

User's Manual

300Mbps In-Wall PoE Wireless Access Point

▶ WNAP-W2200



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Federal Communication Commission Interference Statement



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

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

FCC Caution

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

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

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

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

Federal Communication Commission (FCC) Radiation Exposure Statement

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

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/CE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE). The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) as of April 8, 2000.

Safety

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

National Restrictions

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

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

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

WEEE 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 Manual for PLANET 300Mbps In-wall PoE Wireless Access Point

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Chapter 1. Product Introduction

1.1 Package Contents

Thank you for choosing PLANET WNAP-W2200. Before installing the AP, please verify the contents inside the package box.

WNAP-W2200

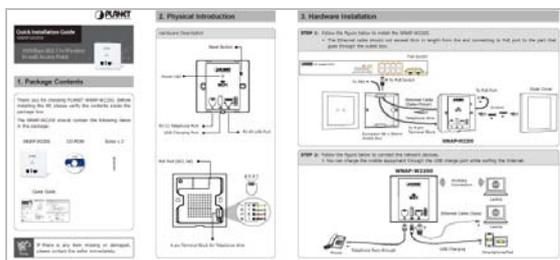


CD-ROM

(User Manual included)



Quick Installation Guide



Screw x 2



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

1.2 Product Description

All-in-One Hotel Room Wireless Solution

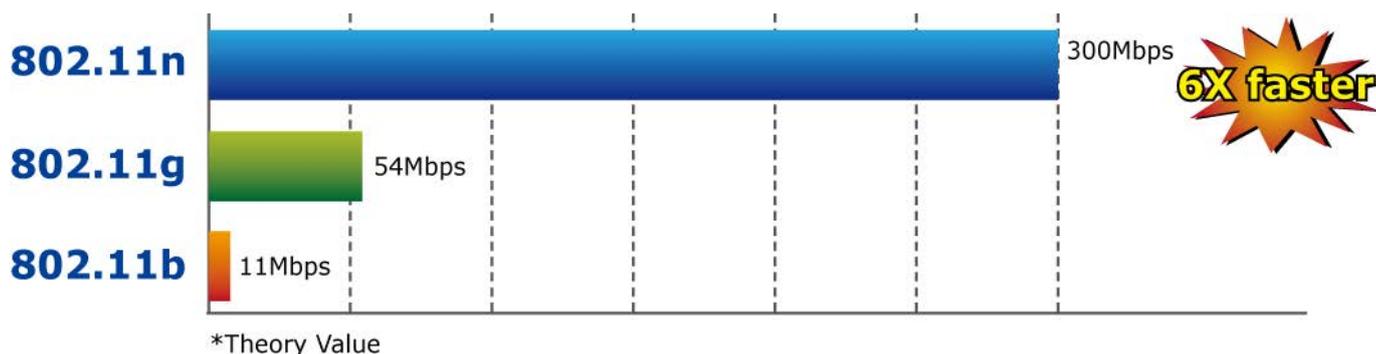
The WNAP-W2200 comes with one RJ-45 port for connecting IPTV or laptop, one RJ-11 port for phone pass-through, and the high-speed 300Mbps wireless connectivity for iPhone, iPad and Android smart phones. In addition, the USB charger port keeps your devices full with power anytime. Its elegant form factor and compact in-wall design enable hotels to build a good brand image.



Wireless Consumer Applications

Ultra High-speed 802.11n Wireless

The WNAP-W2200 features the latest IEEE 802.11n radio with 2T2R MIMO antenna technology to provide improved wireless speed and coverage with up to 300Mbps upload and download data rate. The incredibly wireless speed makes it ideal for handling multiple HD movie streams, high-resolution on-line games, stereo music, and VoIP and data streams at the same time stably and smoothly. It is also backward compliant with 802.11g and 802.11b standards and thus it is no need to change the existing network for convenient maintenance. Just connect to the WNAP-W2200 and you can immediately enjoy the high-speed wireless sharing.



Full Support of Wireless Security Encryption

In aspect of security, besides 64/128-bit WEP encryption, the WNAP-W2200 integrates WPA/WPA2, WPA-PSK/WPA2-PSK and 802.1x Radius authority to secure and protect your wireless LAN. It provides the wireless MAC filtering and SSID broadcast control to consolidate the wireless network security and prevent unauthorized wireless connection.

Adapted to Live In-Wall Design

Featuring attractive appearance and in-wall design, the WNAP-W2200 can be firmly installed into the wall via the standard 86x86mm European outlet box, which is easy and convenient in room installation. Its pure and simple body without protruding antennas also gives no effects to the surroundings.

Convenient USB Charger

To provide better services for travelers, the WNAP-W2200 is built in with one USB 2.0 charger whose output 5V DC power can charge any USB compliant mobile devices, e.g., cell phones, pads, and other handheld devices. Thus, this option gives convenience while in public area so that pedestrians or travelers don't have to worry about forgetting to carry the AC adapter.



Flexible Deployment with PoE Feature

Compliant with IEEE 802.3af Power over Ethernet standard, the WNAP-W2200 can be powered and networked by a single UTP cable. It thus reduces the needs of extra cables and dedicated electrical outlets on the wall, ceiling or any other place where it is difficult to reach. The wireless AP deployment becomes more flexible and worry-free as to the location of the power outlet.

Easy Installation & Management

With user-friendly Web UI and Central Management Utility, it is easy for users to install the device, even for a user who has never experienced in setting up a wireless network. Its SNMP feature allows the system administrator to remotely monitor and control the network devices more efficiently.

1.3 Product Features

➤ **Standard Compliant Hardware Interface**

- Complies with IEEE 802.11n Wireless LAN speed up to 300Mbps
- 2 x 10/100Base-TX Port with 1-port PoE (PD, Powered Device)
- 1 x RJ-11 Port for Telephone Transparency
- USB 2.0 charger port for charging most of mobile devices easily
- European 86 type wall outlet compatible

➤ **RF Interface Characteristics**

- 2T2R MIMO technology for enhanced throughput and coverage
- High-speed data rate of up to 300Mbps with IEEE 802.11n

➤ **Secure Network Connection**

- Advanced security: 64/128-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK (TKIP/AES encryption) and Radius Authentication
- Supports MAC address Filtering
- Supports Dual-SSID to separate guest access and secure private network

➤ **Easy Installation & Management**

- Easy Deployment with Standard IEEE 802.3af PoE supported
- Stylish in-wall design perfectly match the room decoration
- User-friendly Web-based UI
- Centralized Management Utility allows administrator to monitor and configure

1.4 Product Specifications

Product	WNAP-W2200 300Mbps 802.11n Wireless In-wall Access Point	
Hardware Specifications		
Interface	PoE Port	1 x 10/100Mbps Auto MDI/MDI-X RJ45 port (Rear Panel) ※ IEEE 802.3af PD Port
	LAN Port	1 x 10/100Mbps Auto MDI/MDI-X RJ45 port
	RJ-11 Port	Connect to the telephone through the 4-conductor phone line
	4-pin Terminal Block	Connect to the PBX through the 4-conductor telephone wire (Rear Panel)
	USB Port	USB 2.0, Type-A, 5V DC/0.5A Output
PoE	IEEE 802.3af	
Antenna	Built-in 3dBi antenna x2	
Reset Button	Reset button on front panel Press over 7 seconds to reset the device to factory default	
LED Indicators	PWR/SYS LED	
Material	Plastic	
Dimensions (W x D x H)	86 x 86 x 35 mm (L x W x H)	
Weight	103g	
Power Requirements	48V DC, 320mA	
Power Consumption	< 10W	
Wireless interface Specifications		
Standard	Compliant with IEEE 802.11b/g/n	
Frequency Band	America/ FCC: 2.414~2.462GHz (11 Channels) Europe / ETSI: 2.412~2.472GHz (13 Channels)	
Channel Width	20 or 20/40MHz	
Transmission Distance	Indoor up to 100m Outdoor up to 300m (it is limited to the environment)	
RF Power (Intentional Radiator)	IEEE 802.11b: 18dBm IEEE 802.11g: 15dBm IEEE 802.11n: 15dBm	
Wireless Management Features		
Wireless Modes	Access Point (Dual-SSID)	
Encryption Security	WEP (64/128-bit) WPA-PSK (TKIP) / WPA2-PSK (AES) WPA (TKIP) / WPA2 (AES) 802.1x Authentication	
Wireless Security	Enable/Disable SSID Broadcast	
	Wireless LAN ACL (Access Control List) MAC filtering	
Wireless Advanced	AP Isolation: Enable it to isolate each connected wireless client	
	Supports 802.11e WMM (Wi-Fi Multimedia), 802.1Q VLAN	
Max. Supported Clients	Wired: Not limited	

	Wireless: 25
System Management	Web-based (HTTP) management interface
	SNMP management, LED On/Off control, Schedule Reboot
	Supports Planet Smart Discovery & Centralized Management Utility
	System Log
Environments	
Temperature	Operating: -10 ~ 45 degrees C
	Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-Condensing)
	Storage: 10% ~ 90% (non-Condensing)

Chapter 2. Hardware Installation

Please follow the instructions below to connect the WNAP-W2200 to the existing network devices and your computers.

2.1 Product Outlook

- **Dimensions:** 86 x 86 x 35 mm (L x W x H)
- **Diagram :**

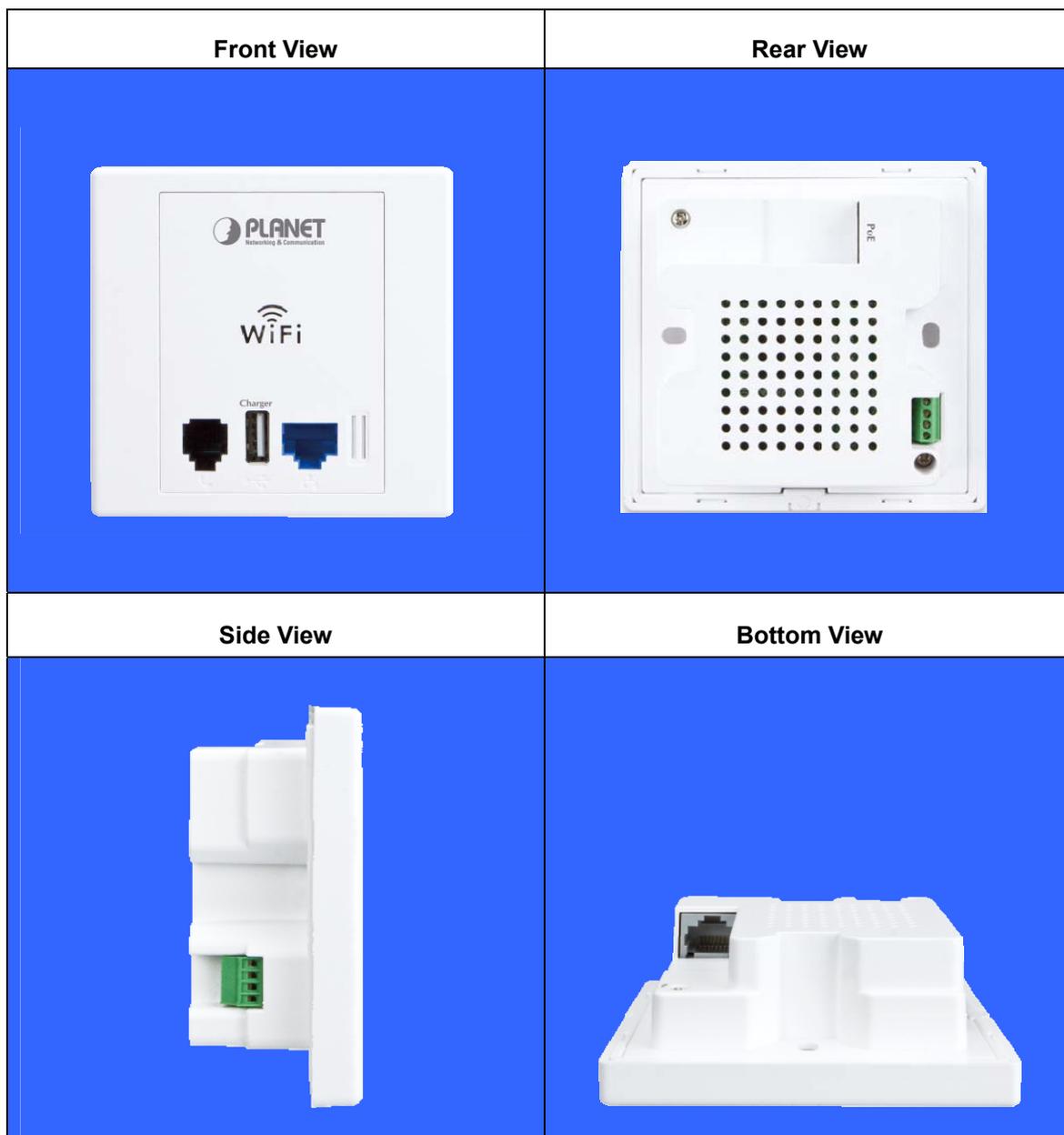


Figure 2-1 WNAP-W2200 Product Outlook

2.1.1 Panel Layout

The front and rear panel provide a simple interface monitoring the AP. Figure 2-2 shows the hardware interface of the WNAP-W2200.

