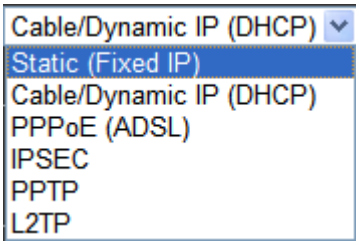
5.5 Network Settings

5.5.1 WAN

There are 5 submenus under the Network menu: **WAN**, **LAN**, **VLAN, Advanced Routing and IPv6**. Click any of them, and you will be able to configure the corresponding function.



WAN Connection Types:



5.5.1.1. Static (Fixed IP)

If your ISP provides a static or fixed IP Address, Subnet Mask, Gateway and DNS setting, select **Static (Fixed IP)**. The Static IP settings page will appear as the figure is shown below.

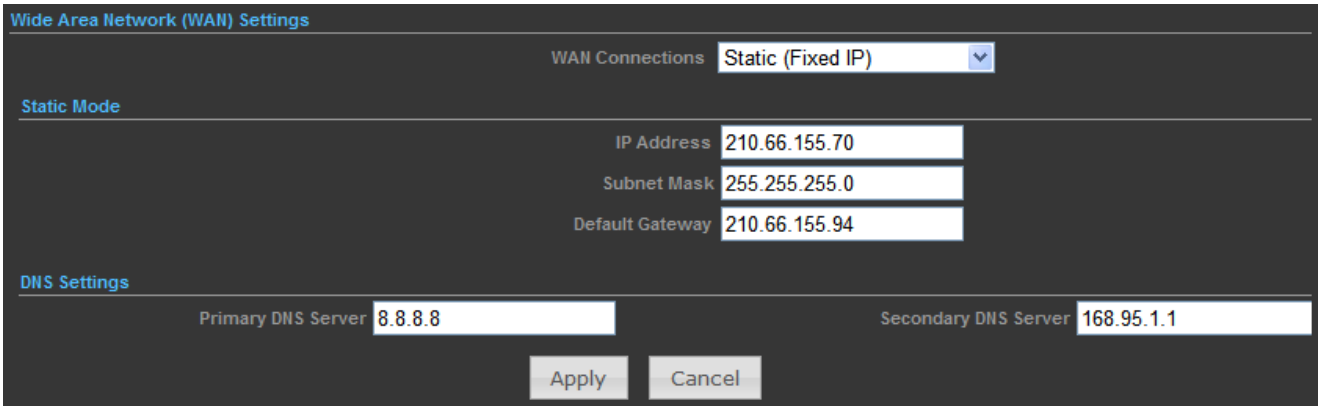


Figure 5-50 WAN - Static IP

The page includes the following fields:

Object	Description
• **WAN Connections**	Select **Static (Fixed IP)** from the list.
• **IP Address**	Enter the IP address in dotted-decimal notation provided by your ISP.
• **Subnet Mask**	Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0
• **Default Gateway**	(Optional) Enter the gateway IP address in dotted-decimal notation provided by your ISP.

• **Primary DNS Server**	(Optional) Enter the DNS IP address in dotted-decimal notation provided by your ISP.
• **Secondary DNS Server**	(Optional) Enter another DNS IP address in dotted-decimal notation provided by your ISP.

5.5.1.2. Cable/Dynamic IP (DHCP)

If your ISP provides the DHCP service, please choose **Cable/Dynamic IP (DHCP)** type, and the AP Router will automatically obtain IP parameters from your ISP. You can see the page as shown below.

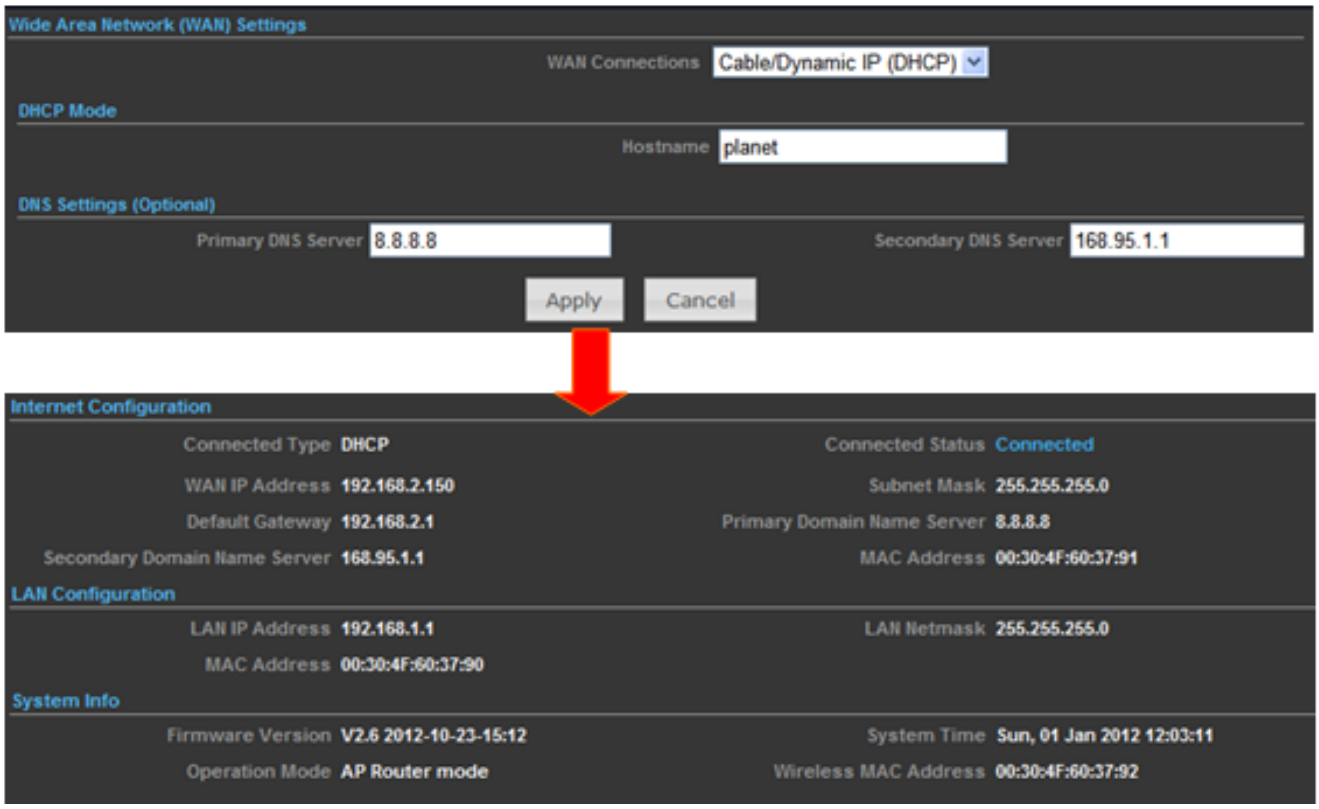


Figure 5-51 WAN - Dynamic IP

The page includes the following fields:

Object	Description
• **WAN Connections**	Select **Cable/Dynamic IP (DHCP)** from the list.
• **Host Name**	This option specifies the Host Name of the AP Router.
• **Primary DNS Server**	(Optional) Enter the DNS IP address in dotted-decimal notation provided by your ISP.
• **Secondary DNS Server**	(Optional) Enter another DNS IP address in dotted-decimal notation provided by your ISP.

5.5.1.3. PPPoE (ADSL)

If local ISP provides a PPPoE connection, choose **PPPoE (ADSL)** and fill the necessary parameters below.

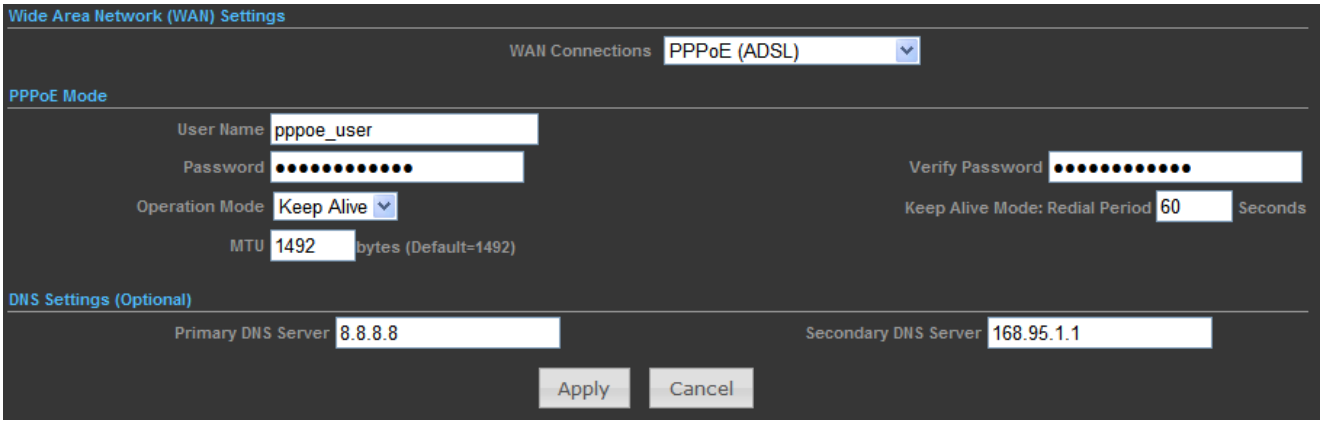


Figure 5-52 WAN - PPPoE

The page includes the following fields:

Object	Description
• **WAN Connections**	Select **PPPoE (ADSL)** from the list.
• **Host Name**	This option specifies the Host Name of the AP Router.
• **User Name / Password**	Enter the User Name and Password provided by your ISP. These fields are case-sensitive.
• **Verify Password**	Enter the same password entered above for the confirmation.
• **Operation Mode**	**Keep Alive:** Being constantly connected.
• **Keep Alive Mode**	Set up the redial period after the disconnection. The default setting is "**60 seconds**".
• **MTU**	Please input the MTU value of your network connection here. If you don't know, please keep the default value.
• **Primary DNS Server**	(Optional) Enter the DNS IP address in dotted-decimal notation provided by your ISP.
• **Secondary DNS Server**	(Optional) Enter another DNS IP address in dotted-decimal notation provided by your ISP.

5.5.1.4. IPSEC

If your ISP provides IPSEC connection, please select **IPSEC**. And enter the following parameters.