Hardware Interface

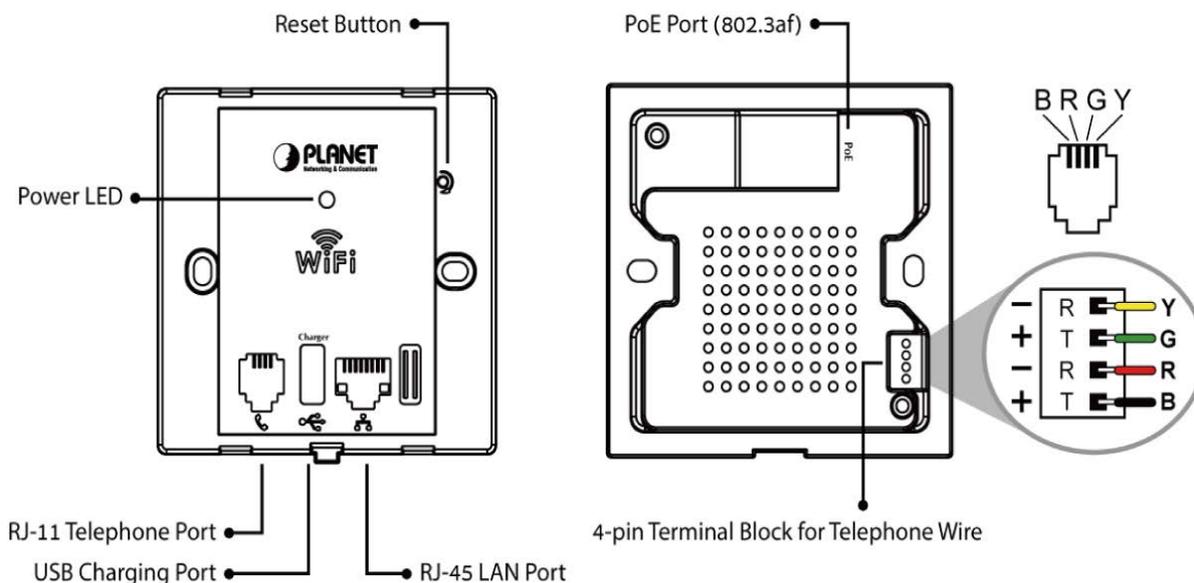


Figure 2-2 WNAP-W2200 Panel Layout

2.1.2 Hardware Description

LED definition

Object			Description
PWR	Green	On	Power on
		Flashing	The system is initializing
		Off	LED enabled: Neither Power nor the device is malfunctioned LED disabled: the LED control has been turned off

Button definition

Object	Description
Reset	Open the front panel to press the Reset button for over 7 seconds and then release it. The system restores to the factory default settings.

H/W Interface definition

Object	Description
PoE Port (802.3af PoE)	10/100Mbps RJ-45 port , Auto MDI/ MDI-X Connect LAN port to the PoE injector to power on the device.
LAN Port	10/100Mbps RJ-45 port , Auto MDI/ MDI-X Connect this port to the network equipment.
USB Port	USB 2.0, Type-A, 5V DC/0.5A Output Connect this port to charge the mobile device.
RJ11 Port	Connect to the telephone through the 4-conductor phone line
4-pin Terminal Block	Connect to the PBX through the 4-conductor telephone wire

Chapter 3. Connecting to the AP

3.1 System Requirements

- Broadband Internet Access Service (Cable/xDSL/Ethernet connection)
- One PoE switch (supply power to the WNAP-W2200)
- PCs with a working Ethernet adapter and an Ethernet cable with RJ-45 connectors
- PCs running Windows XP, Windows Vista / Win 7, MAC OS X or later, Linux, UNIX or other platforms compatible with **TCP/IP** protocols
- The above PCs are installed with Web browser.



1. The AP in the following instructions means PLANET WNAP-W2200.
2. It is recommended to use Internet Explore 8.0 or above to access the AP.

3.2 Installing the AP

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

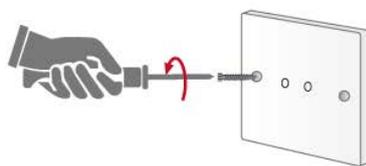
Step 1. Follow the figure below to install the WNAP-W2200.

Easy 6-Step Installation

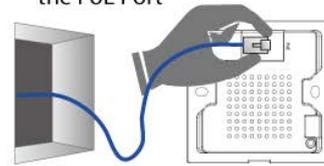
1 Open the front panel



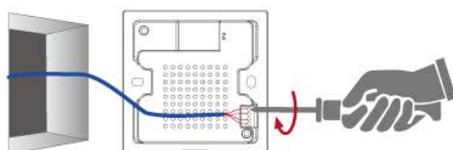
2 Dismantle the existing panel in the wall



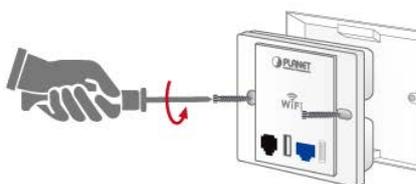
3 Connect network cable to the PoE Port



4 Connect the telephone wire to terminal block



5 Screw the AP on the wall



6 Place the front panel over AP to tightly close, and turn it on



※ The Ethernet cable should not exceed 8cm in length from the end connecting to PoE port to the part that goes through the outlet box.

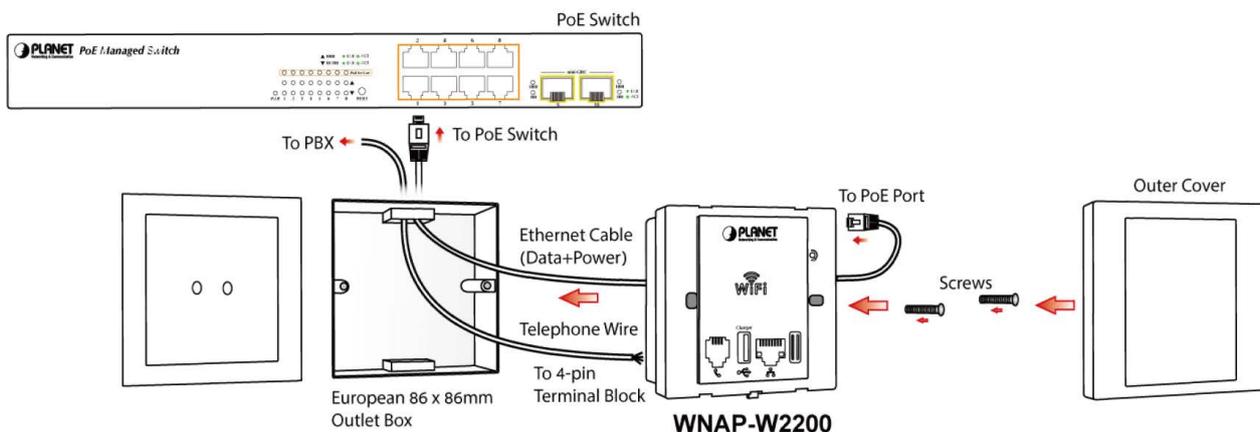


Figure 3-1 WNAP-W2200 Installation Diagram

Step 2. Follow the figure below to connect the network devices.

※ You can charge the mobile equipment through the USB charge port while surfing the Internet.

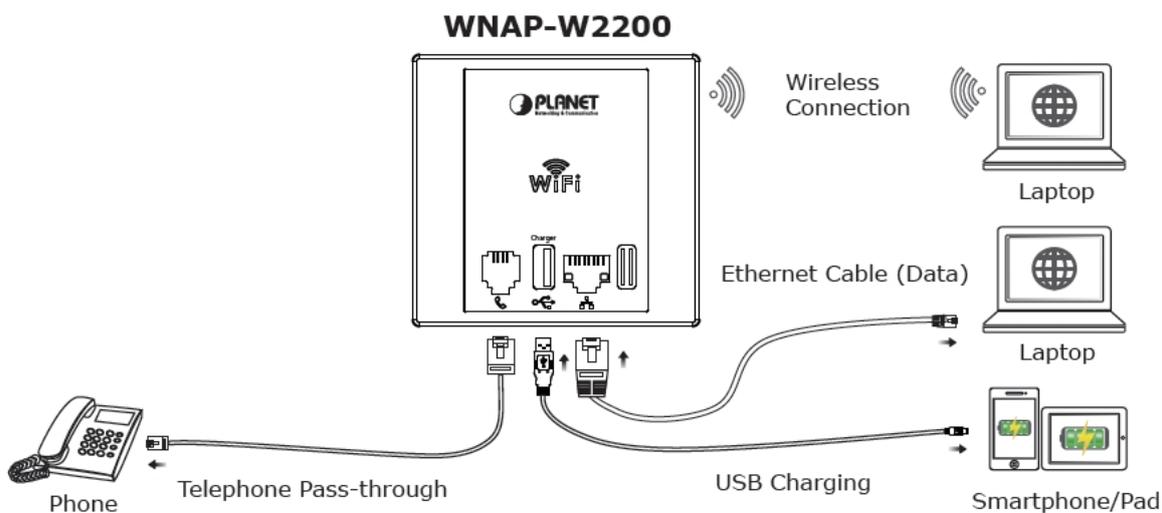


Figure 3-2 WNAP-W2200 Usage Diagram

Chapter 4. Quick Installation Guide

This chapter will show you how to configure the basic functions of your AP within minutes.



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-W2200 is **192.168.1.253**. 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-W2200 with your PC by an Ethernet cable plugging in LAN port on one side and in LAN port of PC on the other side. Please power on the WNAP-W2200 by PoE from PoE switch.

In the following sections, we'll introduce how to install and configure the TCP/IP correctly on **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 (if the default IP address of the WNAP-W2200 is 192.168.1.253, and the DSL router is 192.168.1.254, the "xxx" can be configured to any number from 1 to 252), Subnet Mask is 255.255.255.0.
- 1 Select **Use the following IP address** radio button to configure the IP address of the PC.
 - 2 For example, as the default IP address of the WNAP-W2200 is 192.168.1.253 and the DSL router is 192.168.1.254, you may choose from 192.168.1.1 to 192.168.1.252.

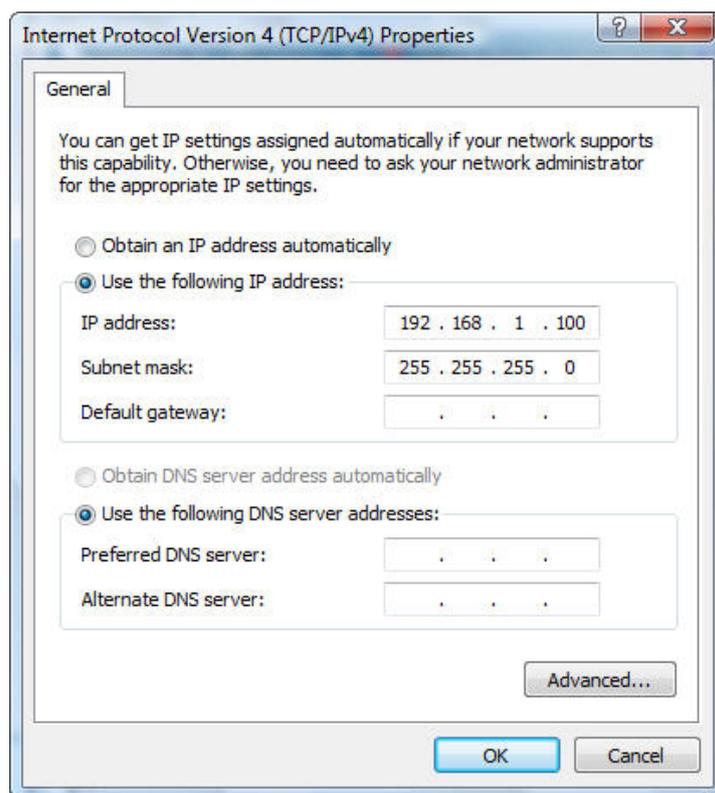


Figure 4-1 TCP/IP Setting

Then 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 on **Windows 7** OS. Please follow the steps below:

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

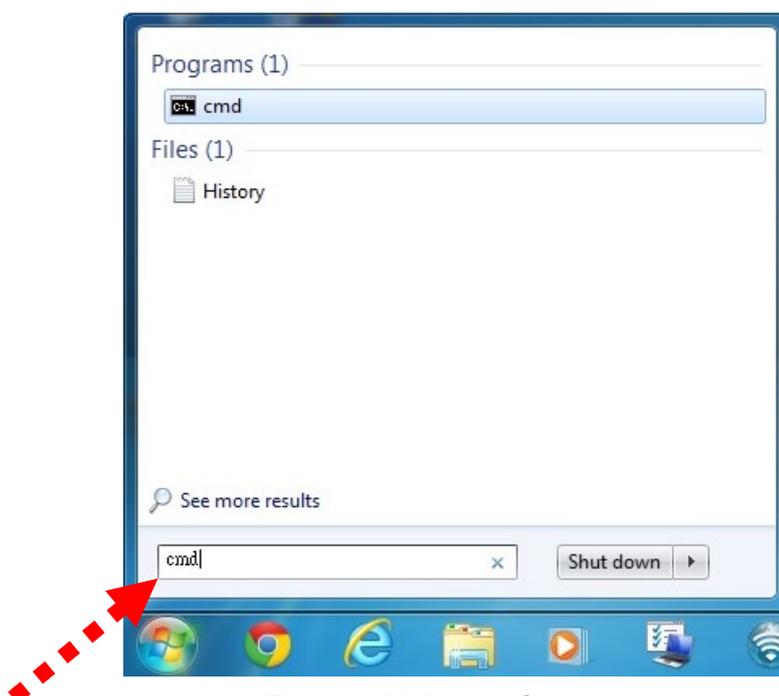


Figure 4-2 Windows Start Menu

- Open a command prompt and type ping **192.168.1.253**, 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 successfully.