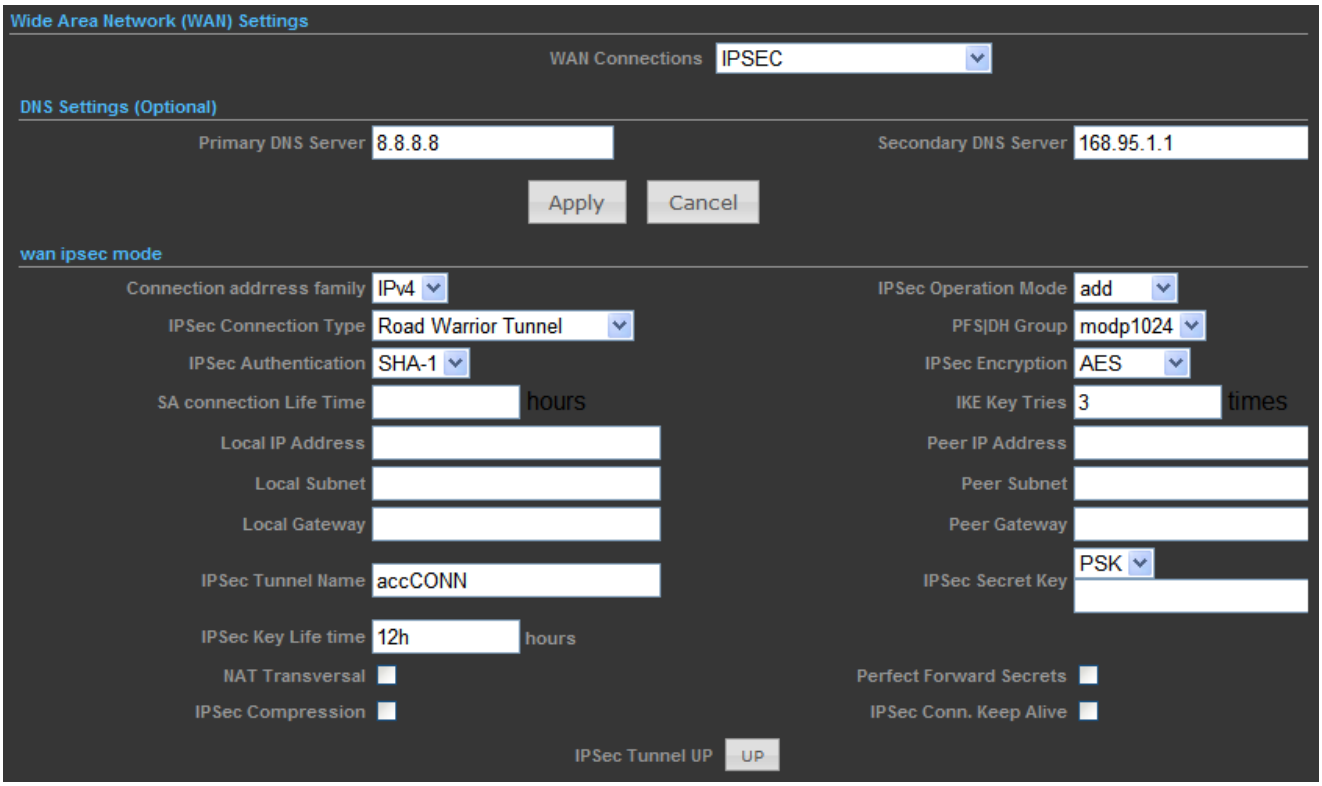


Figure 5-53 WAN - IPSec

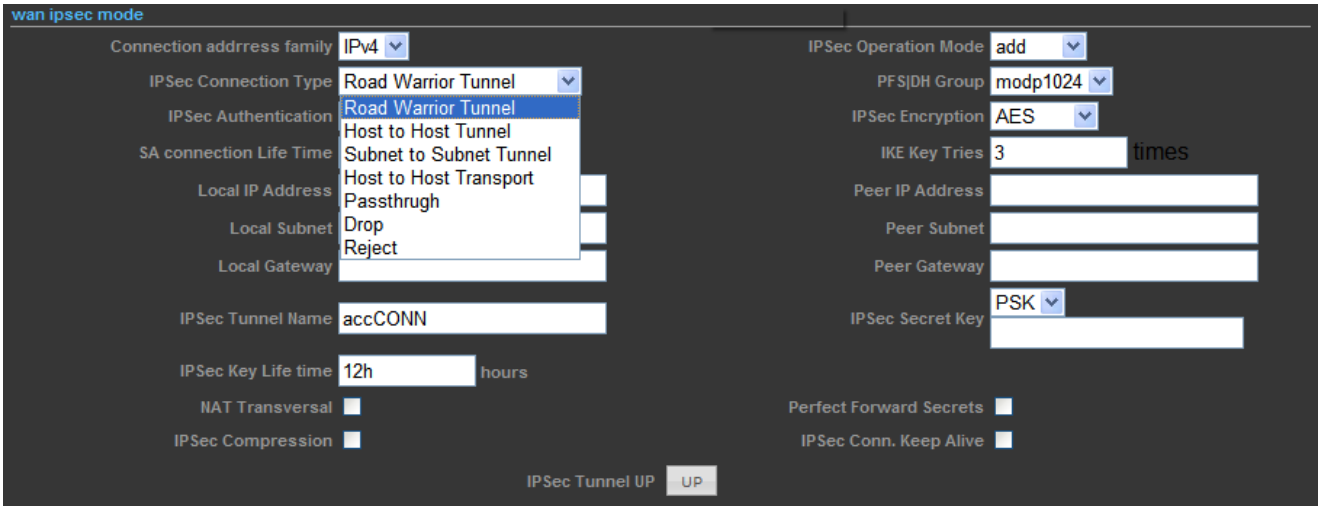


Figure 5-54 WAN – IPv4 (IPSec Connection Type)

The page includes the following fields:

Object	Description
• **WAN Connections**	Select **IPSEC** from the list.
• **Primary DNS Server**	(Optional) Enter the DNS IP address in dotted-decimal notation provided by your ISP.
• **Secondary DNS Server**	(Optional) Enter another DNS IP address in dotted-decimal notation provided by your ISP.

• **Connection address family**	For an IPSec connection, all host addresses must be of the same Address Family (IPv4 and IPv6 use different Address Families).
• **IPSec Operation Mode**	Select the IPSec Operation mode from the drop-down list.
• **IPSec Connection Type**	This field allows you to set the connection type to any of the following: Select **Tunnel** to specify a **Host to Host**, **Host to Subnet (Road Warrior)**, or **Subnet to Subnet Tunnel**. This is by far the most common connection type. Select **Transport** to specify a **Host to Host Transport** mode tunnel. This connection type is much less common, and would generally only be used if you are attempting to establish and IPSec connection to another host which specifically requires this mode. Select **Passthrough** to disable IPSec processing on packets associated with the tunnel. We can't imagine a scenario where you would use this connection type. I mean seriously, if you don't allow IPSec to process the packets then you don't really have a tunnel, right? Still, the underlying protocol supports this mode, and so here we are. Select **Drop** to cause the kernel to drop IPSec packets associated with the tunnel. Select **Reject** to cause the kernel to reject IPSec packets associated with the tunnel.
• **PFS|DH Group**	**Perfect Forward Secrecy (PFS)—PFS** ensures that a given IPSec SA key was not derived from any other secret, like some other keys. In other words, if someone breaks a key, PFS ensures that the attacker is not able to derive any other key. If PFS is not enabled, someone can potentially break the IKE SA secret key, copy all the IPSec protected data, and then use knowledge of the IKE SA secret in order to compromise the IPSec SAs setup by this IKE SA. With PFS, breaking IKE does not give an attacker immediate access to IPSec. The attacker needs to break each IPSec SA individually. Diffie-Hellman (DH) key exchange protocol allows two parties without any initial shared secret to create one securely. The following Modular Exponential (MODP) and Elliptic Curve (EC2N) Diffie-Hellman (also known as "Oakley") Groups are supported:

Diffie-Hellman Group	Name	Reference
Group 1	768 bit MODP group	RFC 2409

	Group 2	1024 bits MODP group	RFC 2409
	Group 3	EC2N group on GP(2^155)	RFC 2409
	Group 4	EC2N group on GP(2^185)	RFC 2409
	Group 5	1536 bits MODP group	RFC 3526

• **IPSec Authentication**	The AP supports **SHA1** & **MD5** authentication algorithms.
• **IPSec Encryption**	The AP supports **DES**, **3DES**, **AES**, **Blowfish**, **Twofish**, **Camellia** Encryption methods. **DES - 56-bit DES-CBC** encryption algorithm **3DES - 168-bit DES** encryption algorithm **AES - 128, 192 and 256-bit key AES-CBC** encryption algorithm **Blowfish** - a symmetric block cipher that can be used as a drop-in replacement for DES or IDEA. It takes a variable-length key, from 32 bits to 448 bits. **Twofish** - Twofish has a 128-bit block size, a key size ranging from 128 to 256 bits, and is optimized for 32-bit CPUs. **Camellia - 128, 192 and 256-bit key** Camellia encryption algorithm
• **SA connection Life Time**	This value describes the timeframe in hours for which the IKE SA is valid and when the next rekeying should take place.
• **IKE Key Tries**	The field is used to specify the retry times of IKE Key.
• **Local IP Address**	This field is used to configure the IP address of the Untangle server on the network configured in the Local Network field.
• **Peer IP Address**	This field should contain the public IP address of the host to which the IPSec VPN will be connected.
• **Local Subnet**	This field is used to configure the local network that will be reachable from hosts on the other side of the IPSec VPN.
• **Peer Subnet**	This field is used to configure the remote network that will be reachable from hosts on the local side of the IPSec VPN.
• **Local Gateway**	This field is used to configure the Gateway of the Untangle server on the network configured in the Local Network field.
• **Peer Gateway**	This field should contain the public Gateway of the host to which the IPSec VPN will be connected.
• **IPSec Tunnel Name**	This field should contain a short name or description.
• **IPSec Secret Key**	This field should contain the shared secret or **PSK (pre-shared key)** that is used to authenticate the connection, and must be the same on both sides of the tunnel for the connection to be successful. Because the PSK is actually used as the encryption key for the session, using long strings of a random nature will provide the highest level of security.

• **IPSec Key Life time**	Lifetime settings determine when a new key is generated. Any time a key lifetime is reached, the associated SA is also renegotiated. The process of generating new keys at intervals is called dynamic rekeying or key regeneration. Lifetimes allow you to force the generation of a new key after a specific interval. For example, if the communication takes 12 hours and you specify the key lifetime as 1 hour, 12 keys will be generated (one every 1 hour) during the exchange.
• **NAT Traversal**	**NAT Traversal** also known as UDP encapsulation allows traffic to get to the specified destination when a device does not have a public address. This is usually the case if your ISP is doing NAT, or the external interface of your firewall is connected to a device that has NAT enabled.
• **Perfect Forward Secrets**	Select the checkbox to enable PFS (Perfect Forward Secrets).
• **IPSec Compression**	Select the checkbox to enable compression of content on the connection.
• **IPSec Conn. Keep Alive**	When the firewall is located behind a NAT device, it sends keep alive packets to maintain the connection. You can also force it to send keep alive packets for all NAT-T connections.
• **IPSec Tunnel UP**	This field indicates the IPSec Tunnel is UP and running.

5.5.1.5. PPTP

If your ISP provides PPTP connection, please select **PPTP**. And enter the following parameters.

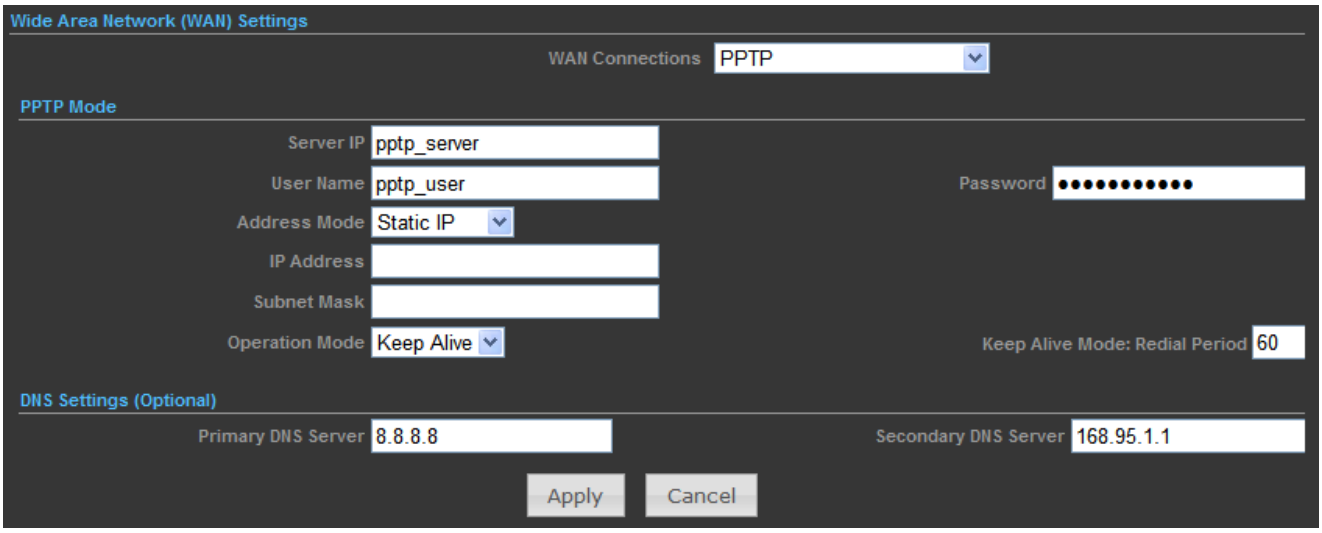


Figure 5-55 WAN – PPTP

The page includes the following fields:

Object	Description
• **WAN Connections**	Select **PPTP** from the list.
• **Server IP**	Enter the IP address of the PPTP server.
• **User Name / Password**	Enter the User Name and Password provided by your ISP. These fields are case-sensitive.
• **Address Mode**	**Static IP/ Dynamic IP**: Choose either as you are given by your ISP and If you choose static IP and enter the domain name, you should also enter the DNS assigned by your ISP. And click the Save button.
• **IP Address**	Enter the User Name and Password provided by your ISP. These fields are case-sensitive.
• **Subnet Mask**	Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0
• **Operation Mode**	**Keep Alive:** Being constantly connected.
• **Keep Alive Mode**	Set up the redial period after the disconnection. The default setting is "**60 seconds**".
• **Primary DNS Server**	(Optional) Enter the DNS IP address in dotted-decimal notation provided by your ISP.
• **Secondary DNS Server**	(Optional) Enter another DNS IP address in dotted-decimal notation provided by your ISP.

5.5.1.6. L2TP

If your ISP provides L2TP connection, please select **L2TP** and enter the following parameters.

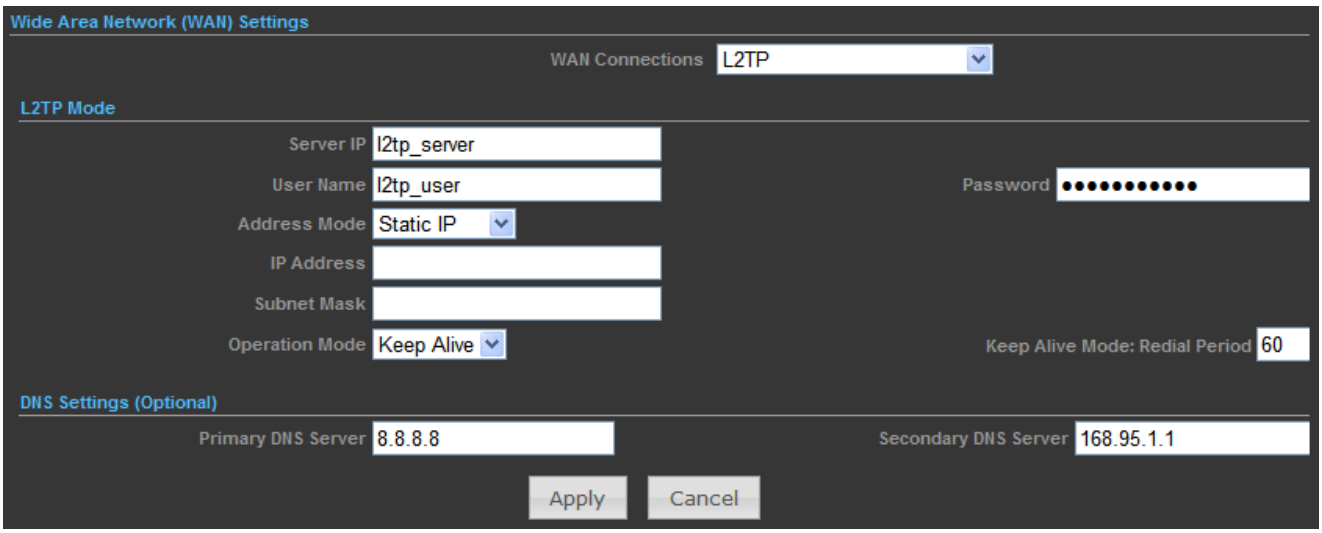


Figure 5-56 WAN – L2TP

The page includes the following fields:

Object	Description
• **WAN Connections**	Select **L2TP** from the list.
• **Server IP**	Enter the IP address of the L2TP server.
• **User Name / Password**	Enter the User Name and Password provided by your ISP. These fields are case-sensitive.
• **Address Mode**	**Static IP/ Dynamic IP**: Choose either as you are given by your ISP and If you choose static IP and enter the domain name, you should also enter the DNS assigned by your ISP. And click the Save button.
• **IP Address**	Enter the User Name and Password provided by your ISP. These fields are case-sensitive.
• **Subnet Mask**	Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0
• **Operation Mode**	**Keep Alive:** Being constantly connected.
• **Keep Alive Mode**	Set up the redial period after the disconnection. The default setting is "**60 seconds**".
• **Primary DNS Server**	(Optional) Enter the DNS IP address in dotted-decimal notation provided by your ISP.
• **Secondary DNS Server**	(Optional) Enter another DNS IP address in dotted-decimal notation provided by your ISP.

5.5.2 LAN

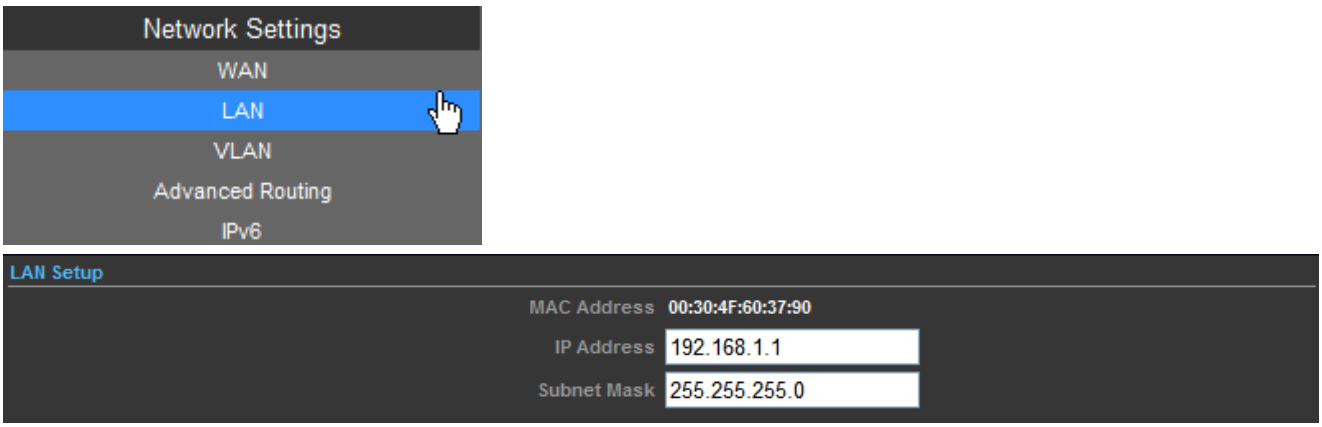


Figure 5-57 LAN Setup

The page includes the following fields:

Object	Description

• **MAC Address**	Display the LAN port MAC address of the Wireless AP.
• **IP Address**	The Wireless AP's LAN IP. The default is **192.168.1.1**. You can change it according to your need.
• **Subnet Mask**	Enter the subnet mask of the LAN IP.

5.5.2.1. DHCP Server

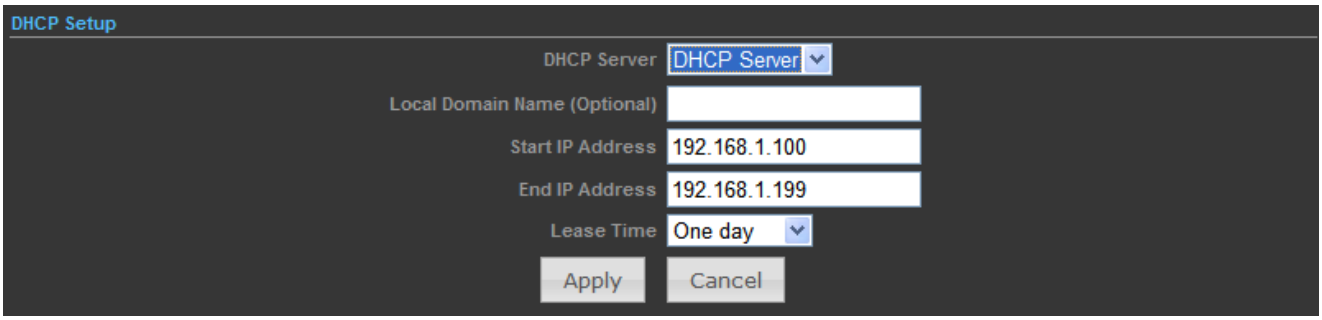


Figure 5-58 DHCP Server

The page includes the following fields:

Object	Description
• **DHCP Server**	Select **DHCP Server** to enable DHCP server feature.
• **Local Domain Name (Optional)**	(Optional) Input the domain name of your network.
• **Start IP Address**	Enter the starting IP address for the DHCP server's IP assignment.
• **End IP Address**	Enter the ending IP address for the DHCP server's IP assignment.
• **Lease Time**	The length of time for the IP address lease. Configuring a proper lease time improves the efficiency for the DHCP server to reclaim disused IP addresses.

To benefit from the DHCP server feature, you must set all LAN PCs to DHCP clients by selecting the "Obtain an IP Address Automatically" radio buttons thereon.

5.5.2.2. DHCP Relay

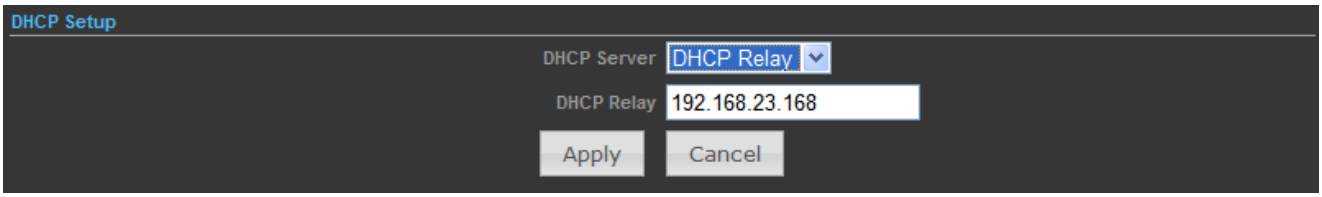
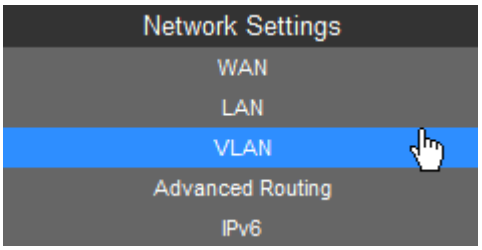


Figure 5-59 DHCP Relay

The page includes the following fields:

Object	Description
• **DHCP Server**	Select **DHCP Relay** to enable DHCP relay feature.
• **DHCP Relay**	A DHCP relay agent is any host that forwards DHCP packets between clients and servers. Configure the IP address of DHCP Relay host.

5.5.3 VLAN



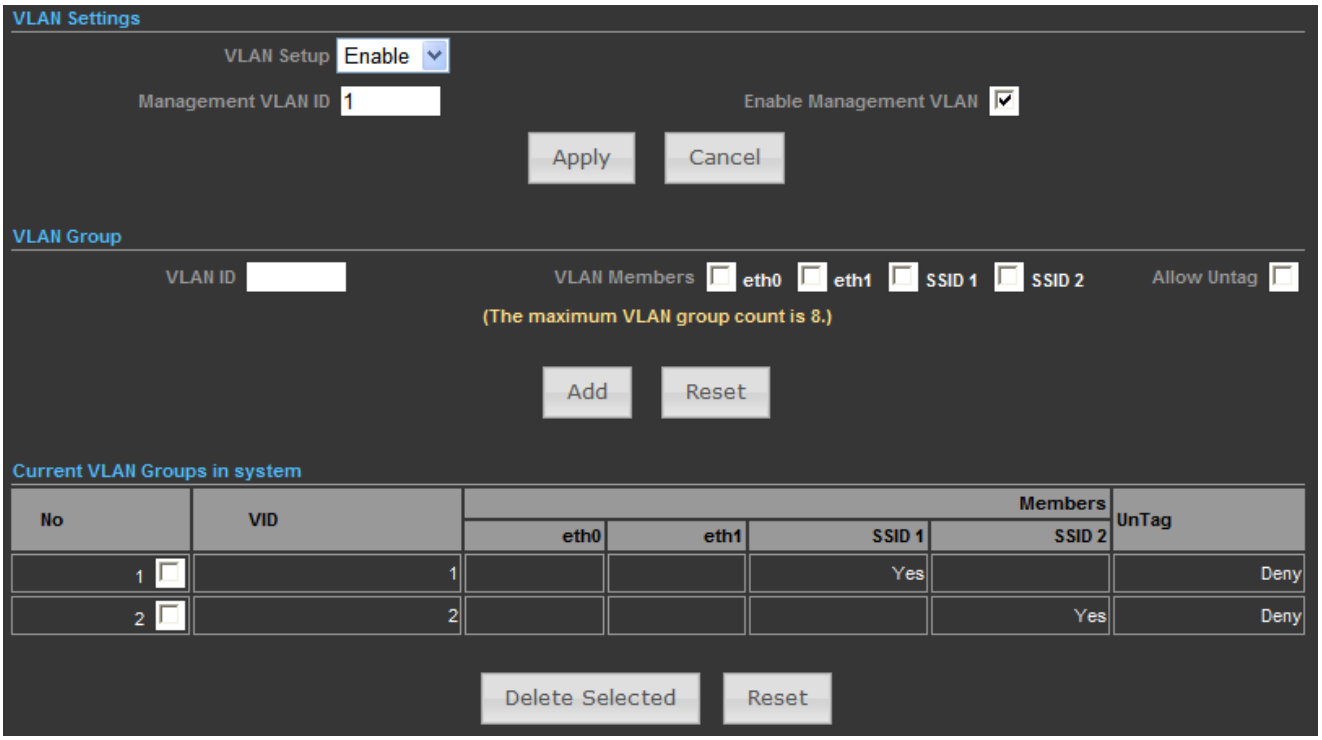


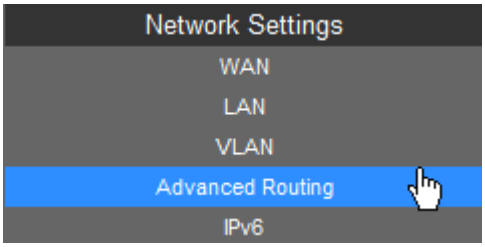
Figure 5-60 VLAN

The page includes the following fields:

Object	Description
• **VLAN Setup**	Check this box to enable the VLAN function.
• **Management VLAN ID**	Configure a specified VLAN to be the management VLAN.

• **Enable Management VLAN ID**	Check this box to enable the Management VLAN function.
• **VLAN ID**	The ID of a VLAN. Only in the same VLAN can a wireless PC and a wired PC communicate with each other. The value can be between 1 and 4095. If the VLAN function is enabled, when AP forwards packets, the packets out from the LAN port will be added with an IEEE 802.1Q VLAN Tag, whose VLAN ID is just the ID of the VLAN where the sender belongs.