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\>ping 192.168.1.253

Pinging 192.168.1.253 with 32 bytes of data:

Reply from 192.168.1.253: bytes=32 time=17ms TTL=64
Reply from 192.168.1.253: bytes=32 time=18ms TTL=64
Reply from 192.168.1.253: bytes=32 time=18ms TTL=64
Reply from 192.168.1.253: bytes=32 time=18ms TTL=64

Ping statistics for 192.168.1.253:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 17ms, Maximum = 18ms, Average = 17ms

C:\>_
```

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.



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Documents and Settings\user>ping 192.168.1.253

Pinging 192.168.1.253 with 32 bytes of data:

Destination host unreachable.
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.

Ping statistics for 192.168.1.253:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Documents and Settings\user>_
```

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 AP with the web browser.

Step 1. To access the configuration utility, open a web browser and enter the default IP address <http://192.168.1.253> in the web address field of the browser.

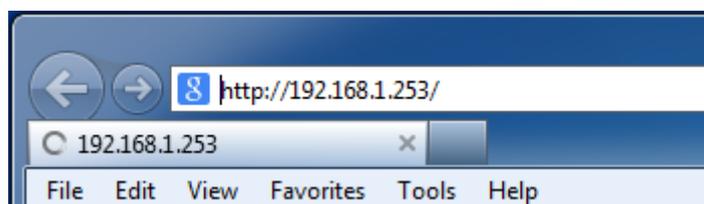


Figure 4-5 Login by Default IP Address

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: **192.168.1.253**

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 on the screen that appears, cancel the Using Proxy checkbox, and click OK to finish it.

Chapter 5. Configuring the AP

This chapter delivers a detailed presentation of AP's functionalities and features under 7 main menus below, allowing you to manage the AP with ease.



Figure 5-1 Main Menu

During operation, if you are not clear about a certain feature, you can simply click the “**Help**” button to read all the related helpful info.

5.1 Status

On this page, you can view information about the current running status of the WNAP-W2200, including LAN interface, wireless interface settings and status, and firmware version information.

■ System Status

This section displays system status.

System Status	
Device Name	WNAP-W2200
System Time	2014-01-01 02:52:31
Working Mode	AP Mode
Up time	02:53:02
Number of Wireless Clients	0
Firmware Version	V1.0.2.8_EN_PLA
Hardware Version	1.0.0.0

Figure 5-2 System Status

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

Object	Description
• Device Name:	Displays the model of device.
• System Time:	Displays system time.
• Working Mode:	Displays working mode.
• Uptime:	Displays the working time of the WNAP-W2200.
• Number of Wireless Clients	Displays the number of wireless clients.
Firmware Version:	Displays AP's firmware version.
Hardware Version:	Displays AP's hardware version.

■ Wireless Status

This section allows you to view the wireless info listed below:

Radio Status	
Radio (On/Off)	On
Network Mode	11b/g/n mixed
Channel	1

SSID Status			
SSID	MAC Address	Security Mode	Status
WNAP-W2200_0D9AC0	00:30:4F:0D:9A:C0	WPA2-PSK	On
WNAP-W2200_0D9AC1	00:30:4F:0D:9A:C1	WPA2-PSK	On

Figure 5-3 Wireless Status

The page includes the following fields:

Object	Description
• Radio:	Displays whether wireless is On or Off.
• Network Mode:	Displays currently active network mode.
• Channel:	Displays current channel.
• SSID:	Displays current SSID.
• MAC Address:	Displays MAC address of the AP's wireless interface.
• Security Mode:	Displays current security mode.
• Status:	Displays whether the client is on or off.

■ Traffic Statistics

This section displays statistics information.

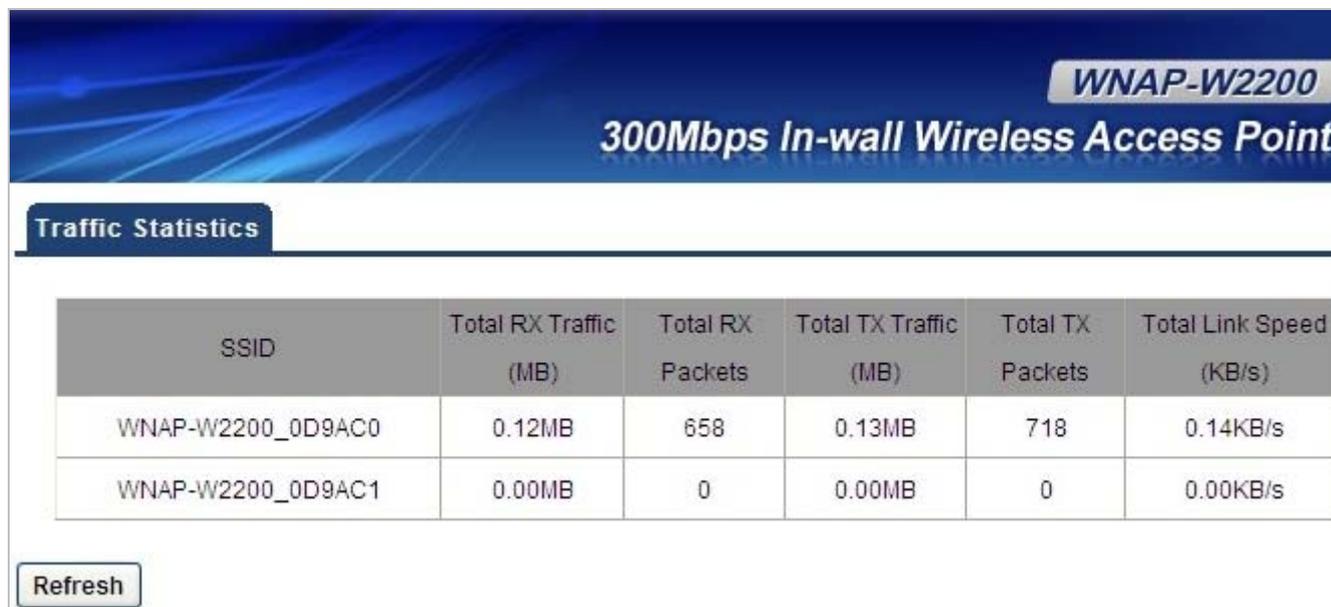


Figure 5-4 Traffic Statistics

The page includes the following fields:

Object	Description
• SSID:	Displays the traffic of the SSID.
• Total RX Traffic:	Displays MB of RX Traffic.
• Total RX Packets:	Displays packets of RX.
• Total TX Traffic:	Displays MB of TX Traffic.
• Total TX Packets:	Displays packets of TX.
• Total Link Speed:	Displays the total link speed.

■ Wireless Clients

This section displays the information of wireless clients.

The screenshot shows the 'Client List' section of the WNAP-W2200 interface. It includes a header for the device, a 'Client List' tab, and a table of connected clients. A dropdown menu is set to 'WNAP-W2200_0D9AC0'.

ID	MAC Address	SSID	IP	Link Speed	Connection Duration
1	C0:F8:DA:03:B9:86	WNAP-W2200_0D9AC0	192.168.1.133	300 Mbps	00:01:19

Figure 5-5 Wireless Clients

The page includes the following fields:

Object	Description
• ID:	Displays the number of wireless client.
• MAC Address:	Displays MAC address of wireless client.
• SSID:	Displays SSID of wireless client.
• IP:	Displays IP of wireless client.
• Link Speed:	Displays link speed of wireless client.
• Connection Duration:	Displays the total connection time.

5.2 LAN Setup

On the LAN Setup page, you can configure the IP parameters of the LAN on the screen as shown below.

The screenshot shows the LAN Setup configuration page for the WNAP-W2200. The page has a blue header with the product name and a 'LAN Setup' tab. The configuration fields are as follows:

- MAC Address: 00:30:4F:02:D4:B8
- Address Mode: Static IP (dropdown menu)
- IP Address: 192.168.1.253 (with example: 192.168.1.1)
- Subnet Mask: 255.255.255.0 (with example: 255.255.255.0)
- Gateway: 192.168.1.1
- Primary DNS Server: 8.8.8.8
- Secondary DNS Server: (Optional) [empty field]

Buttons for 'Save', 'Restore', and 'Help' are located on the right side of the form.

Figure 5-6 LAN Setup

The page includes the following fields:

Object	Description
• MAC Address:	Displays MAC address of the AP's LAN interface.
• IP Type:	Static IP Specify a static IP address, subnet mask, default gateway and DNS server for WNAP-W2200 manually. Make sure the specified IP address is unique on your network in order to prevent IP conflict.
	Dynamic If a DHCP server exists in your network, you can select this option, and thus the WNAP-W2200 is able to obtain IP settings automatically from that DHCP server.
• IP Address:	Enter the IP address of your AP or reset it in dotted-decimal notation (factory default: 192.168.1.253).
• Subnet Mask:	An address code that determines the size of the network. Normally use 255.255.255.0 as the subnet mask.
• Gateway:	(Optional.) Suggest to input the IP address of the LAN port of the Router; default value is 192.168.1.1



Note

If you change the IP Address of LAN, you must use the new IP Address to login the AP.



When the IP address of the WNAP-W2200 is changed, the clients on the network often need to wait for a while or even reboot before they can access the new IP address. For an immediate access to the AP, please flush the netbios cache on the client computer by running the “nbtstat -r” command before using the device name of the WNAP-W2200 to access its Web Management page.

5.3 DHCP Server

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

5.3.1 DHCP Server

Choose menu “**DHCP Server**” to configure the settings for DHCP server on this page. After the configuration is done, please click the “Save” button to save the settings.

The screenshot shows the DHCP Server configuration interface. At the top right, it says 'WNAP-W2200' and '300Mbps In-wall Wireless Access Point'. Below that is a 'DHCP Server' tab. The configuration area contains several fields: 'DHCP Server' with an 'Enable' checkbox, 'Start IP' (192.168.1.100), 'End IP' (192.168.1.200), 'Lease Time' (1 day dropdown), 'Subnet Mask' (255.255.255.0), 'Gateway' (192.168.1.253), 'Primary DNS Server' (192.168.1.253), and 'Secondary DNS Server (Optional)'. On the right side, there are three buttons: 'Save', 'Restore', and 'Help'.

Figure 5-7 DHCP Server

The page includes the following fields:

Object	Description
• DHCP Server:	Click “Enable” to enable the DHCP function.
• Start IP:	The start IP address of all the available successive IPs.
• End IP:	The end IP address of all the available successive IPs.
• Lease Time:	Select the time for using one assigned IP from the dropdown list. After the lease time, the AP automatically assigns new IP
• Subnet Mask:	AP’s LAN subnet mask.
• Gateway:	Suggest to input the IP address of the LAN port of the router; default value is 192.168.1.253
• Primary DNS Server:	Enter the necessary DNS address.

- | | |
|--------------------------------|--|
| • Secondary DNS Server: | Enter the other DNS address which is optional. |
|--------------------------------|--|

5.3.2 DHCP Client List

This section displays the information of DHCP clients.

ID	Host Name	IP Address	MAC Address	Lease Time
1	ENM-MIKI	192.168.1.111	EC:A8:6B:D6:99:C4	23:59:55

Figure 5-8 DHCP Client List

The page includes the following fields:

Object	Description
• ID:	Displays the number of DHCP client.
• Host Name:	Displays the name of DHCP client.
• IP Address:	Displays IP of DHCP client.
• MAC Address:	Displays MAC Address of DHCP client.
• Lease Time:	Displays the total connection time.

5.4 Wireless

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

5.4.1 Basic

Choose menu “**Wireless → Basic**” to configure the security settings for the wireless network on this page. After the configuration is done, please click the “Save” button to save the settings.

The screenshot shows the configuration interface for the WNAP-W2200. The 'Basic' tab is active. The settings are as follows:

- SSID: WNAP-W2200_0D9AC0
- Enable:
- Broadcast SSID: Enable
- AP isolation: Disable Enable
- Maximum clients: 25 (Range: 1-25)
- Security Mode: WPA2 - PSK
- Cipher Type: AES TKIP TKIP&AES
- Key: 12345678
- Key Update Interval: 3600 Seconds (60—99999 seconds. If set to 0, key will not be updated.)

Buttons for Save, Restore, and Help are located on the right side of the form.