5.5.4 Advanced Routing



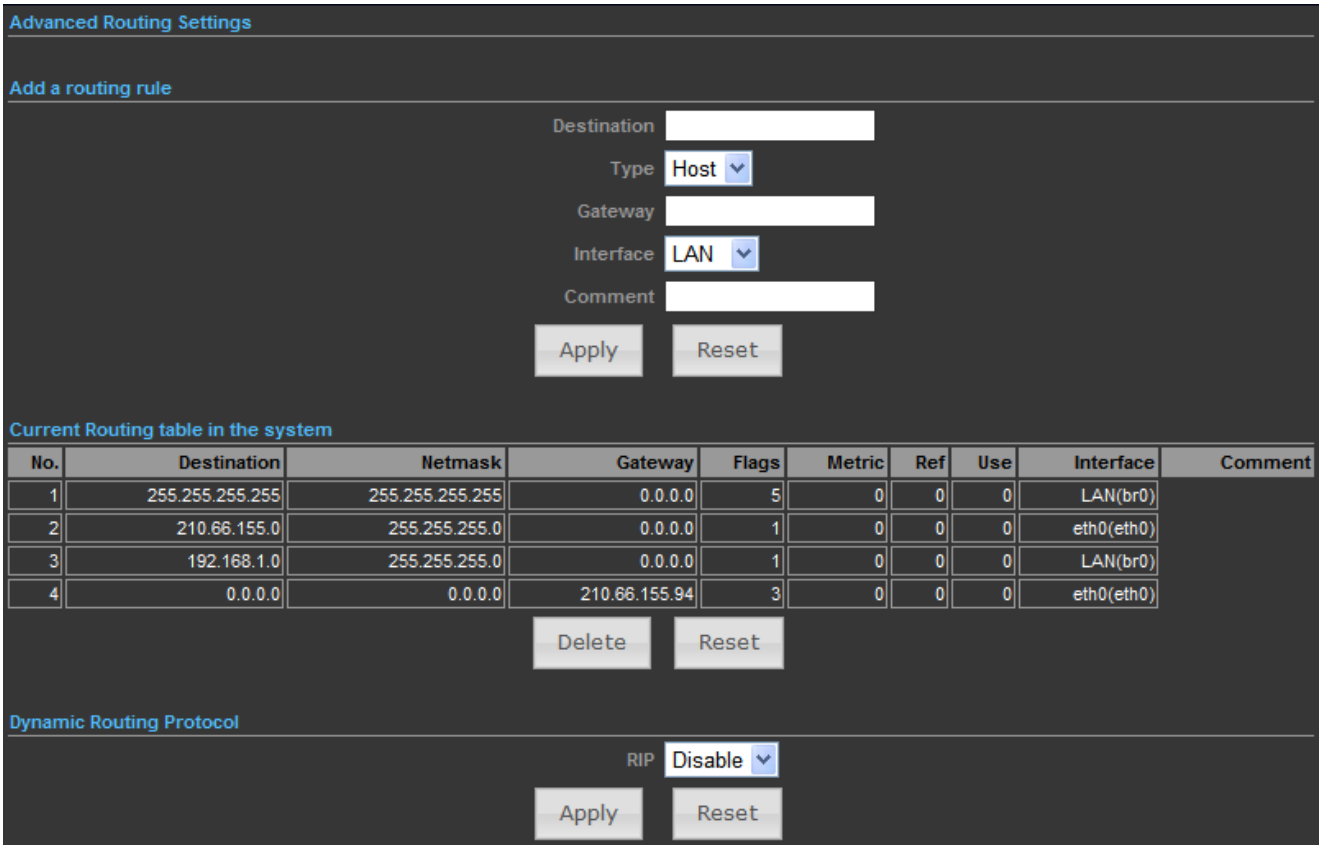


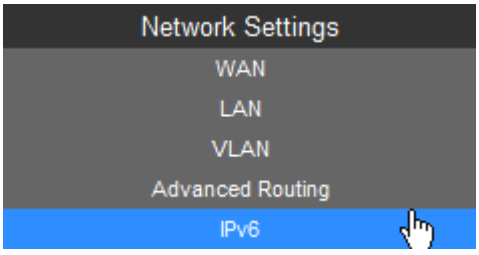
Figure 5-61 Advanced Routing

The page includes the following fields:

Object	Description
• **Destination**	The IP address of packets that can be routed.
• **Type**	Defines the type of destination. (Host: Signal IP address / Net: Portion of Network)
• **Gateway**	Defines the packets destination next hop
• **Interface**	Select interface to which a static routing subnet is to be applied
• **Comment**	Help identify the routing
• **Dynamic Routing Protocol**	Enable or disable the **RIP (Routing Information Protocol)** for the WAN or LAN interface. It supports RIP v1 and v2.

5.5.5 IPv6

Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.



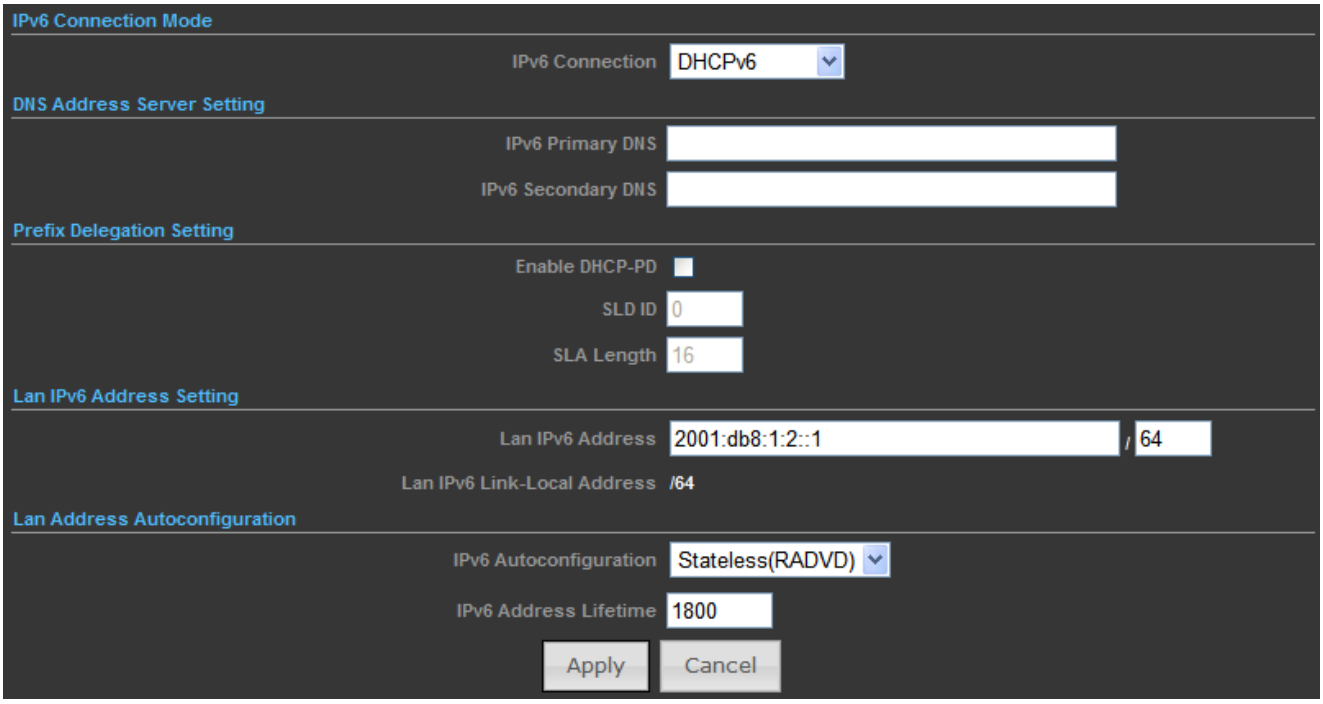


Figure 5-62 IPv6

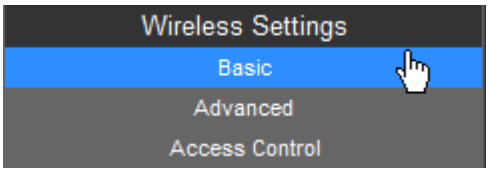
The page includes the following fields:

Object	Description
• **IPv6 Connection Mode**	Choose the mode to be used by the AP/Router to the IPv6 Internet. There are 7 connection modes available: **Static**, **SLAAC**, **DHCPv6**, **6to4 Tunnel**, **6in4 Tunnel**, **PPPoE**, and **Pass Through**.
• **DNS Address Server Setting**	Enter the IPv6 Primary DNS & IPv6 Secondary DNS to this section.
• **Prefix Delegation Setting**	Enter the IPv6 Prefix Delegation information provided by your Internet Service Provider (ISP).
• **LAN IPv6 Address Setting**	Use this section to configure the internal network settings of your AP/Router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.
• **LAN Address Auto configuration**	IPv6 offers two types of autoconfiguration: **Stateful (DHCPv6)** & **Stateless (RADVD)**. **Stateful (DHCPv6)**: This type of configuration is suitable for small organizations and individuals. It allows each host to determine its address from the contents of received user advertisements. It makes use of the IEEE EUI-64 standard to define the network ID portion of the address. **Stateless(RADVD)**: With Stateless Autoconfiguration, a host gains an address via an interface automatically "leasing" an address and does not require the establishment of a server to delve out address space.

5.6 Wireless Settings

You could configure the minimum number of Wireless settings for communication, such as Network Name (SSID) and Channel. The Access Point can be set simply with only the minimum setting items.

5.6.1 Basic



5.6.1.1. Wireless Mode – Access Point

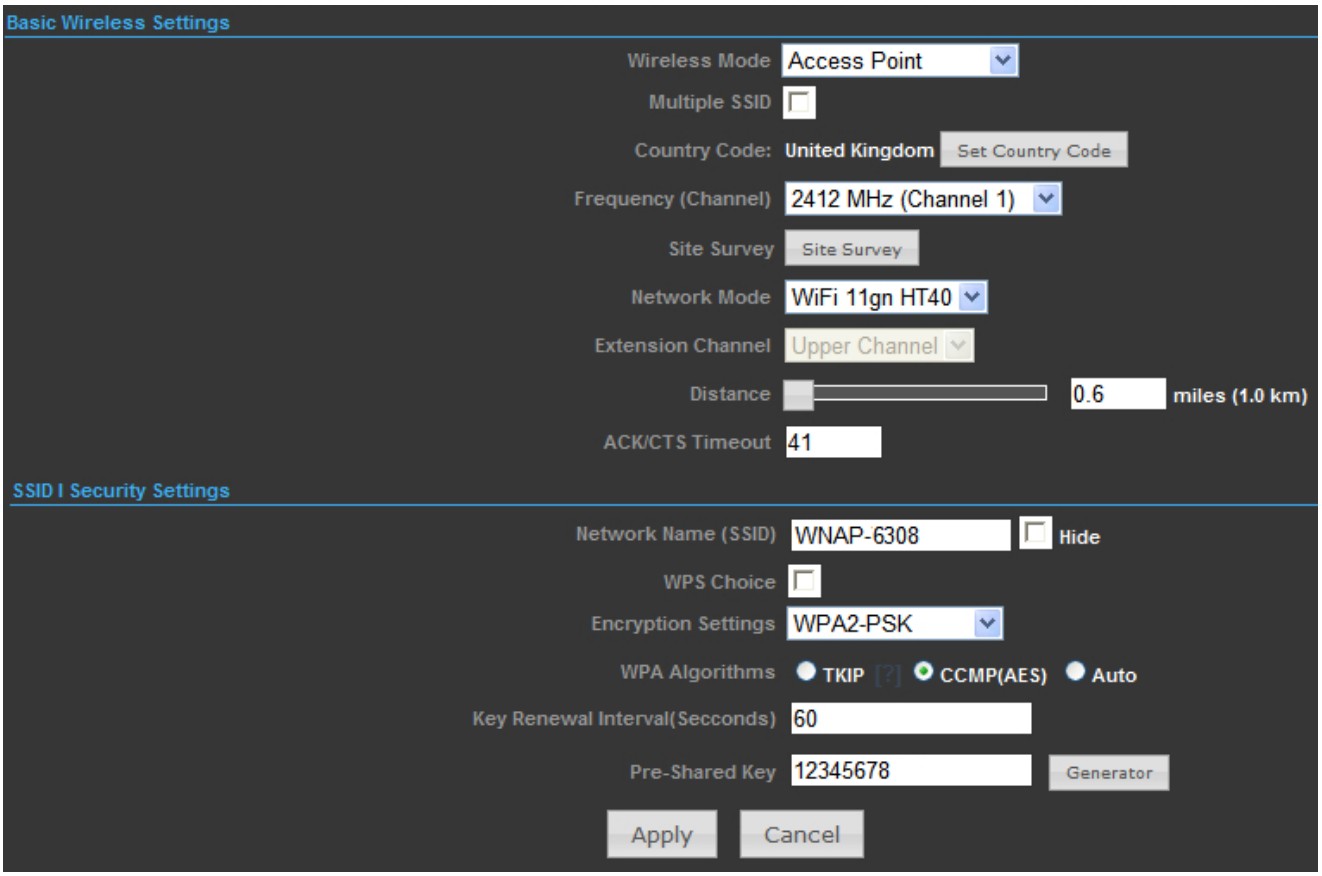


Figure 5-63 Wireless Mode - AP

The page includes the following fields:

Object	Description
• **Wireless Mode**	Click to select Wireless Mode from pull down menu. There are 4 options available: ■ **Access Point**: This mode allows wireless clients or Stations(STA) to access ■ **WDS Access Point:** This mode enables the wireless interconnection of Access Point in an IEEE802.11 network .and accept wireless clients at the same time. ■ **WDS Repeater:** Set to this mode to enable the wireless access point repeat the signal of root access point using WDS. ■ **WDS Client:** Set to this mode to enable wireless client using WDS to connect to the WDS Access Point.
• **Multiple SSID**	There is one more SSID available. Select the checkbox to enable it,

	enter the descriptive names that you want to use.
• **Country Code**	Set your country code by clicking the "**Set Country Code**".
• **Frequency (Channel)**	Set the channel you would like to use. The channel range will be changed by selecting different domain.
• **Site Survey**	Click "**Site Survey**" button to observe the signal of remote sites.
• **Network Mode**	Select the operating channel width to WiFi 11gn (mixed), HT20 or HT40MHz.
• **Extension Channel**	An extension channel is a secondary channel used to bond with the primary channel to increase this range to 40MHz. Bonded channels allow for greater bandwidth on the local network.
• **Distance**	To decrease the chances of data retransmission at long distance, the IEEE 802.11b/g/n Wireless Outdoor CPE can automatically adjust proper ACK timeout value by specifying distance of the two nodes.
• **ACK/CTS Timeout**	**ACK/CTS Timeout** settings are for long distance links. It is important to tweak settings to achieve the optimal result based on requirement. The device's default settings should be sufficient for most applications. The value is auto determined by distance between the radios, data rate of average environment.
• **Network Name (SSID)**	It is the wireless network name. The SSID can be 32 bytes long. User can use the default SSID or change it. The default SSID is **WNAP-6308**.
• **WPS Choice**	Enable it to use WPS associating with AP or Client device.
• **Encryption Settings**	Select the encryption type that you would like to use.
• **WPA Algorithms**	Select the WPA Algorithms that you would like to use.
• **Key Renewal Interval (Seconds)**	The key renewal time is the period of time that the AP uses the same key before a new one is generated.
• **Pre-Shared Key**	Data encryption and key are required for wireless authentication.

5.6.1.2. Wireless Mode – WDS Access Point

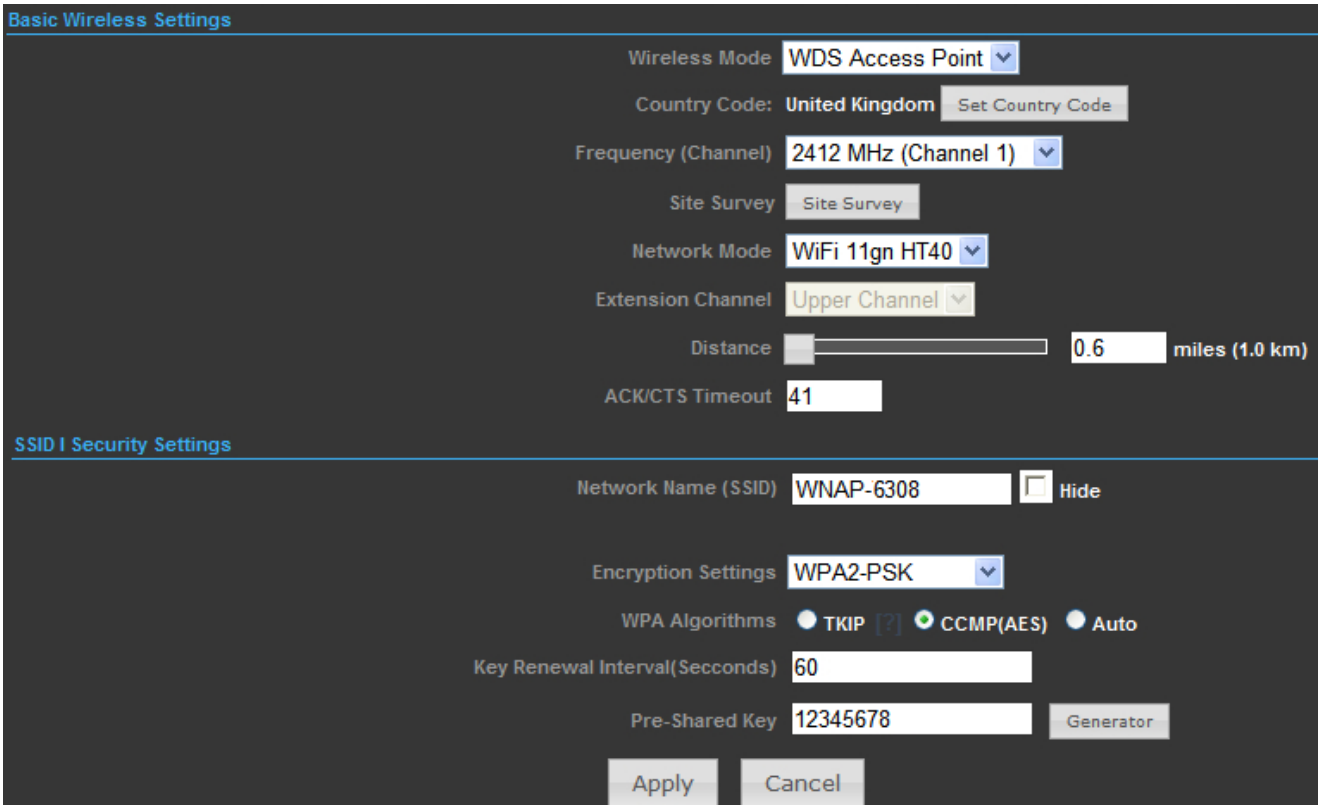


Figure 5-64 Wireless Mode – WDS AP

The page includes the following fields:

Object	Description
• **Wireless Mode**	Click to select Wireless Mode from pull down menu. There are 4 options available: **Access Point**: This mode allows wireless clients or Stations(STA) to access **WDS Access Point**: This mode enables the wireless interconnection of Access Point in an IEEE802.11 network .and accept wireless clients at the same time. **WDS Repeater**: Set to this mode to enable the wireless access point repeat the signal of root access point using WDS. **WDS Client**: Set to this mode to enable wireless client using WDS to connect to the WDS Access Point.
• **Country Code**	Set your country code by clicking the "**Set Country Code**".
• **Frequency (Channel)**	Set the channel you would like to use. The channel range will be changed by selecting different domain.

• **Site Survey**	Click "**Site Survey**" button to observe the signal of remote sites.
• **Network Mode**	Select the operating channel width to WiFi 11gn (mixed), HT20 or HT40MHz.
• **Extension Channel**	An extension channel is a secondary channel used to bond with the primary channel to increase this range to 40MHz. Bonded channels allow for greater bandwidth on the local network.
• **Distance**	To decrease the chances of data retransmission at long distance, the IEEE 802.11b/g/n Wireless Outdoor CPE can automatically adjust proper ACK timeout value by specifying distance of the two nodes.
• **ACK/CTS Timeout**	**ACK/CTS Timeout** settings are for long distance links. It is important to tweak settings to achieve the optimal result based on requirement. The device's default settings should be sufficient for most applications. The value is auto determined by distance between the radios, data rate of average environment.
• **Network Name (SSID)**	It is the wireless network name. The SSID can be 32 bytes long. User can use the default SSID or change it. The default SSID is **WNAP-6308**.
• **Encryption Settings**	Select the encryption type that you would like to use.
• **WPA Algorithms**	Select the WPA Algorithms that you would like to use.
• **Key Renewal Interval (Seconds)**	The key renewal time is the period of time that the AP uses the same key before a new one is generated.
• **Pre-Shared Key**	Data encryption and key are required for wireless authentication.

5.6.1.3. Wireless Mode – WDS Repeater

Figure 5-65 Wireless Mode – WDS Repeater

The page includes the following fields:

Object	Description
• **Wireless Mode**	Click to select Wireless Mode from pull down menu. There are 4 options available: **Access Point**: This mode allows wireless clients or Stations(STA) to access **WDS Access Point**: This mode enables the wireless interconnection of Access Point in an IEEE802.11 network .and accept wireless clients at the same time. **WDS Repeater**: Set to this mode to enable the wireless access point repeat the signal of root access point using WDS. **WDS Client**: Set to this mode to enable wireless client using WDS to connect to the WDS Access Point.
• **Root AP MAC Address (optional)**	Fill out the Root AP's MAC Address enable it to connect to the Root AP using WDS.
• **Country Code**	Set your country code by clicking the "**Set Country Code**".

• **Frequency (Channel)**	Set the channel you would like to use. The channel range will be changed by selecting different domain.
• **Site Survey**	Click "**Site Survey**" button to observe the signal of remote sites.
• **Network Mode**	Select the operating channel width to WiFi 11gn (mixed), HT20 or HT40MHz.
• **Extension Channel**	An extension channel is a secondary channel used to bond with the primary channel to increase this range to 40MHz. Bonded channels allow for greater bandwidth on the local network.
• **Distance**	To decrease the chances of data retransmission at long distance, the IEEE 802.11b/g/n Wireless Outdoor CPE can automatically adjust proper ACK timeout value by specifying distance of the two nodes.
• **ACK/CTS Timeout**	**ACK/CTS Timeout** settings are for long distance links. It is important to tweak settings to achieve the optimal result based on requirement. The device's default settings should be sufficient for most applications. The value is auto determined by distance between the radios, data rate of average environment.
• **Network Name (SSID)**	It is the wireless network name of itself. The SSID can be 32 bytes long. User can use the default SSID or change it. The default SSID is **WNAP-6308**.
• **Root AP SSID**	It is the wireless network name of Root AP. The SSID must be the same with Root AP so that the connection can be established successfully.
• **Encryption Settings**	Select the encryption type that you would like to use.
• **WPA Algorithms**	Select the WPA Algorithms that you would like to use.
• **Key Renewal Interval (Seconds)**	The key renewal time is the period of time that the AP uses the same key before a new one is generated.
• **Pre-Shared Key**	Data encryption and key are required for wireless authentication.

5.6.1.4. Wireless Mode – WDS Client

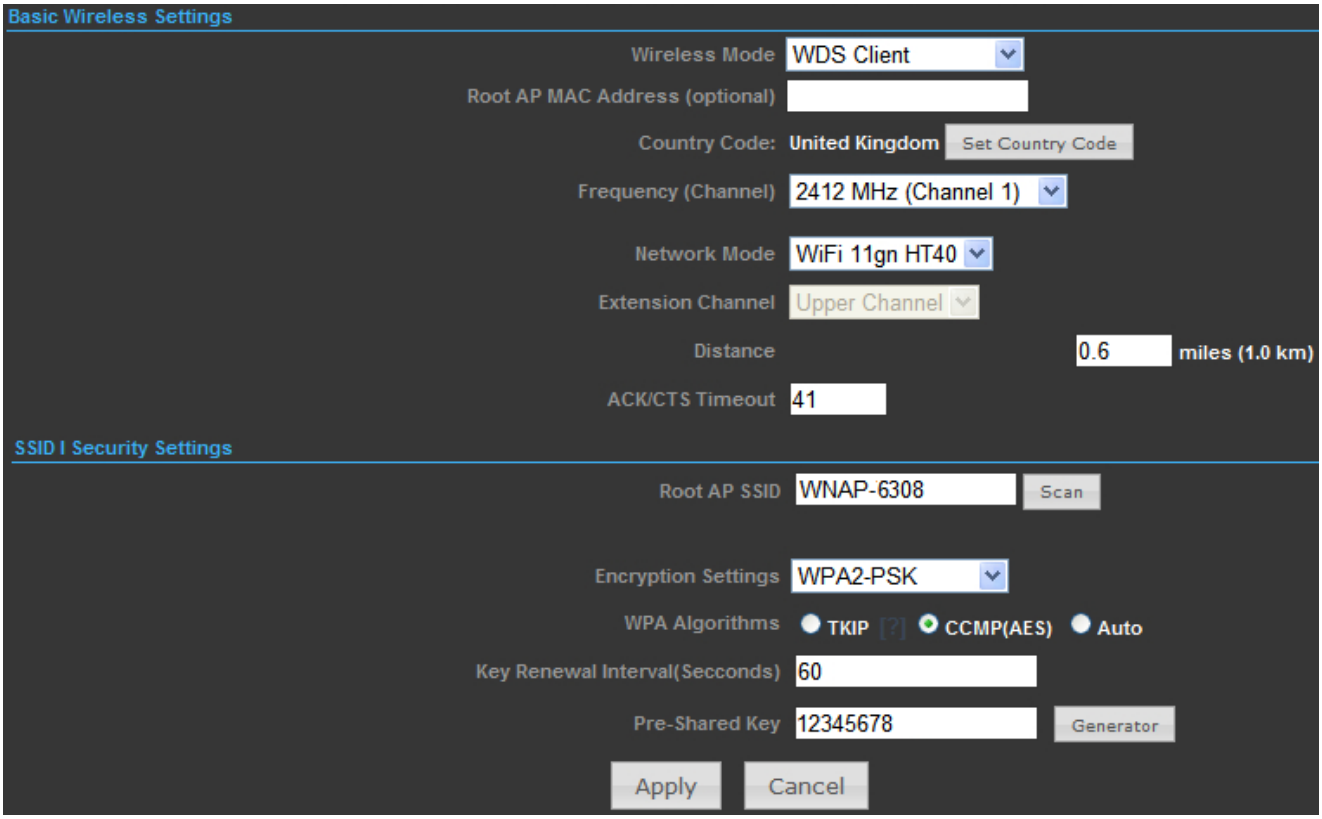


Figure 5-66 Wireless Mode – WDS Client

The page includes the following fields:

Object	Description
• **Wireless Mode**	Click to select Wireless Mode from pull down menu. There are 4 options available: **Access Point**: This mode allows wireless clients or Stations(STA) to access **WDS Access Point**: This mode enables the wireless interconnection of Access Point in an IEEE802.11 network .and accept wireless clients at the same time. **WDS Repeater**: Set to this mode to enable the wireless access point repeat the signal of root access point using WDS. **WDS Client**: Set to this mode to enable wireless client using WDS to connect to the WDS Access Point.
• **Root AP MAC Address (optional)**	Fill out the Root AP's MAC Address enable it to connect to the Root AP using WDS.
• **Country Code**	Set your country code by clicking the "**Set Country Code**".