Figure 5-9 Wireless Basic

The page includes the following fields:

Object	Description
• SSID:	Displays the current SSID.
• Wireless Enable:	Click “Enable” to enable the wireless signal.
• Broadcast SSID:	When you select “Disable SSID broadcast”, AP will not broadcast its own SSID. If there is a wireless connection request, you need to input SSID manually.
• AP Isolation:	The access control feature is based on wireless MAC address. When this feature is enabled, each of your wireless clients will be in its own virtual network and will not be able to communicate with each other. This feature is to isolate the communication of wireless clients

	connected with a different AP.	
• Maximum Clients:	Enter the clients you want to allow connection to the WNAP-W2200 in the field.	
• Security Mode:	None	It allows any device to join the network without performing any security check.
	WEP	<p>WEP (Wired Equivalent Privacy), a basic encryption method, usually encrypts wireless data using a series of digital keys (64 bits or 128 bits in length).</p> <p>By using the same keys on each of your wireless network devices, you can prevent unauthorized wireless devices from monitoring your transmissions or using your wireless resources. WEP is based on RSA algorithm from RC4. It is the original and weak encryption method, so it is recommended not to use this method.</p>
	Shared Mode	Data encryption and key are required for wireless authentication.
	802.1X	<p>This security mode is used when a RADIUS server is connected to the device. 802.1x, a kind of Port-based authentication protocol, is an authentication type and strategy for users. The port can be either a physic port or logic port (such as VLAN). For wireless LAN users, a port is just a channel.</p> <p>The final purpose of 802.1x authentication is to check if the port can be used. If the port is authenticated successfully, you can open this port which allows all the messages to pass. If the port isn't authenticated successfully, you can keep this port "disable" which just allows 802.1x authentication protocol message to pass.</p>
	WPA-PSK	It is a simplified WPA mode with no need for specific authentication server. In this so-called WPA Pre-Shared Key, all you have to do is just pre-enter a key in each WLAN node and this is the common way to be adopted in large and middle enterprise as well as residential network.
	WPA2-PSK	As a new version of WPA, only all the clients support WPA2, can it be available. If it is selected, the data encryption can only be AES and the passphrase is required.
	Mixed WPA/WPA2-PSK	It provides options of WPA (TKIP) or WPA2 (AES) encryption for the client. If it is selected, the data encryption can only be TKIP + AES and the passphrase is required.

	WPA	WPA is a medium level encryption and is supported by most wireless devices and operating systems.
	WPA2	WPA2 is a high level encryption and is supported by most wireless devices and operating systems.
• Cipher Type:	AES	AES is a specification for the encryption of electronic data. We strongly recommend choosing AES as your default setting.
	TKIP	TKIP is a security protocol used in the IEEE 802.11 wireless networking standard.
• Key:	Enter the security key you want to set up.	
• Key Update Interval:	It represents the time interval where the encryption key is automatically changed for added security. The default value is often 3600.	

5.4.2 Radio

Choose menu “**Wireless Settings → Radio**” to configure the basic settings for the wireless network on this page. After the configuration is done, please click the “Apply” button to save the settings.



Figure 5-10 Wireless Radio

The page includes the following fields:

Object	Description
• Wireless Enable:	Click “Enable” to enable the wireless signal.
• Wireless Mode:	11b/g Mixed Mode Allow the 11b/g-compliant client device to connect

		with the AP with auto-negotiation speed, and 11n wireless client to connect the device with 11g speed.
	11b Mode	Allow the wireless client to connect with the device in 11b mode at the maximum speed of 11Mbps.
	11g Mode	Allow the 11g/11n-compliant client device to connect with the AP at the maximum speed of 54Mbps.
	11b/g/n Mixed Mode	Allow 11b/g/n-compliant client device to connect with the AP with auto-negotiation speed. The maximum speed is 300Mbps.
• Country:	Select your country or a neighboring country.	
• Channel:	Specify the effective channel (from 1 to 13 or set to Auto) of the wireless network.	
• Channel Bandwidth:	Select the proper channel bandwidth to improve the wireless performance. 20M bandwidth can improve the anti-jamming ability of the wireless device. 40M bandwidth can improve the flux of 11N client.	
• Extension Channel:	To increase data throughput of wireless network, the extension channel range is used in 11n mode.	
• WMM Capability:	To enhance wireless multimedia transfer performance (on-line video and voice). If you are not clear about this, enable it.	
• APSD Capability:	It is used for auto power-saved service. The default is disabled.	

5.4.3 Advanced

Choose menu “**Wireless → Advanced**” to configure the advanced settings for the wireless network on this page. After the configuration, please click the “Save” button to save the settings.

The screenshot shows the configuration page for the WNAP-W2200 300Mbps In-wall Wireless Access Point. The page is titled 'Advanced' and contains the following settings:

- Beacon Interval:** 100 (Range: 20 - 999; Default: 100)
- Fragment Threshold:** 2346 (Range: 256 - 2346; Default: 2346)
- RTS Threshold:** 2347 (Range: 1 - 2347; Default: 2347)
- DTIM Interval:** 1 (Range: 1 - 255; Default: 1)
- Wireless LED:** Enable Disable
- Preamble:** Long Preamble Short Preamble

Buttons for 'Save', 'Restore', and 'Help' are located on the right side of the configuration area.

Figure 5-11 Wireless Advanced

The page includes the following fields:

Object	Description
• Beacon Interval:	The interval of time that this access point broadcasts a beacon. Beacon is used to synchronize the wireless network. Default is "100".
• Fragment Threshold:	You can specify the maximum size of packet during the fragmentation of data to be transmitted. If you set this value too low, it will result in bad performance. Default is "2346".
• RTS Threshold:	When the packet size is smaller than the RTS threshold, the access point will not use the RTS/CTS mechanism to send this packet. Default is "2347".
• DTIM Interval:	DTIM is a kind of traffic indication map (TIM) which informs the clients about the presence of buffered multicast/broadcast data on the access point. It is generated within the periodic beacon at a frequency specified by the DTIM Interval. The higher the DTIM period, the longer a client device may sleep and therefore the more power that particular client device may potentially save. Default is "1".
• Wireless LED:	Select "Enable" or "Disable" Wireless LED to turn on or turn off the LED display.
• Preamble:	There are two types of preambles: long preamble and short preamble. By default, the device transmits data using the short preamble.

5.4.4 Wireless Access Control

Choose menu “**Wireless → Wireless Access Control**” to allow or deny the computer of specified MAC address to wirelessly connect with the WNAP-W2200 on this page. After the configuration is done, please click the “Save” button to save the settings.

Figure 5-12 Wireless Access Control

The page includes the following fields:

Object	Description
• SSID:	Displays the current SSID.
• MAC Filter Mode:	You can choose to set to Allow or Deny, or disable this function.
• MAC Address:	Enter the MAC address you want to allow or deny to connect to the WNAP-W2200 in the field. Then, click “Add” to add the MAC address to the control list.
• Current Access Control List:	You can select some MAC address, and click the “Delete” button to delete it.

5.4.5 QVLAN

Choose menu “**Wireless → QVLAN**” to configure the 802.1QVLAN function. After the configuration is done, please click the “Save” button to save the settings.

WNAP-W2200
300Mbps In-wall Wireless Access Point

QVLAN

Enable

SSID	VLAN ID (2-4094)
WNAP-W2200_0D9AC0	1000
WNAP-W2200_0D9AC1	1000

Save
Restore
Help

Figure 5-13 Wireless QVLAN

The page includes the following fields:

Object	Description
<ul style="list-style-type: none"> • VLAN Enable: 	Click “Enable” to enable the 802.1Q VLAN function.
<ul style="list-style-type: none"> • VLAN ID: 	You can specify a VLAN ID for each SSID here. The default is 1000.

5.5 SNMP

Simple Network Management Protocol (SNMP) is a popular protocol for network management. It is widely used in local area networks (LAN) for collecting information, and managing and monitoring network devices, such as servers, printers, hubs, switches, and routers from a management host.

Managed devices that support SNMP including software are referred to as an SNMP agent, which usually interacts with third-party SNMP management software to enable the sharing of network status information between monitored devices and applications and the SNMP management system.

A defined collection of variables (managed objects) are maintained by the SNMP agent and used to manage the device. These objects are defined in a **Management Information Base (MIB)**, which provides a standard presentation of the information controlled by the on-board SNMP agent. SNMP defines both the format of the MIB specifications and the protocol used to access this information over the network.



The screenshot shows the configuration page for the WNAP-W2200 300Mbps In-wall Wireless Access Point. The page title is "WNAP-W2200 300Mbps In-wall Wireless Access Point". The "SNMP" tab is selected. The page contains the following configuration options:

Field	Value
SNMP	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Administrator Name	Administrator
Device Name	WNAP-W2200
Location	Taipei
Read Community	public
Write/Read Community	private

Buttons: Save, Restore, Help

Figure 5-14 SNMP

This device supports SNMP v1 and SNMP v2c. Please click "**SNMP**" in the Menu to enter this page. Click "**Enable**" to enable the SNMP management.

The page includes the following fields:

Object	Description
• Administrator Name:	Set the name to access the AP. Default is "Administrator".
• Device Name:	Set the AP's name. Default is "WNAP-W2200".
• Location:	Set the AP's network location.
• Read Community:	Indicates the community read access string to permit reading this AP's SNMP information. The default is Public .
• Write/Read Community:	Indicates the community write access string to permit reading and re-writing this AP's SNMP information. The default is Private .

5.6 Tools

This section focuses on how to maintain AP, including Restore to Factory Default Setting, Backup/Restore, Firmware Upgrade, Reboot, Set Password, and Logs.

5.6.1 Maintenance

■ Firmware Update

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



Figure 5-15 Firmware Upgrade

To update firmware, do as follows:

1. Click "**Choose file**" to locate the firmware and "**Update**" to upgrade.
2. AP will reboot automatically when upgrade completes.



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

■ Reboot

This page is used to reboot wireless access point. Rebooting the device makes the settings configured go into effect.

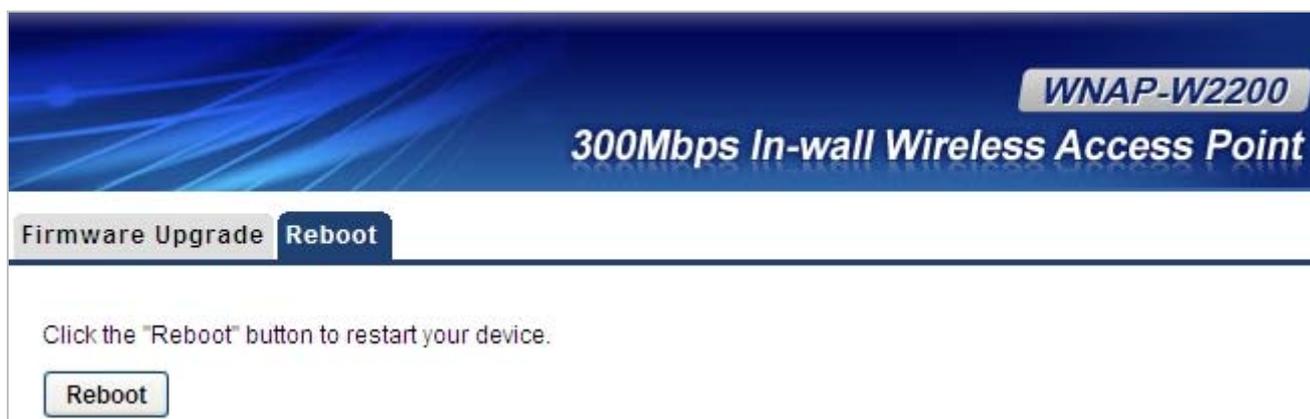


Figure 5-16 Reboot

- **Reboot:** Click this button to reboot the device.

5.6.2 Time

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

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

■ System Time

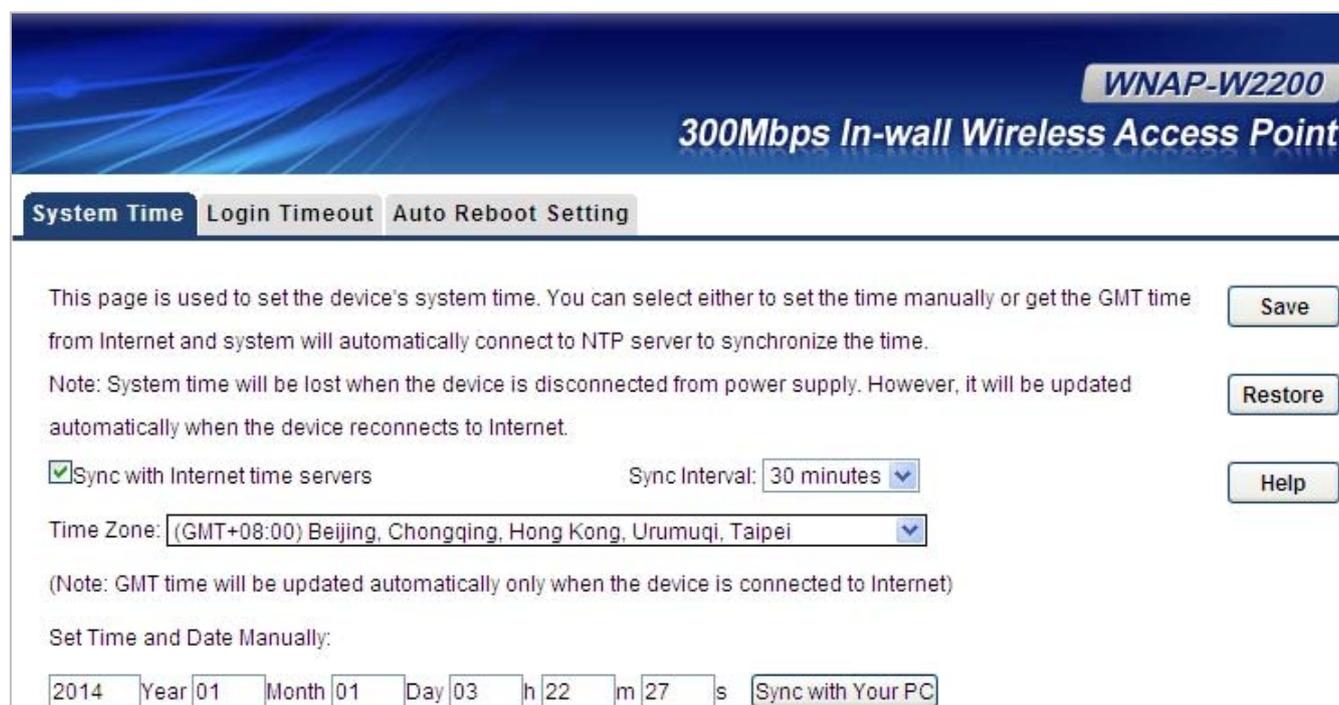


Figure 5-17 System Time

The page includes the following fields:

Object	Description
<ul style="list-style-type: none"> • Sync with Internet Time Servers: 	Select it to update the system time by synchronizing with a public time server over the Internet.
<ul style="list-style-type: none"> • Sync Interval: 	Configure the interval of synchronizing time.
<ul style="list-style-type: none"> • Time Zone: 	Select the time zone of the country you are currently in. The router will set its time based on your selection.
<ul style="list-style-type: none"> • Set Time & Date Manually: 	Input current time manually.
<ul style="list-style-type: none"> • Sync with Your PC: 	Synchronize local time to the AP.



The configured time and date settings are lost when the wireless AP is powered off.

■ Login Timeout

Figure 5-18 Login Timeout

- **Login Timeout:** You can configure the web login timeout (1-60 minutes). The default is 5 minutes.

■ Auto Reboot Setting

WNAP-W2200
300Mbps In-wall Wireless Access Point

System Time Login Timeout **Auto Reboot Setting**

Auto Reboot

Reboot Time (Hour:Minute)

Reboot Plan

Weekday Mon Tue Wed Thr Fri Sat Sun

Save Restore Help

Figure 5-19 Auto Reboot Setting

The page includes the following fields:

Object	Description
• Auto Reboot:	Click it to enable auto reboot function.
• Reboot Time:	Enter the Reboot Time (24-hour format) to enable this function to take effect. For example, if you want this function to work at 18:00 every Sunday, you need to choose "Weekday" in the Reboot Plan field, and select the "Sun" checkbox in the Weekday field.
• Reboot Plan:	Select "Weekday" for multi-time reboot schedule or "Once" for only one day reboot time.
• Weekday:	Select the day you need to reboot.

5.6.3 Logs

■ View Logs

The section is to view the system log. Click the "Refresh" to update the log. Click "Clear" to clear all the shown information.

WNAP-W2200
300Mbps In-wall Wireless Access Point

View Logs | Log Setup

Type of logs to display: All

Index	Time	Type	Log Content
51	2014-01-01 03:14:28	System	Sending ack
50	2014-01-01 03:14:28	System	Received request...
49	2014-01-01 03:14:28	System	Sending offer...
48	2014-01-01 03:14:28	System	Received discover...
47	2014-01-01 03:14:14	System	set dhcpd configure success.
46	2014-01-01 03:14:13	System	Dhcp server start

Page 4 3 2 1

Figure 5-20 View Logs

- **Refresh:** Click this button to update the log.
- **Clear:** Click this button to clear the current log.

■ Log Setup

You set up the number of logs and log server.

WNAP-W2200
300Mbps In-wall Wireless Access Point

View Logs | **Log Setup**

Number of Logs (Default: 200. Range: 200-500)

Enable (To use the following rules, you must check this box.)

ID	Log Server IP	Log Server Port	Enable	Action
----	---------------	-----------------	--------	--------

Figure 5-21 Log Setup

The page includes the following fields:

Object	Description
• Number of Logs:	Set the number of logs. Default is 200.
• Log Server IP:	Enter the log server IP.
• Log Server Port:	Enter the log server port.

5.6.4 Backup Settings

This section allows you to back up the current settings or to restore the previous settings configured on the device.

Choose menu “**Tools**→ **Backup Settings**” to back up or restore the configuration of the WNAP-W2200.

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

■ Backup & Restore



Figure 5-22 Backup & Restore

The page includes the following fields:

Object	Description
Backup:	Once you have configured the device the way you want, you can save these settings to a configuration file on your local hard drive that can later be imported to your device in case that the device is restored to factory default settings. To do this, click the "Backup" button and specify a directory to save settings on your local hardware.
Restore:	Click the "Choose File" button to locate and select a configuration file that is saved previously to your local hard drive. And then click the "Restore" button to reset your device to previous settings.

■ Restore to Factory Default

This section is to reset all configurations to the default values. It means the device will lose all the settings you have set.

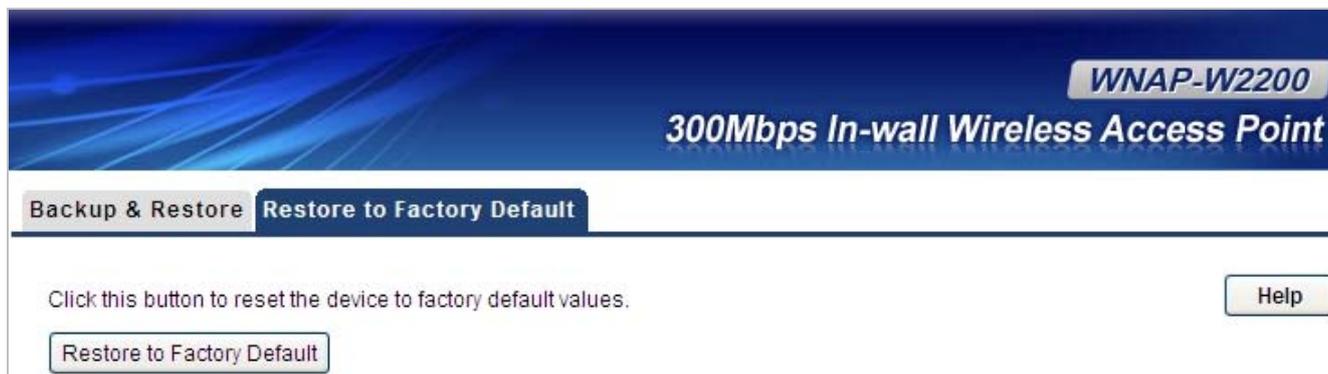


Figure 5-23 Restore to Factory Default

- **Restore:** Click this button to restore to default settings.
- **Factory Default Settings:**
 - User Name:** admin
 - Password:** admin
 - IP Address:** 192.168.1.253
 - Subnet Mask:** 255.255.255.0
 - SSID:** WNAP-W2200_XXXXXX ("X" means the last 6 digits of the MAC address)
 - Wireless Encryption Type:** None

5.6.5 Set Password

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

Choose menu "**Tools**→ **Set Password**" to change the user name and password which is inputted to access the web UI of the WNAP-W2200.

WNAP-W2200
300Mbps In-wall Wireless Access Point

User Name & Password

Use this section to change your login user name and password.

Note: User name and password can only include 1~32 letters, numbers or underscore!

Access Mode	User Name	Enable	Action
Administrator Name	admin	<input checked="" type="checkbox"/>	<input type="button" value="Change"/>
User	user	<input checked="" type="checkbox"/>	<input type="button" value="Delete"/> <input type="button" value="Change"/>

WNAP-W2200

300Mbps In-wall Wireless Access Point

User Name & Password

Use this section to change your login user name and password.

Note: User name and password can only include 1~32 letters, numbers or underscore!

Access Mode	User Name	Enable	Action
Administrator	admin	<input checked="" type="checkbox"/>	<input type="button" value="Change"/>
User	user	<input checked="" type="checkbox"/>	<input type="button" value="Delete"/> <input type="button" value="Change"/>

Old User Name

Old Password

New User Name

New Password

Confirm New Password

Figure 5-24 Setting Login Password

The page includes the following fields:

Object	Description
• Old User Name:	Enter the old user name.
• Old Password:	Enter the old password.
• New User Name:	Enter the new user name.
• New Password:	Enter the new password.
• Confirm New Password:	Confirm the new password again.



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

5.6.6 Diagnostics

This section is used to ping an IP address or domain name.

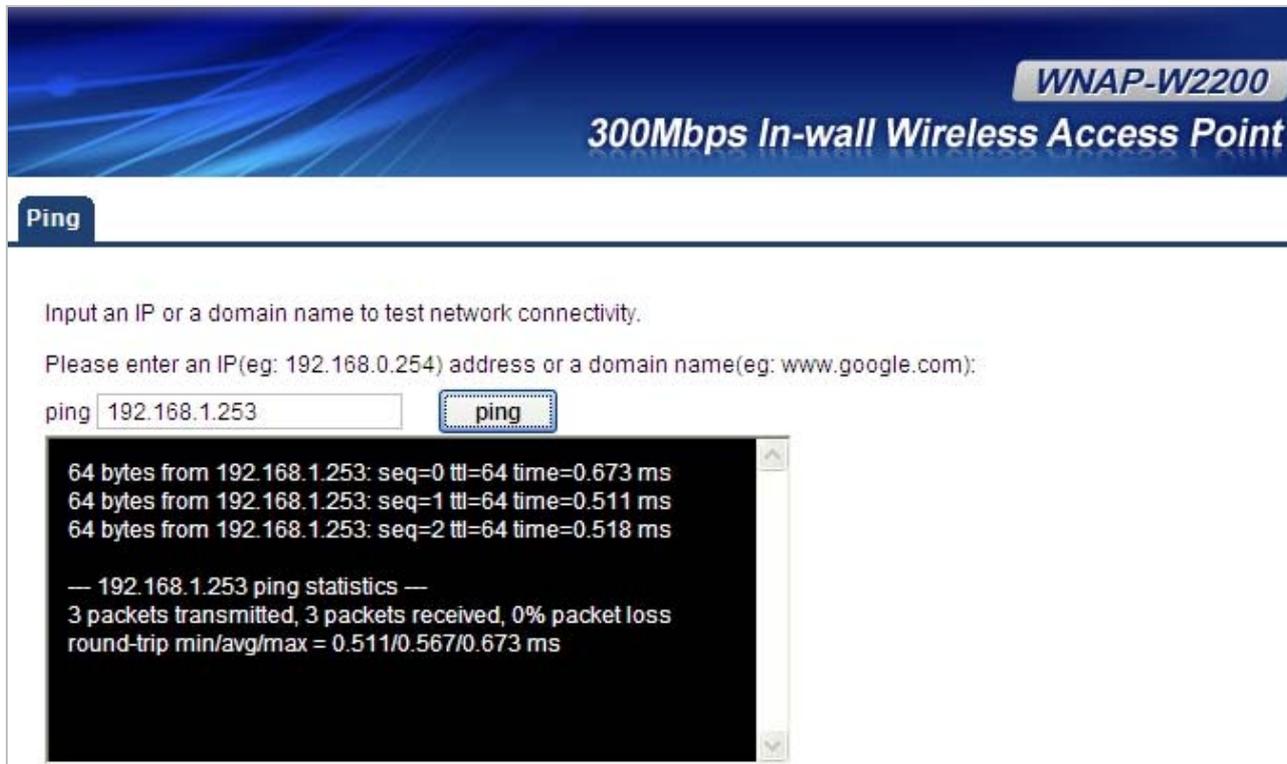


Figure 5-25 Diagnostics

Chapter 6. Quick Connection to a Wireless Network

In the following sections, the **default SSID** of the WNAP-W2200 is configured to “**default**”.

6.1 Windows XP (Wireless Zero Configuration)

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



Figure 6-1 System Tray – Wireless Network Icon

Step 2: Select [View Available Wireless Networks]

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

- (1) Select SSID [default]
- (2) Click the [Connect] button

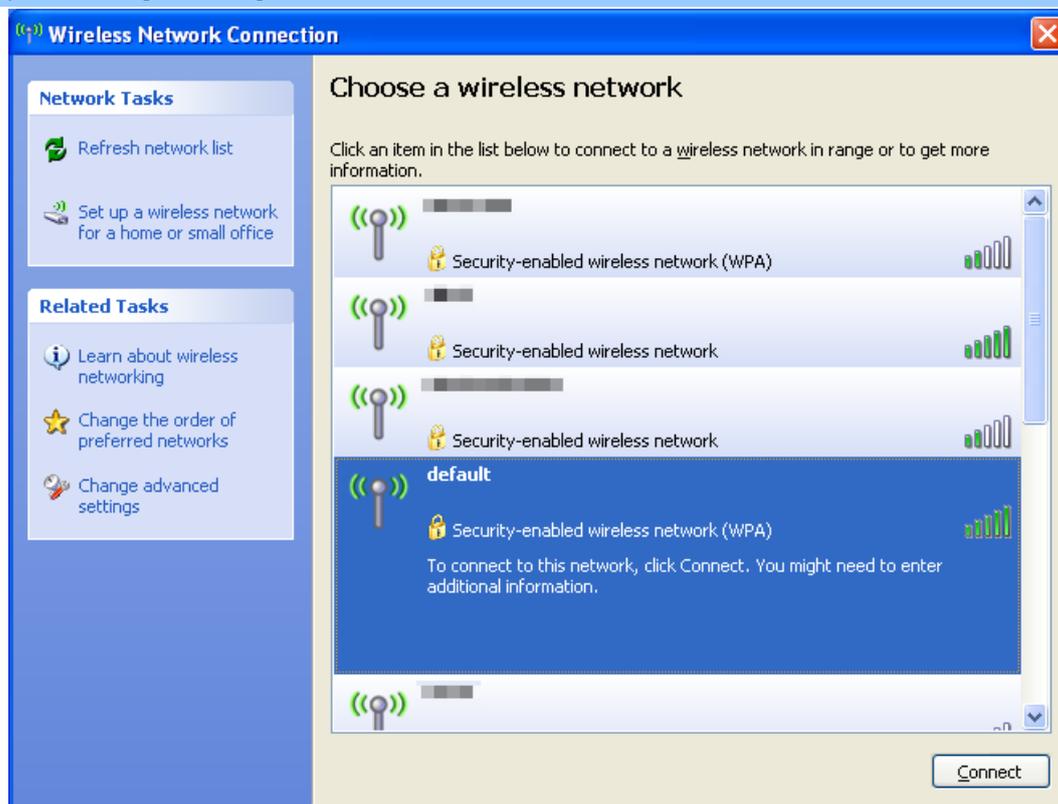


Figure 6-2 Choose a Wireless Network

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

- (1) The Wireless Network Connection box will appear
- (2) Enter the encryption key that configured in [section 5.3.2](#)
- (3) Click the [Connect] button