• **Frequency (Channel)**	Set the channel you would like to use. The channel range will be changed by selecting different domain.
• **Network Mode**	Select the operating channel width to WiFi 11gn (mixed), HT20 or HT40MHz.
• **Extension Channel**	An extension channel is a secondary channel used to bond with the primary channel to increase this range to 40MHz. Bonded channels allow for greater bandwidth on the local network.
• **Distance**	To decrease the chances of data retransmission at long distance, the IEEE 802.11b/g/n Wireless Outdoor CPE can automatically adjust proper ACK timeout value by specifying distance of the two nodes.
• **ACK/CTS Timeout**	ACK/CTS Timeout settings are for long distance links. It is important to tweak settings to achieve the optimal result based on requirement. The device's default settings should be sufficient for most applications. The value is auto determined by distance between the radios, data rate of average environment.
• **Root AP SSID**	It is the wireless network name of Root AP. The SSID must be the same with Root AP so that the connection can be established successfully. Click "**Scan**" to site survey the Root AP.
• **Encryption Settings**	Select the encryption type that you would like to use.
• **WPA Algorithms**	Select the WPA Algorithms that you would like to use.
• **Key Renewal Interval (Seconds)**	The key renewal time is the period of time that the AP uses the same key before a new one is generated.
• **Pre-Shared Key**	Data encryption and key are required for wireless authentication.

5.6.2 Profile Settings

In **Client Bridge** and **Client Router** operation modes, please go to “Advanced-> Wireless Settings-> Profile Settings” to configure the wireless client function to connect with the wireless AP.

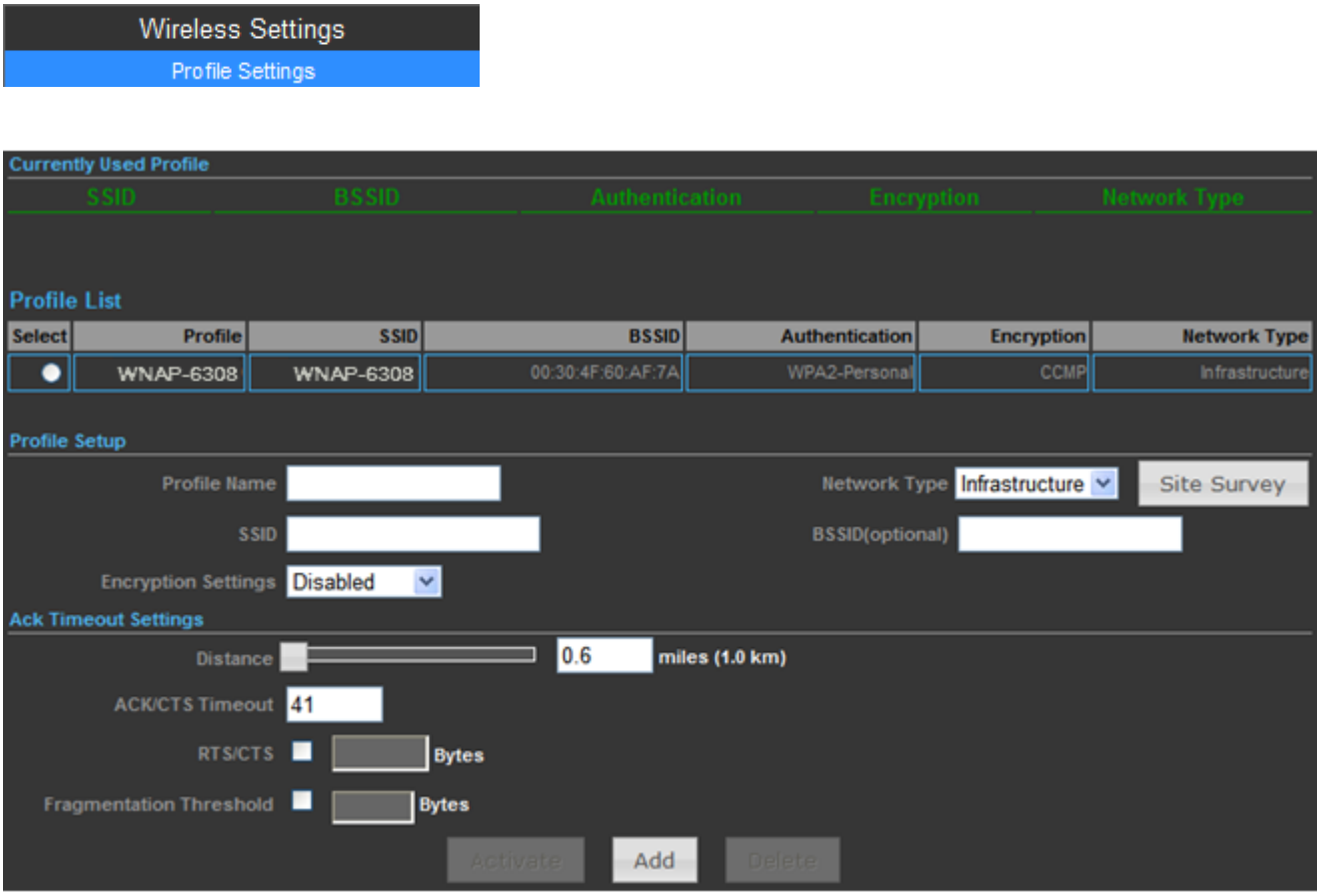


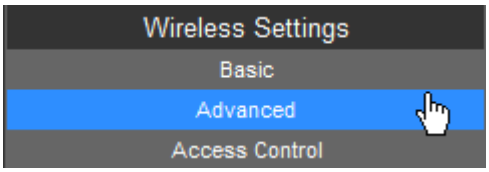
Figure 5-67 Client Bridge – Profile Settings

The page includes the following fields:

Object	Description
• **Profile Name**	Fill out the Root AP’s MAC Address enabling it to connect to the Root AP using WDS.
• **Network Type**	Set the Network Type that you would like to use. **Infrastructure**: Infrastructure networks consist of the networked devices and the wireless access point or wireless router. Each device must connect to the access point before having access to other computers on the network. **Ad-hoc**: In an ad hoc network, each device's network adapter directly communicates with other devices.

• **SSID**	It is the wireless network name of Root AP.
• **BSSID (optional)**	Indicate the Basic Service Set ID of the associated AP
• **Encryption Settings**	Select the encryption type that you would like to use.
• **Distance**	To decrease the chances of data retransmission at long distance, the IEEE 802.11b/g/n Wireless Outdoor CPE can automatically adjust proper ACK timeout value by specifying distance of the two nodes.
• **ACK/CTS Timeout**	**ACK/CTS Timeout** settings are for long distance links. It is important to tweak settings to achieve the optimal result based on requirement. The device's default settings should be sufficient for most applications. The value is auto determined by distance between the radios, data rate of average environment.
• **RTS/CTS**	**RTS/CTS (Request to Send / Clear to Send)** is the optional mechanism used by the 802.11 wireless networking protocol to reduce frame collisions introduced by the hidden node problem. You can enter a setting ranging from 0 to 2347 bytes.
• **Fragmentation Threshold**	The fragmentation threshold determines the size at which packets are fragmented (sent as several pieces instead of as one block). Use a low setting in areas where communication is poor or where there is a great deal of radio interference. This function will help you to improve the network performance.
• **WDS Client**	Check it to enable WDS Client function.

5.6.3 Advanced



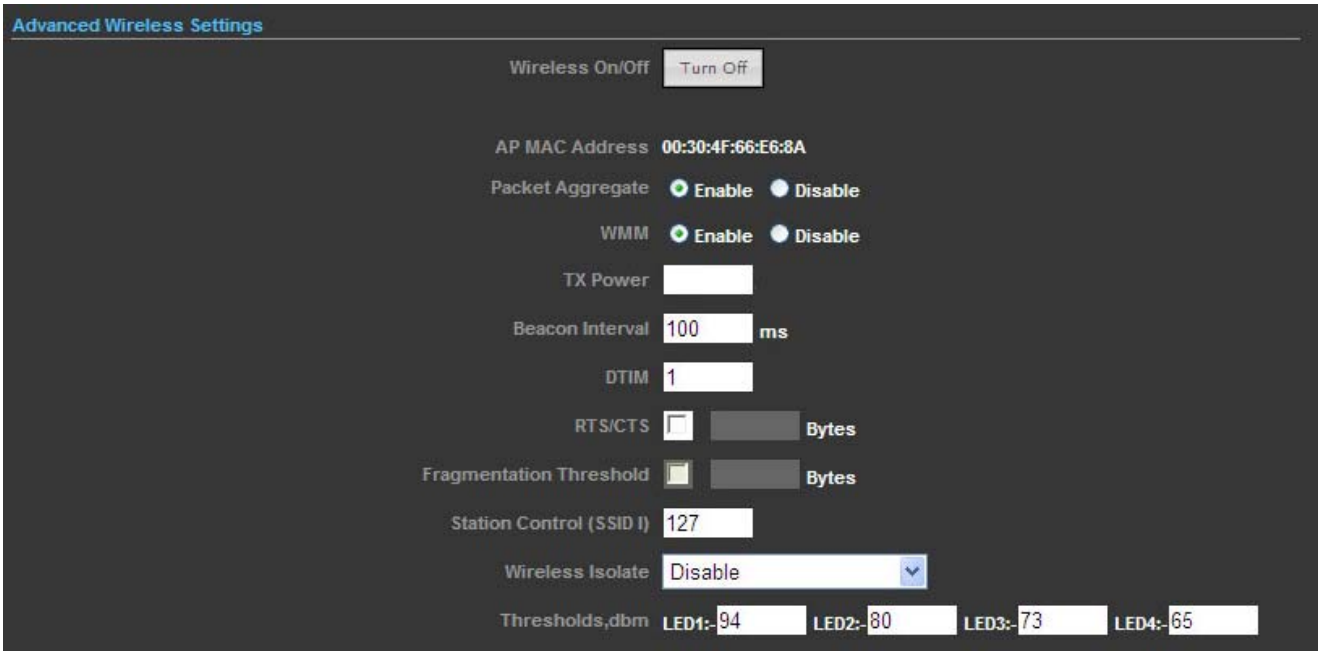


Figure 5-68 Wireless Settings – Advanced

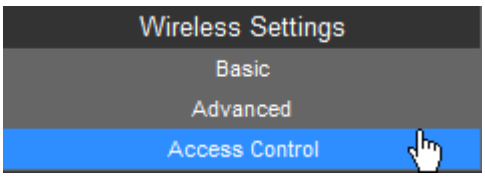
The page includes the following fields:

Object	Description
• **Wireless On/Off**	Click this button to switch the Wireless Radio On or Off.
• **AP MAC Address**	Display the AP MAC Address of wireless interface.
• **Packet Aggregate**	In a packet-based communications network, packet aggregation is the process of joining multiple packets together into a single transmission unit, in order to reduce the overhead associated with each transmission.
• **WMM**	WMM function can guarantee the packets with high-priority messages being transmitted preferentially. It is strongly recommended enabled.
• **TX Power**	You can limit the Transmit Power of the Device through this field. The default value is 23dBm, and the minimum TX Power is 3dBm.
• **Beacon Interval**	The beacons are the packets sent by the Device to synchronize a wireless network. Beacon Interval value determines the time

	interval of the beacons. You can specify a value between 20-1000 milliseconds. The default value is **100**.
• **DTIM**	This value determines the interval of the Delivery Traffic Indication Message (DTIM). You can specify the value between 1-255 Beacon Intervals. The default value is **1**, which indicates the DTIM Interval is the same as Beacon Interval.
• **RTS/CTS**	The RTS/CTS mechanism is widely used in wireless networks in order to avoid packet collisions and, thus, achieve high throughput.
• **Fragmentation Threshold**	This value is the maximum size determining whether packets will be fragmented. Setting the Fragmentation Threshold too low may result in poor network performance since excessive packets. 2346 is the default setting and is recommended.
• **Station Control (SSID I)**	Fill out the Station Control value of SSID I.
• **Station Control (SSID II)**	Fill out the Station Control value of SSID II.
• **Wireless Isolate**	Isolate all connected wireless stations so that wireless stations cannot access each other through WLAN. This function will be disabled if WDS/Bridge is enabled.
• **Thresholds, dbm**	Set the AP to the external LED lights and wireless signal strength received correspondence, when the AP receives the wireless signal, according to the wireless signal strength, the corresponding LED will be lit.

5.6.4 Access Control

Choose menu "**Advanced-> Wireless Settings-> Access Control**" to configure the filtering rules for the clients who would like to associate with Wireless AP.