Figure 6-3 Enter the Network Key

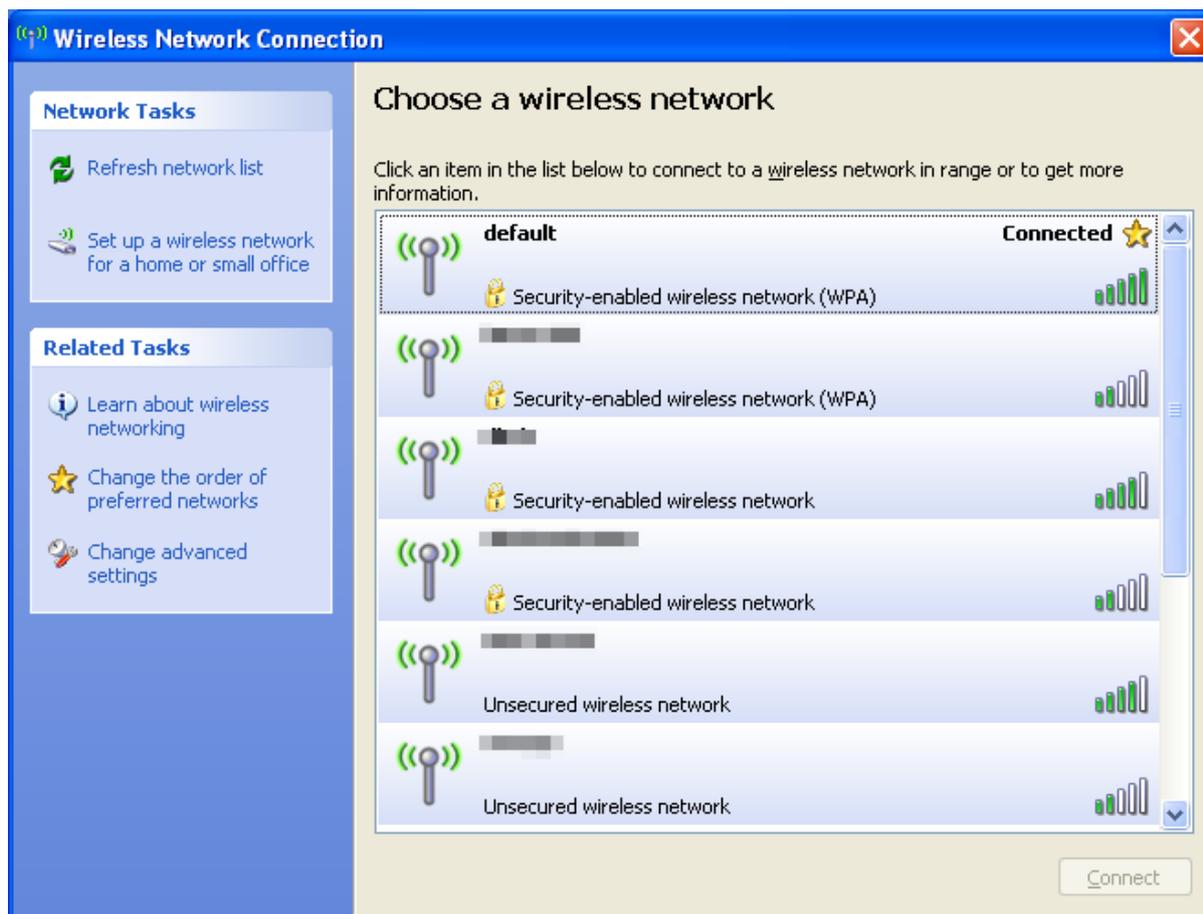
Step 5: Check if “**Connected**” is displayed

Figure 6-4 Choose a Wireless Network -- Connected



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

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



Figure 6-5 Network Icon

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

- (1) Select SSID [default]
- (2) Click the [Connect] button

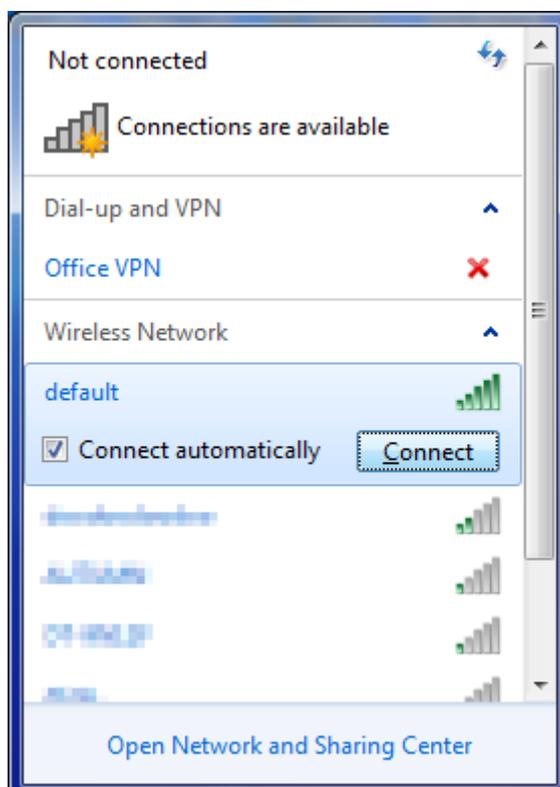


Figure 6-6 WLAN AutoConfig



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 configured in [section 5.3.2](#)
- (3) Click the [OK] button



Figure 6-7 Type the Network Key

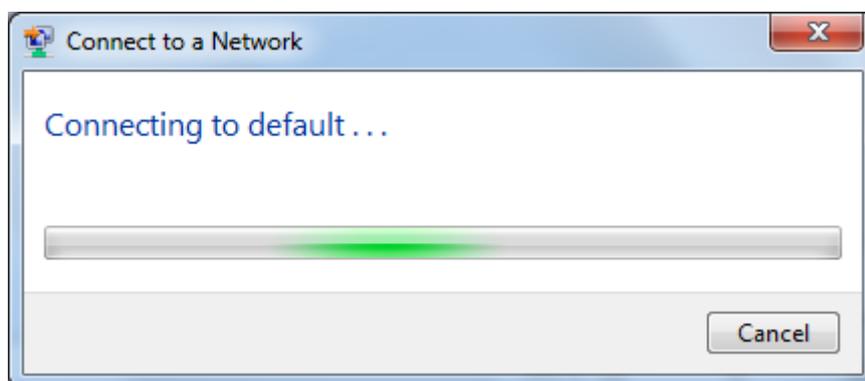


Figure 6-8 Connecting to a Network

Step 5: Check if **“Connected”** is displayed

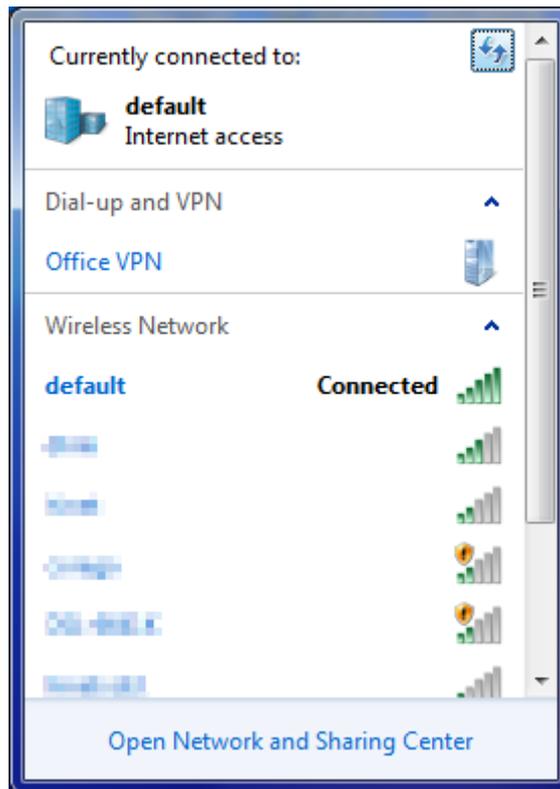


Figure 6-9 Connected to a Network

6.3 Mac OS X 10.x

In the following sections, the default SSID of the WNAP-W2200 is configured to “default”.

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

The AirPort Network Connection menu will appear

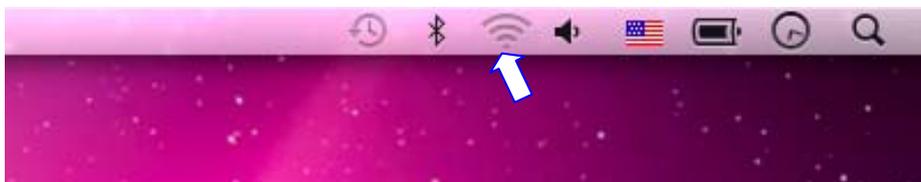


Figure 6-10 Mac OS – Network Icon

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

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

(2) Double-click on the selected SSID

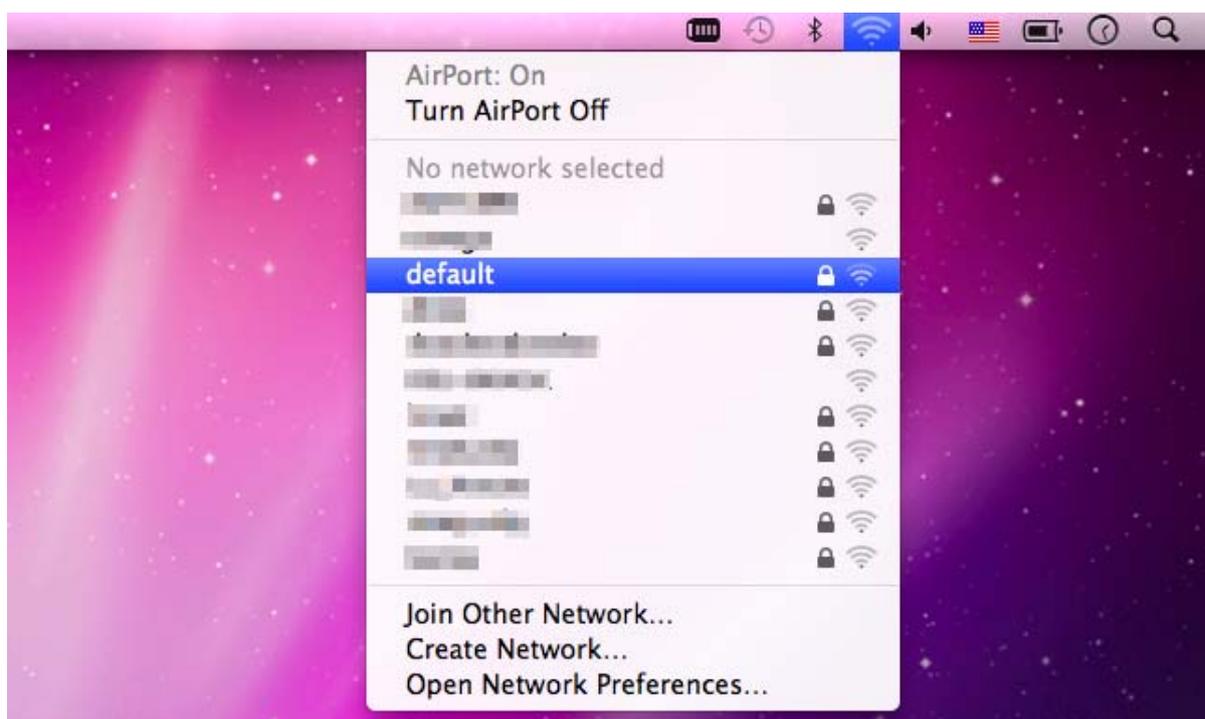


Figure 6-11 Highlight and Select the Wireless Network

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

(1) Enter the encryption key that configured in [section 5.3.2](#)

(2) Click the [OK] button



Figure 6-12 Enter the Password



Note

If you will be connecting 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 front of the SSID.

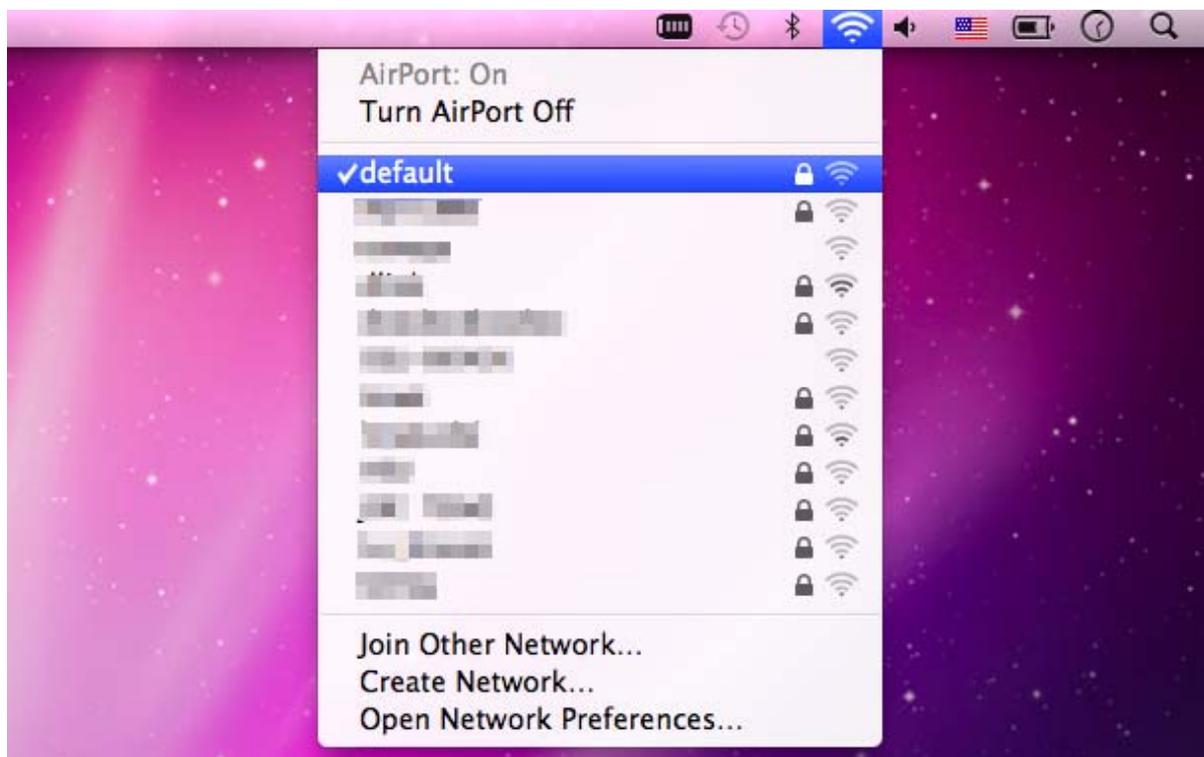


Figure 6-13 Connected to the Network

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

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

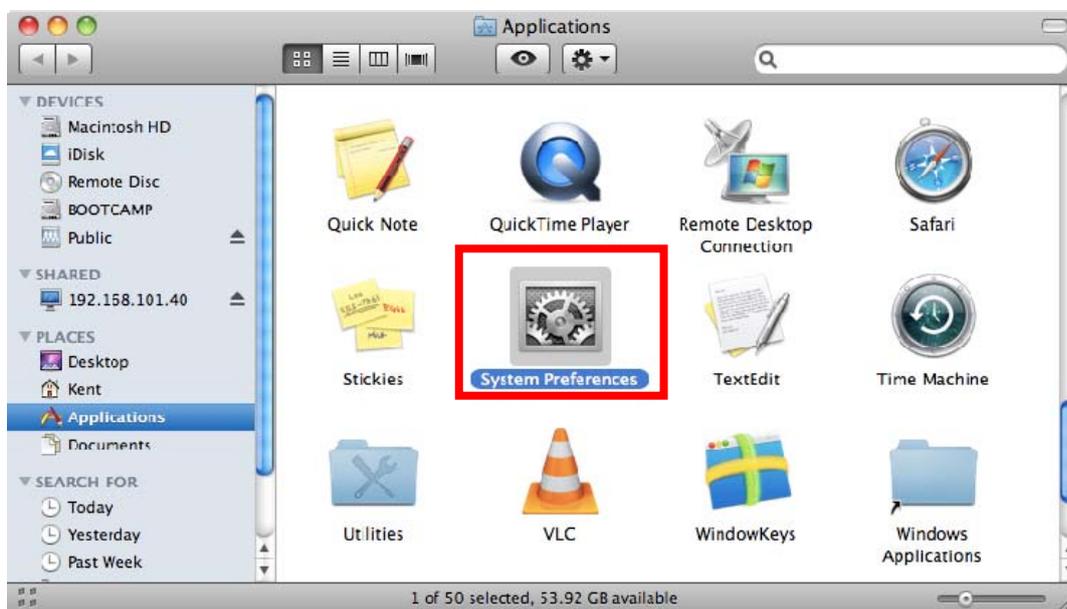


Figure 6-14 System Preferences

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

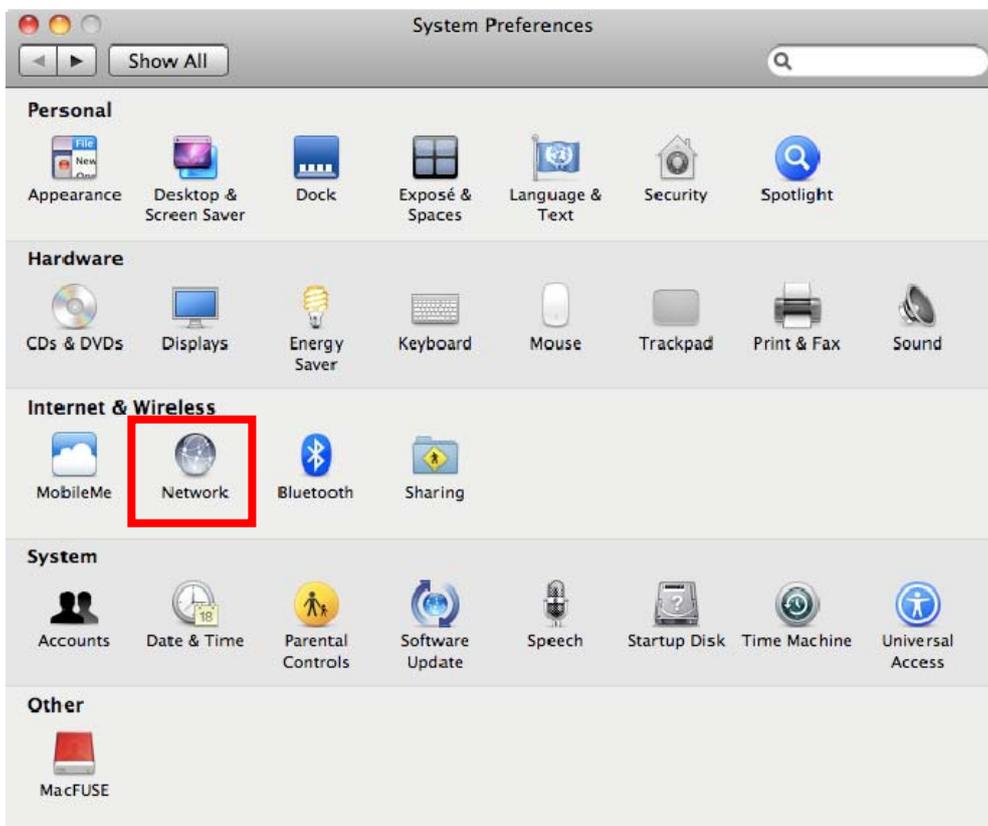


Figure 6-15 System Preferences -- Network

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

- (1) Choose the **AirPort** on the left-menu (make sure it is ON)
- (2) Select Network Name **[default]** here

If this is the first time to connect to the Wireless AP, it should show “No network selected”.

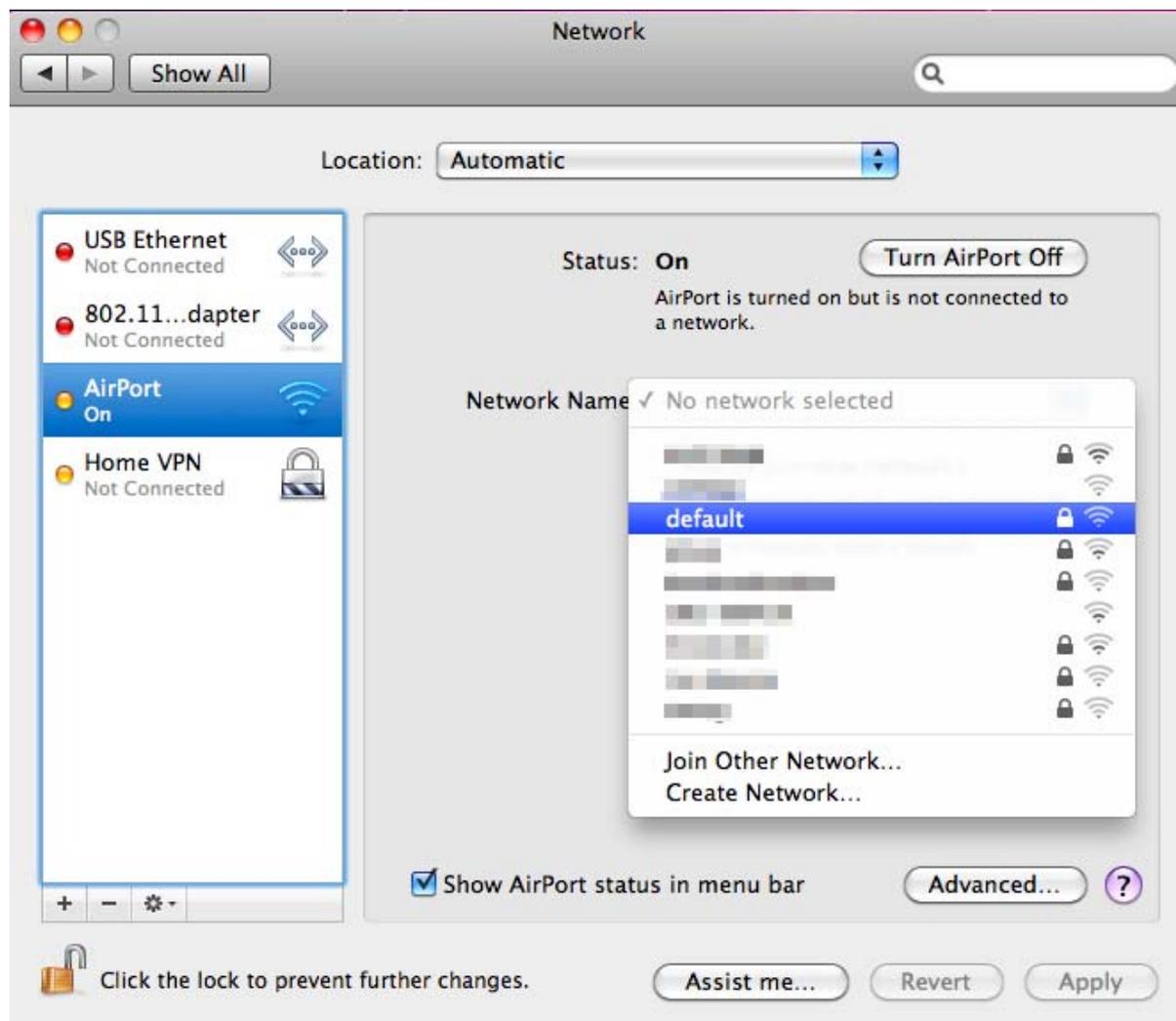


Figure 6-16 Select the Wireless Network

6.4 iPhone / iPod Touch / iPad

In the following sections, the **default SSID** of the WNAP-W2200 is configured to “**default**”.

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

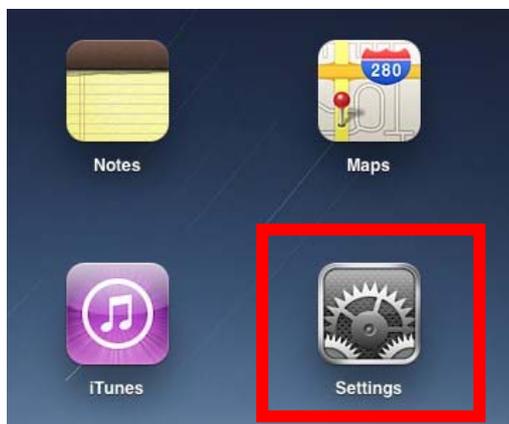


Figure 6-17 iPhone – Settings Icon

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

(3) Tap [General] \ [Network]

(4) Tap [Wi-Fi]

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



Figure 6-18 Wi-Fi setting

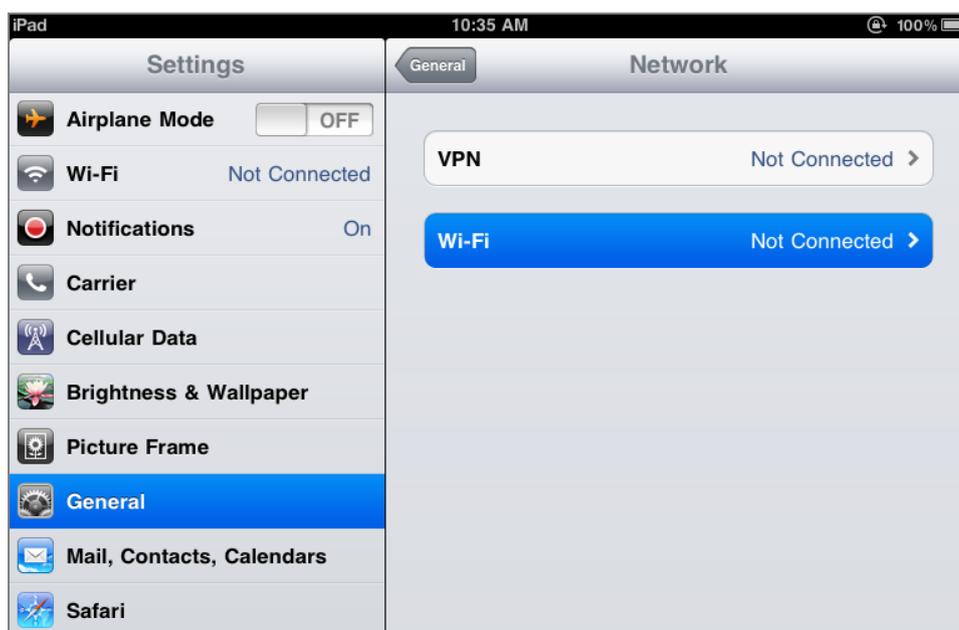


Figure 6-19 Wi-Fi setting – Not Connected

Step 3: Tap the target wireless network (SSID) in “Choose a Network...”