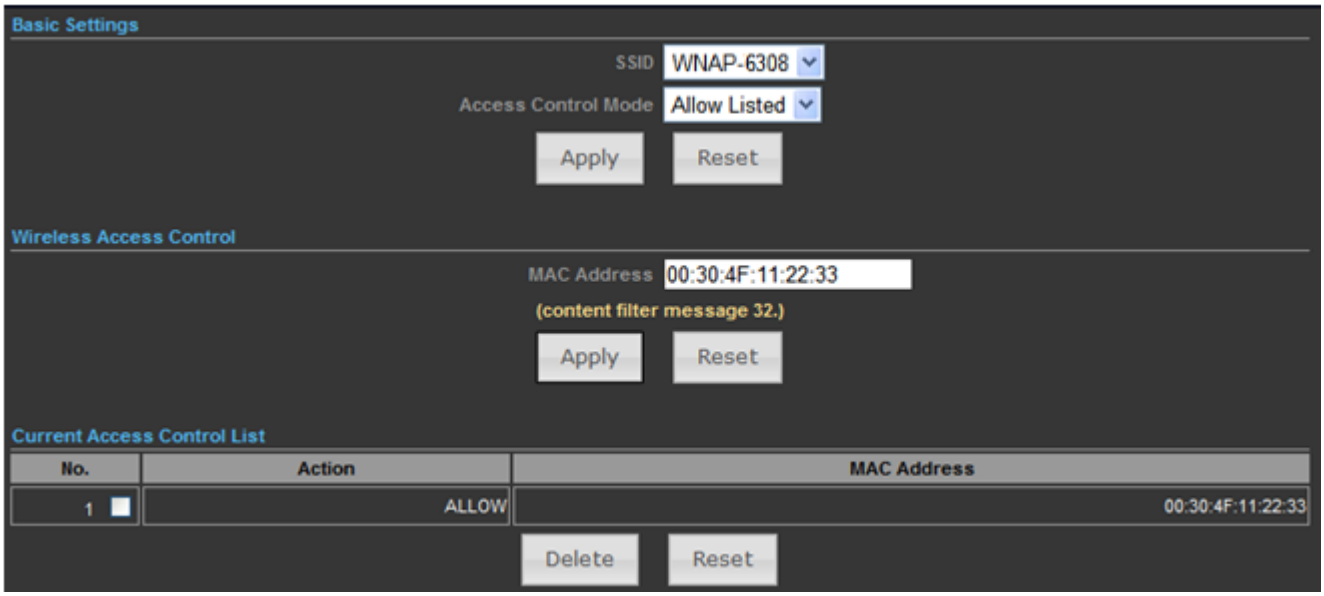


Figure 5-69 Wireless Settings – Access Control

The page includes the following fields:

Object	Description
• **SSID**	Select the SSID which you would like to configure access control.
• **Access Control Mode**	**Allow Listed**: allow the packets not specified by any access control policy to pass through the AP Router. **Deny Listed**: deny the packets not specified by any access control policy to pass through the AP Router.
• **MAC Address**	Configure the MAC Address to apply the access control.
• **Current Access Control List**	Display the current Access Control List.

5.7 Logout

Select "**Logout**", and then click "**Yes**" to logout the system.

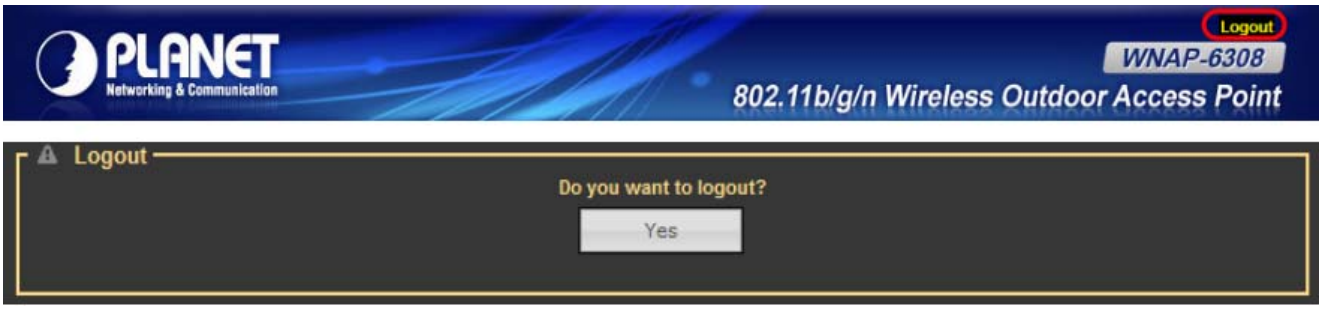


Figure 5-70 Logout

Chapter 6. Quick Connection to a Wireless Network

6.1 Windows XP (Wireless Zero Configuration)

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

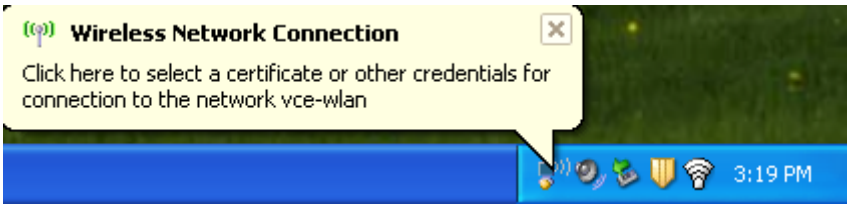


Figure 6-1 Wireless Zero Configuration

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

Figure 6-2 View Available Wireless Networks

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

(1) Select SSID [PLANET]

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

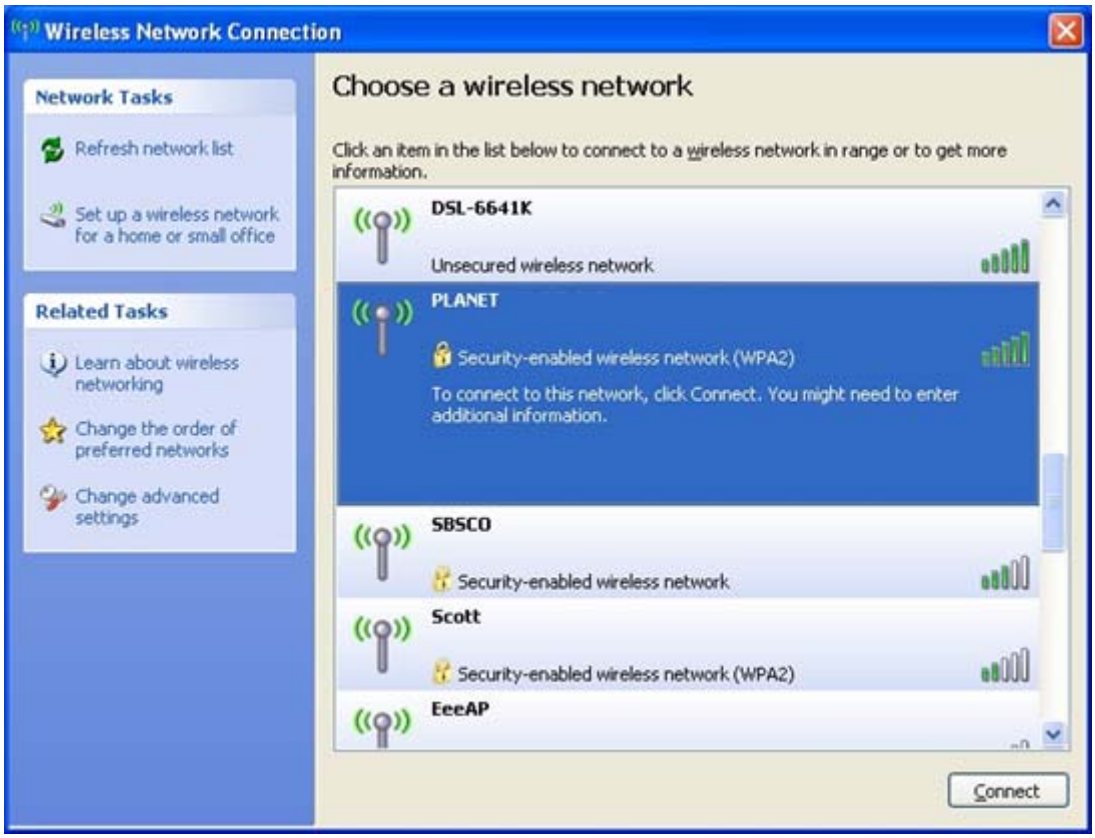


Figure 6-3 Choose a wireless network

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

(1) The Wireless Network Connection box will appear

(2) Enter the encryption key that is configured in **Section 5.6.2**

(3) Click the [Connect] button

Figure 6-4 Enter the encryption key

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

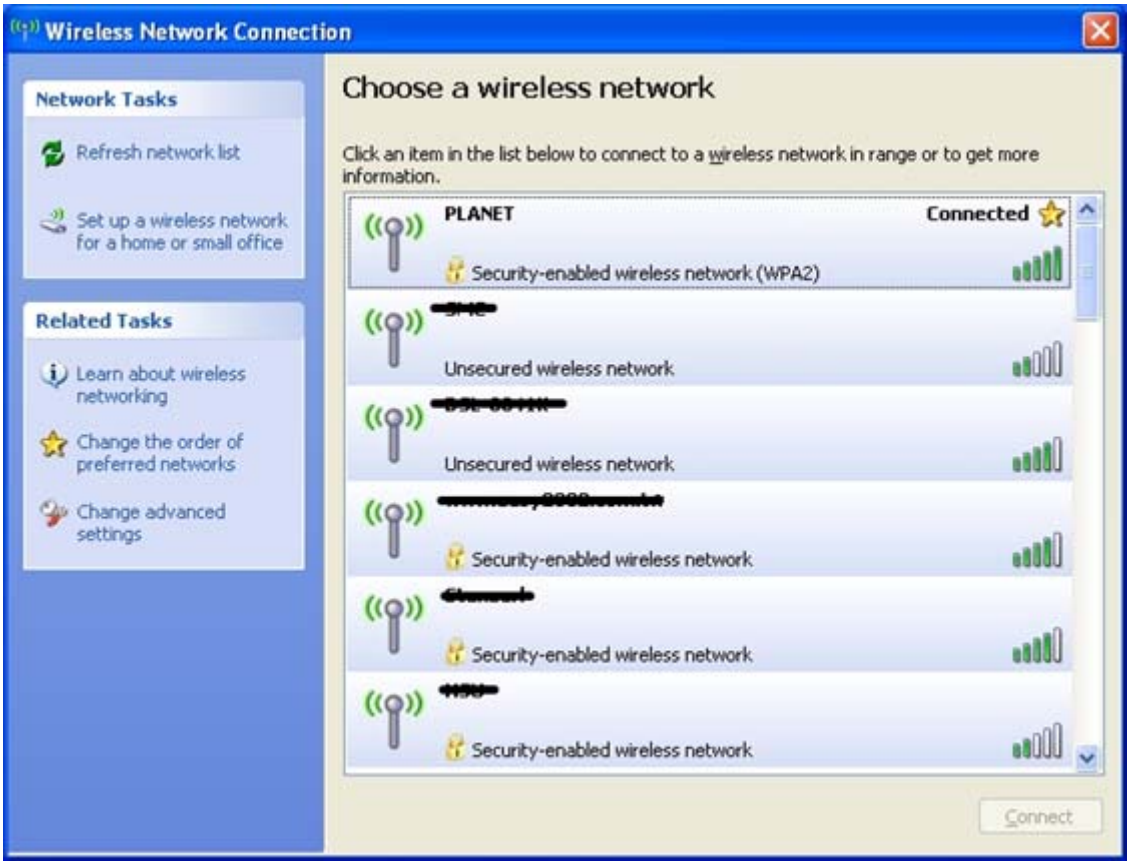


Figure 6-5 Wireless Network Connected

Note

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

6.2 Windows 7 (WLAN AutoConfig)

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

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

Figure 6-6 WLAN AutoConfig

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

(1) Select SSID [PLANET]

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

Figure 6-7 WLAN AutoConfig window

Note

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

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

(1) The Connect to a Network box will appear

(2) Enter the encryption key that is configured in **Section 5.6.2**

(3) Click the [OK] button

Figure 6-8 WLAN AutoConfig – type the network security key

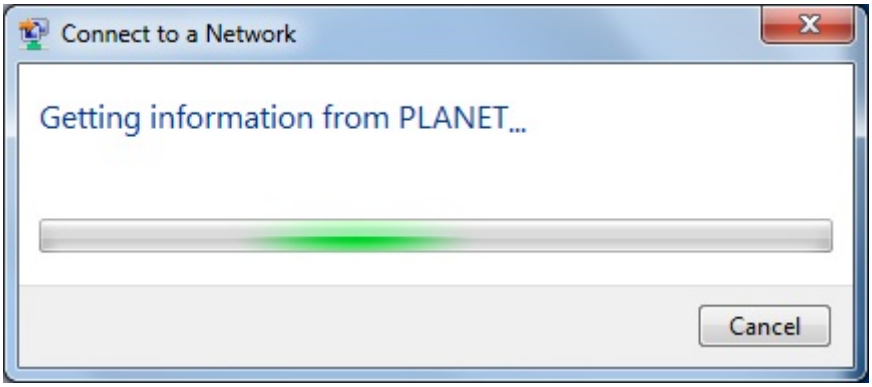


Figure 6-9 WLAN AutoConfig – connecting

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

Figure 6-10 WLAN AutoConfig – Connected

6.3 Mac OS X 10.x

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

The AirPort Network Connection menu will appear

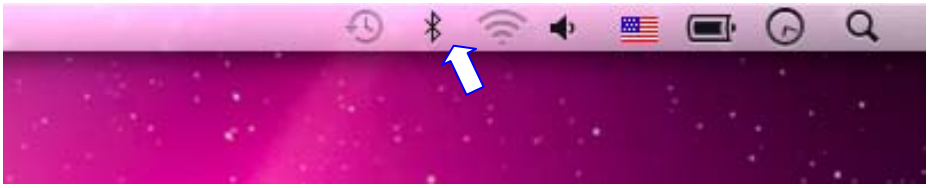


Figure 6-11 The AirPort Network Connection icon

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

(1) Select and SSID [PLANET]

(2) Double-click on the selected SSID

Figure 6-12 The AirPort Network Connection menu

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

(1) Enter the encryption key that is configured in **Section 5.6.2**

(2) Click the [OK] button

Figure 6-13 The AirPort Network Connection – enter password

Note

If you will connect this Wireless AP 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 6-14 The AirPort Network Connection – connected