- (1) Turn on Wi-Fi by tapping “Wi-Fi”
- (2) Select SSID [default]



Figure 6-20 Turn On Wi-Fi

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 5.3.2](#)
- (3) Tap the [Join] button

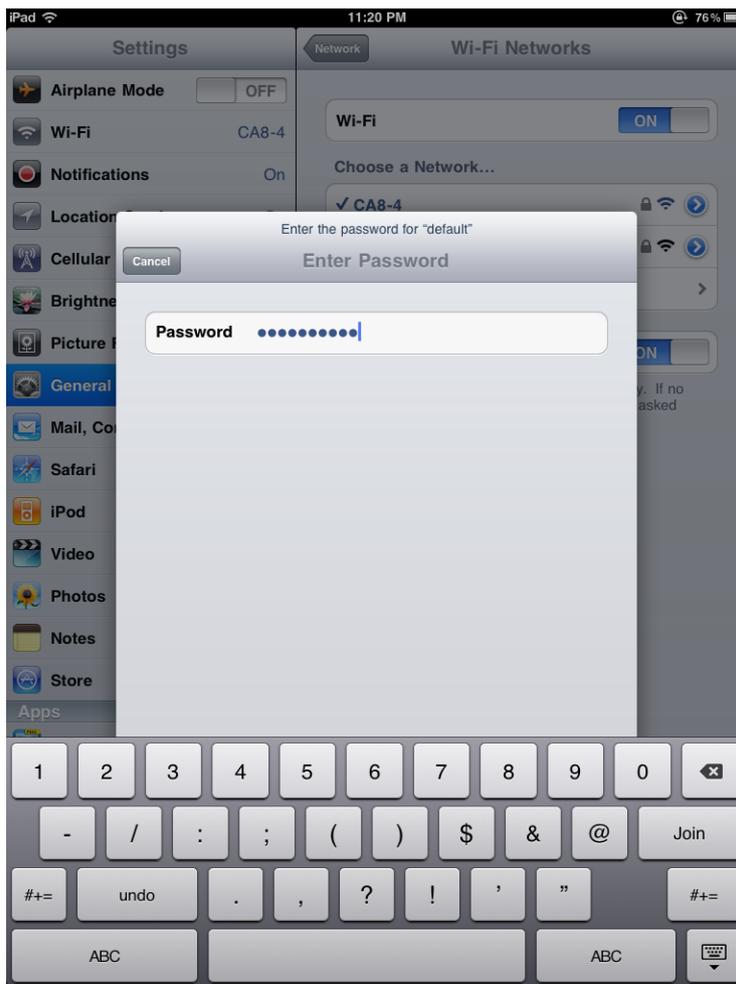


Figure 6-21 iPhone -- Enter the Password

Step 5: Check if the device is connected to the selected wireless network.
If "Yes", then there will be a "check" symbol in front of the SSID.



Figure 6-22 iPhone -- Connected to the Network

Appendix A: Planet Smart Discovery Utility

To easily list the WNAP-W2200 in your Ethernet environment, the Planet Smart Discovery Utility from user's manual CD-ROM is an ideal solution.

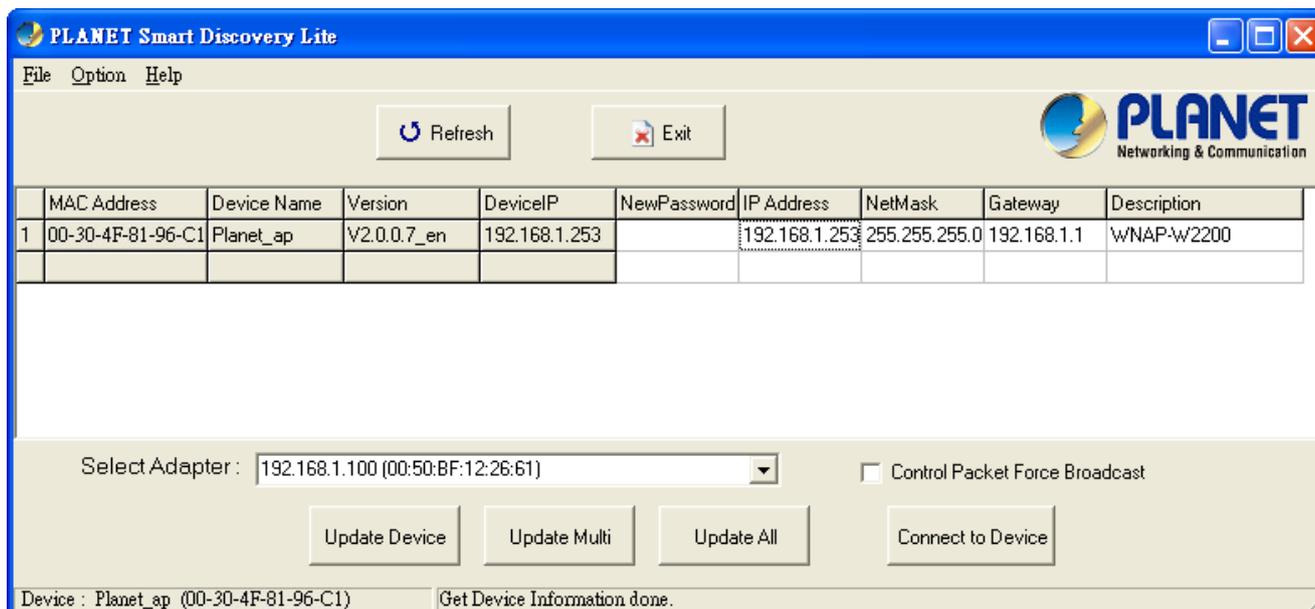
The following installation instructions guide you to running the Planet Smart Discovery Utility.

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

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



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



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



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 dealer for help. Some problems can be solved by yourself within a very short time.

Scenario	Solution
The AP is not responding to me when I want to access it by web browser.	<ul style="list-style-type: none"> 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 obtain an IP address automatically (DHCP), and see if your computer can get an IP address. f. If you did a firmware upgrade and this happens, contact your dealer of purchase for help. g. If all the solutions above don't work, contact the dealer for help.
I can't get connected to the Internet.	<ul style="list-style-type: none"> a. Go to 'Status' -> 'Internet Connection' menu, and check Internet connection status. b. Please be patient, sometimes Internet is just that slow. c. If you connect a computer to Internet directly before, try to do that again, and check if you can get connected to Internet with your computer directly attached to the device provided by your Internet service provider. d. Check PPPoE / L2TP / PPTP user ID and password again. e. Call your Internet service provide and check if there's something wrong with their service. f. If you just can't connect to one or more website, but you can still use other internet services, please check URL/Keyword filter. g. Try to reset the AP and try again later. h. Reset the device provided by your Internet service provider too. i. Try to use IP address instead of host name. If you can

	use IP address to communicate with a remote server, but can't use host name, please check DNS setting.
I can't locate my AP by my wireless device.	<ul style="list-style-type: none"> a. 'Broadcast ESSID' set to off? b. All two antennas are 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 downloading is very slow or breaks frequently.	<ul style="list-style-type: none"> a. Are you using QoS function? Try to disable it and try again. b. Internet is slow sometimes. Please be 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.	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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-W2200 300Mbps 802.11n Wireless In-wall Access Point	
Hardware Specifications		
Interface	PoE Port	1 x 10/100Mbps Auto MDI/MDI-X RJ45 port (Rear Panel) ※ IEEE 802.3af PD Port
	LAN Port	1 x 10/100Mbps Auto MDI/MDI-X RJ45 port
	RJ-11 Port	Connect to the telephone through the 4-conductor phone line
	4-pin Terminal Block	Connect to the PBX through the 4-conductor telephone wire (Rear Panel)
	USB Port	USB 2.0, Type-A, 5V DC/0.5A Output
PoE	IEEE 802.3af	
Antenna	Built-in 3dBi antenna x2	
Reset Button	Reset button on front panel Press over 7 seconds to reset the device to factory default	
LED Indicators	PWR/SYS LED	
Material	Plastic	
Dimensions (W x D x H)	86 x 86 x 35 mm (L x W x H)	
Weight	103g	
Power Requirements	48V DC, 320mA	
Power Consumption	< 10W	
Wireless Interface Specifications		
Standard	Compliant with IEEE 802.11b/g/n	
Frequency Band	America/ FCC: 2.414~2.462GHz (11 Channels) Europe / ETSI: 2.412~2.472GHz (13 Channels)	
Channel Width	20 or 20/40MHz	
Transmission Distance	Indoor up to 100m Outdoor up to 300m (it is limited to the environment)	
RF Power (Intentional Radiator)	IEEE 802.11b: 18dBm IEEE 802.11g: 15dBm IEEE 802.11n: 15dBm	
Wireless Management Features		
Wireless Modes	Access Point (Dual-SSID)	
Encryption Security	WEP (64/128-bit) WPA-PSK (TKIP) / WPA2-PSK (AES) WPA (TKIP) / WPA2 (AES) 802.1x Authentication	
Wireless Security	Enable/Disable SSID Broadcast	

	Wireless LAN ACL (Access Control List) MAC filtering
Wireless Advanced	AP Isolation: Enable it to isolate each connected wireless client
	Supports 802.11e WMM (Wi-Fi Multimedia), 802.1Q VLAN
Max. Supported Clients	Wire: Not limited
	Wireless: 25
System Management	Web-based (HTTP) management interface
	SNMP management, LED On/Off control, Schedule Reboot
	Supports Planet Smart Discovery & Centralized Management Utility
	System Log
Environments	
Temperature	Operating: -10 ~ 45 degrees C
	Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-Condensing)
	Storage: 10% ~ 90% (non-Condensing)

Appendix D: Glossary

- **802.11n** - 802.11n builds upon previous 802.11 standards by adding MIMO (multiple-input multiple-output). MIMO uses multiple transmitter and receiver antennas to allow for increased data throughput via spatial multiplexing and increased range by exploiting the spatial diversity, perhaps through coding schemes like Alamouti coding. The Enhanced Wireless Consortium (EWC) [3] was formed to help accelerate the IEEE 802.11n development process and promote a technology specification for interoperability of next-generation wireless local area networking (WLAN) products.
- **802.11b** - The 802.11b standard specifies a wireless networking at 11Mbps using direct-sequence spread-spectrum (DSSS) technology and operating in the unlicensed radio spectrum at 2.4GHz, and WEP encryption for security. 802.11b networks are also referred to as Wi-Fi networks.
- **802.11g** - Specification for wireless networking at 54Mbps using direct-sequence spread-spectrum (DSSS) technology and OFDM modulation, and operating in the unlicensed radio spectrum at 2.4GHz. It features backward compatibility with IEEE 802.11b devices and WEP encryption for security.
- **DDNS (Dynamic Domain Name System)** - The capability of assigning a fixed host and domain name to a dynamic Internet IP Address.
- **DHCP (Dynamic Host Configuration Protocol)** - A protocol that automatically configures the TCP/IP parameters for all the PC(s) that are connected to a DHCP server.
- **DMZ (Demilitarized Zone)** - A Demilitarized Zone allows one local host to be exposed to the Internet for a special-purpose service such as Internet gaming or videoconferencing.
- **DNS (Domain Name System)** - An Internet Service that translates the names of websites into IP addresses.
- **Domain Name** - A descriptive name for an address or group of addresses on the Internet.
- **DSL (Digital Subscriber Line)** - A technology that allows data to be sent or received over existing traditional phone lines.
- **ISP (Internet Service Provider)** - A company that provides access to the Internet.
- **MTU (Maximum Transmission Unit)** - The size in bytes of the largest packet that can be transmitted.
- **NAT (Network Address Translation)** - NAT technology translates IP addresses of a local area network to a different IP address for the Internet.
- **PPPoE (Point to Point Protocol over Ethernet)** - PPPoE is a protocol for connecting remote hosts to the Internet over an always-on connection by simulating a dial-up connection.

- **SSID** - A **S**ervice **S**et **I**dentification is a thirty-two character (maximum) alphanumeric key identifying a wireless local area network. For the wireless devices in a network to communicate with each other, all devices must be configured with the same SSID. This is typically the configuration parameter for a wireless PC card. It corresponds to the ESSID in the wireless Access Point and to the wireless network name.
- **WEP (Wired Equivalent Privacy)** - A data privacy mechanism based on a 64-bit or 128-bit or 152-bit shared key algorithm, as described in the IEEE 802.11 standard.
- **Wi-Fi** - A trade name for the 802.11b wireless networking standard, given by the Wireless Ethernet Compatibility Alliance (WECA, see <http://www.wi-fi.net>), an industry standards group promoting interoperability among 802.11b devices.
- **WLAN (Wireless Local Area Network)** - A group of computers and associated devices communicate with each other wirelessly, in which network serving users are limited in a local area.

EC Declaration of Conformity

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