6.4 iPhone / iPod Touch / iPad

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

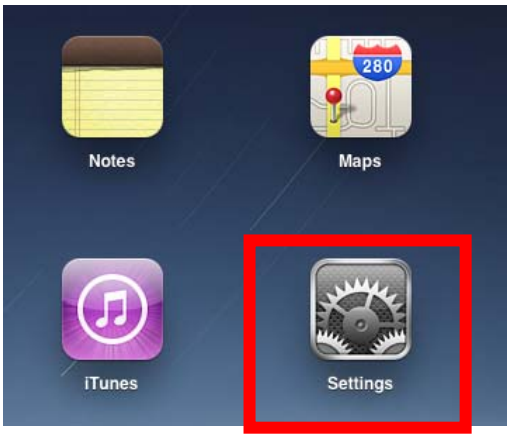


Figure 6-15 The Wi-Fi Settings in iPhone/iPod Touch/iPad

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

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

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

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

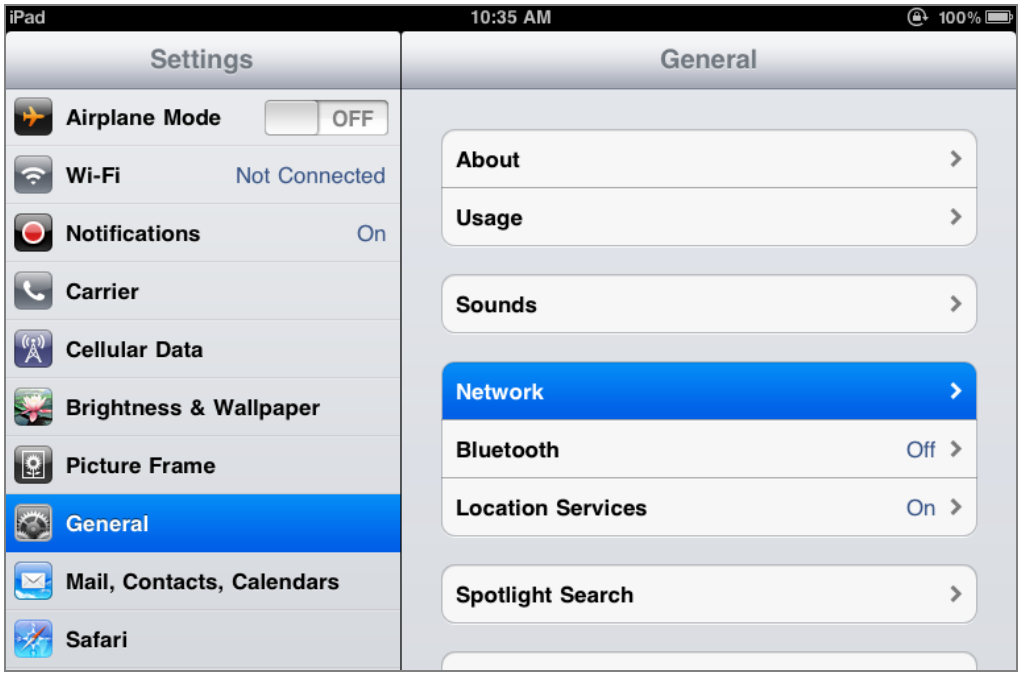


Figure 6-16 General Settings

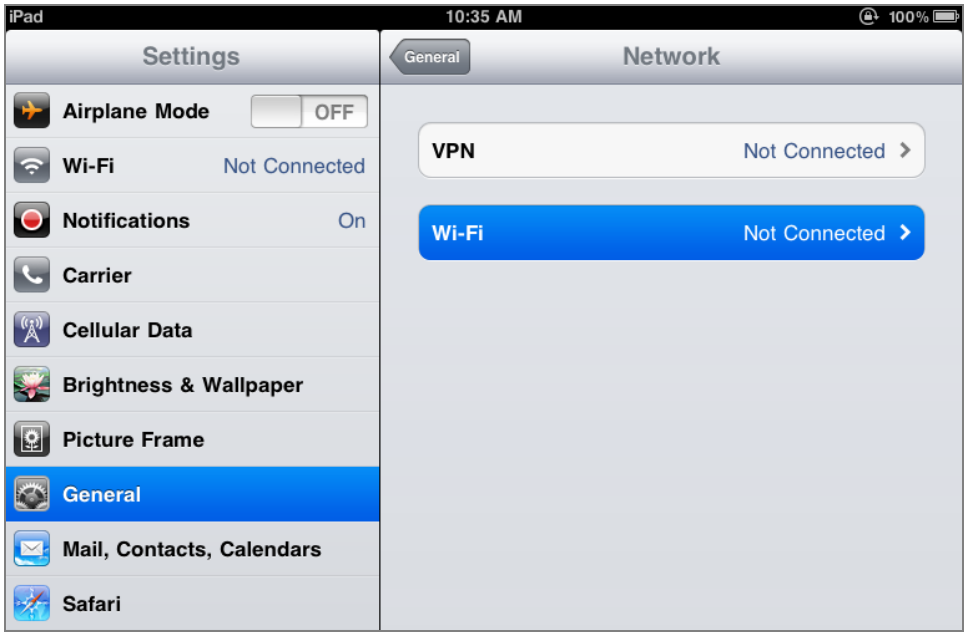


Figure 6-17 General Settings – Not Connected

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

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

(2) Select SSID [PLANET]

Figure 6-18 General Settings – Wi-Fi On

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

(1) The password input screen will be displayed

(2) Enter the encryption key that is configured in Section 5.6.2

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

Figure 6-19 General Settings – Enter password

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 6-20 General Settings – Wi-Fi Network Connected

Appendix A: Planet Smart Discovery Utility

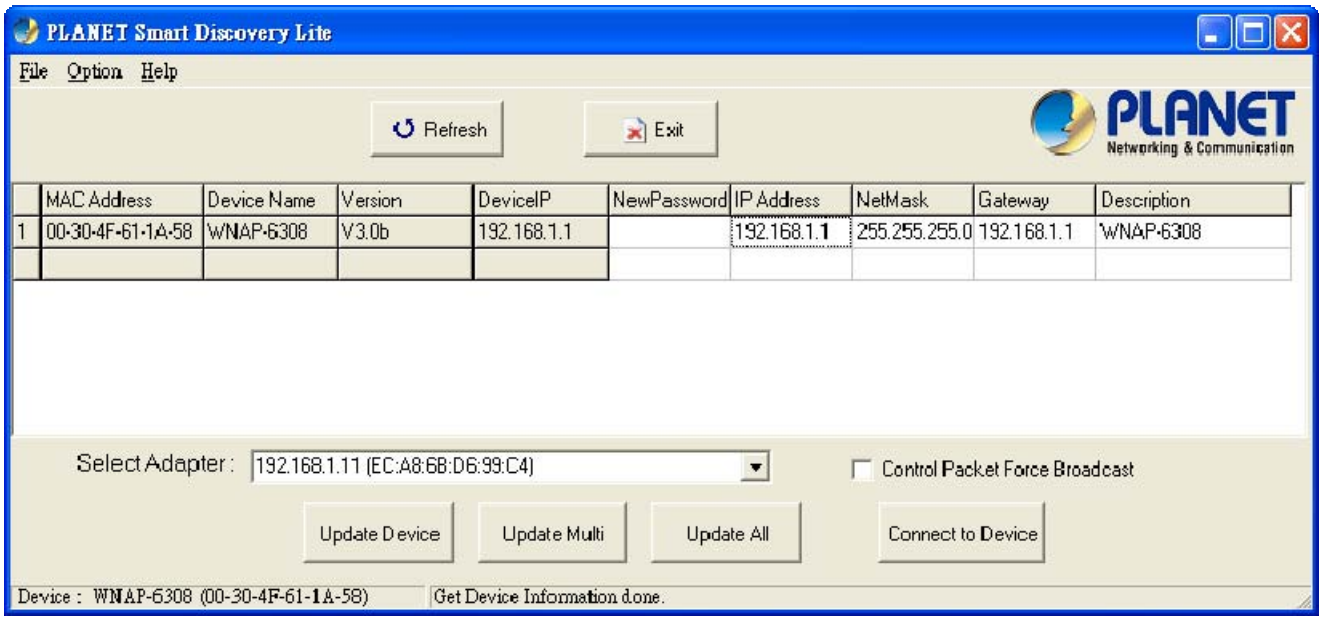
To easily list the device in your Ethernet environment, the Smart Discovery Utility from user's manual CD-ROM is an ideal solution.

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

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

Step 2: Run this utility.

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



Step 4: Navigate to the device, and then click **"Connect to Device"** button to connect to its Web configuration page.

Note

1. Before connecting to device, please ensure your network adapter has been configured to the IP address in the same subnet.
2. The fields in white background can be modified directly, and then you can apply the new setting by clicking the "**Update Device**" button.

Appendix B: Troubleshooting

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

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

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

Appendix C: Specifications

Product	**WNAP-6308** **2.4GHz 150Mbps 802.11n Wireless Outdoor Access Point**
Hardware Specifications	
Standard	IEEE 802.11b/g/n Wireless LAN IEEE 802.11i Wireless Security IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Ethernet IEEE 802.3x Flow Control
Memory	32 Mbytes DDR SDRAM 8 Mbytes Flash
Interface	Wireless IEEE 802.11b/g/n, 1T1R LAN/WAN: 1 x 10/100Base-TX, Auto-MDI / MDIX
Antenna	Built-in N-Type (Male) Antenna Connector
Wireless RF Specifications	
Wireless Technology	IEEE 802.11b/g IEEE 802.11n
Data Rate	IEEE 802.11b: 11, 5.5, 2 and 1Mbps IEEE 802.11g: 54, 48, 36, 24, 18, 12, 9 and 6Mbps IEEE 802.11n (20MHz): up to 72Mbps IEEE 802.11n (40MHz): up to 150Mbps
Media Access Control	CSMA / CA
Modulation	Transmission/Emission Type: DSSS / OFDM Data modulation type: OFDM with BPSK, QPSK, 16-QAM, 64-QAM, DBPSK, DQPSK, CCK
Frequency Band	2.412GHz ~ 2.484GHz
Operating Channel	America/ FCC: 2.414~2.462GHz (11 Channels) Europe/ ETSI: 2.412~2.472GHz (13 Channels) Japan/ TELEC: 2.412~2.484GHz (14 Channels)
RF Output Power (Max.)	IEEE 802.11b/g: 23 ± 1.5dBm IEEE 802.11n: 23 ± 1.5dBm
Receiver Sensitivity	IEEE 802.11b/g: -95dBm IEEE 802.11n: -91dBm
Output Power Control	3~23dBm
Software Features	
LAN	Built-in DHCP server supporting static IP address distributing
	Supports 802.1d STP (Spanning Tree)
WAN	■ Static IP ■ Dynamic IP ■ PPPoE

	■ PPTP ■ L2TP ■ IPSec	
Operating Mode	■ Bridge ■ Gateway ■ WISP	
Firewall	NAT firewall with SPI (Stateful Packet Inspection)	
	Built-in NAT server supporting Virtual Server and DMZ	
	Built-in firewall with Port / IP address / MAC / URL filtering	
Wireless Mode	■ AP ■ Client ■ WDS PTP ■ WDS PTMP ■ WDS Repeater (AP+WDS)	
Channel Width	20MHz / 40MHz	
Wireless Isolation	Enables isolation of each connected wireless client from communicating with each other mutually.	
Encryption Type	64/128-bits WEP, WPA, WPA-PSK, WPA2, WPA2-PSK, 802.1X	
Wireless Security	Provides wireless LAN ACL (Access Control List) filtering	
	Wireless MAC address filtering	
	Supports WPS (Wi-Fi Protected Setup)	
	Enable / Disable SSID Broadcast	
Multiple SSID	Up to 2	
Max. Wireless Client	20	
Max. WDS AP	8	
Max. Wired Client	30	
WMM	Supports Wi-Fi Multimedia	
QoS	Supports Quality of Service for bandwidth control	
NTP	Network Time Management	
Management	Web UI, DHCP Client, Configuration Backup & Restore, Dynamic DNS, SNMP	
Diagnostic Tool	System Log, Ping Watchdog	
Mechanical & Power		
IP Rate	IP55	
Material	Outdoor UV Stabilized Enclosure	
Dimensions (Φ x H)	45 x 169 mm	
Weight	128kg	
Installation	Pole mounting	
Power Requirements	LAN	12~24V DC, Passive PoE Pin 4,5 VDC+ Pin 7,8 VDC-
Power Consumption	1.5W	
Environment & Certification		

Operation Temperature	-35 ~ 65 degrees C
Operating Humidity	5 ~ 90% non-condensing
Regulatory	CE / FCC/ RoHS
Accessory	
Standard Accessories	■ Passive PoE Injector & Power Cord x 1 ■ Plastic Strap x 2 ■ Quick Installation Guide x 1 ■ CD (User's Manual, Quick Installation Guide) x 1

EC Declaration of Conformity

For the following equipment:

*Type of Product : 2.4GHz 802.11n Wireless Outdoor Access Point

*Model Number : WNAP-6308

* 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 60950-1	(2006 + A11: 2009 + A1:2010+A12:2011)
EN 300 328 V1.8.1	(2014-12-31)
EN 301 489-1 V1.9.2	(2011-09)
EN 301 489-17 V2.2.1	(2012-09)

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	**28th Feb., 2014**	Kent Kang
Place	*Date*	*Legal Signature*

PLANET TECHNOLOGY CORPORATION

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10F., No.96, Minquan Rd., Xindian Dist., New Taipei City, Taiwan, R.O.C. Tel:886-2-2219-9518 Fax:886-2-2219-9528

EC Declaration of Conformity

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