PLANET
Networking & Communication

User's Manual

900Mbps Dual Band

Ceiling Mount Wireless AP

► WDAP-C7400

Copyright

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 900Mbps Dual Band Ceiling Mount Wireless Access Point

Model: WDAP-C7400

Rev: 1.0 (August, 2013)

Part No. EM-WDAP-C7400_v1.0 (**2081-E10550-000**)

CONTENTS

FIGURE

Chapter 1. Product Introduction

1.1 Package Contents

Thank you for choosing PLANET WDAP-C7400. Before installing the AP, please verify the contents inside the package box.

WDAP-C7400   **Ceiling Plate**   **CD-ROM**

(User Manual included)

Quick Guide   **Mounting Kit**

x 5   x 5

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

1.2 Product Description

Incredible ultra high speed and perfect coverage

The WDAP-C7400 provides the dual-band 2.4GHz + 5GHz wireless access capability, transmit power up to 500mW and 3 built-in high sensitivity dual-band antennas. It comes with an attractive flying saucer appearance and is compliant with the IEEE 802.3af/at PoE PD power scheme, thus making deployment easy and mounting to the ceiling and wall of villa and hotel lobbies, exhibition halls and other large rooms flexible. This brings the wireless network more innovations.

WiFi Home Networking

PC

Printer

IP Camera

WDAP-C7400

Smart Pad

Stereo

Gaming Console

Apple TV

Laptop

(((2.4GHz 802.11b/g/n

» High power
» More compatibility
» Wider range of applications

(((5GHz 802.11a/n

» Less interference
» More non-overlapping channels
» Stable connection

1000Base-T UTP

Ultra High Speed 802.11n Wireless Type

The WDAP-C7400 supports IEEE 802.11a/b/g/n dual band standards with 3T3R MIMO technology; therefore, it provides the wireless speed up to 450+450Mbps which is 18X faster than the traditional 11g access point. Moreover, the WDAP-C7400 is equipped with Gigabit Ethernet Port. Compared with the general wireless AP, the WDAP-C7400 offers faster transmission speed for the network applications and less interference to enhance data throughput. The incredible wireless speed makes it ideal for handling multiple HD movie streams, high resolution on-line games, stereo music, VoIP and data streams at the same time stably and smoothly.

3T3R-2.4G+5G	900Mbps
3T3R-2.4G	450Mbps
2T2R-802.11n	300Mbps
1T1R-802.11n	150Mbps
802.11g	54Mbps

18X Faster

100 200 300 400 500 600 700 800 900 (Mbps)
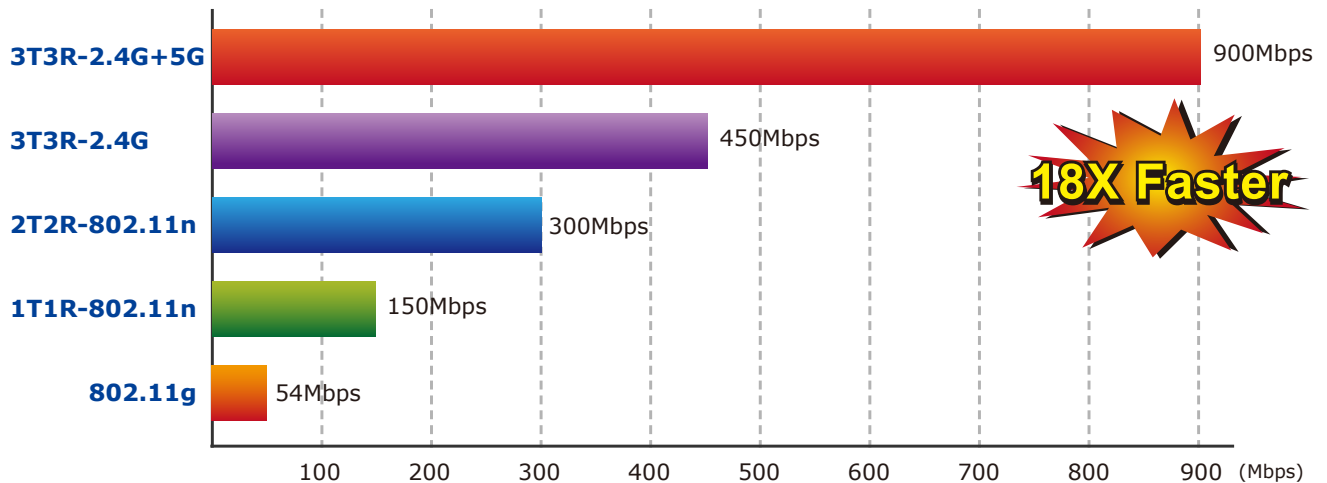
Fully Support of Wireless Security Encryption

In aspect of security, besides 64/128-bit WEP encryption, the WDAP-C7400 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.

Unique & Ceiling Mountable Design

Featuring attractive flying saucer appearance and ceiling mountable design, the WDAP-C7400 can be firmly adsorbed on the ceiling or the wall, which is easy and convenient in client-side installation. Its streamlined body without the protruding antennas also gives effects of embellishment in the surroundings.

Wireless Coverage Plus !

The WDAP-C7400 is built-in with high power amplifier and 3 high sensitivity dual-band antennas which provide stronger signal and excellent coverage even in the wider range or bad environment. With adjustable transmit power option, the administrator can flexibly reduce or increase the output power to apply various environments. Thus it is smart and powerful wireless solution for the needs of large indoor space wireless network.

Flexible Deployment with PoE Feature

Compliant with IEEE 802.3af/at Power over Ethernet standard, the WDAP-C7400 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 which is difficult to reach. The wireless network deployment becomes more flexible and worry-free from the power outlet locations.

Easy Installation & Management

With user-friendly Web UI and Central Management Utility, it is easy for administrator to set up the WDAP-C7400, even for a user who never experiences in setting up a wireless network. In addition, 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 802.11a/b/g/n Wireless LAN speed up to 900Mbps
- 2 x 10/100/1000Base-TX Ports with 1-port PoE (PD, Powered Device)
- IEEE Standard 802.3af/at Power Over Ethernet Design

> **RF Interface Characteristics**

- 2.4GHz+5GHz Dual Band concurrent, more efficiency for carrying high load traffic.
- 3T3R MIMO technology for enhanced throughput and coverage
- High Output Power Up to 500mW with multiple adjustable transmit power control
- High Speed Up to 900Mbps (450+450Mbps Transmit/Receive) data rate

> **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

> **Easy Installation & Management**

- Stylish Ceiling mount design
- User Friendly Web-based UI
- SNMP-based management interface
- Centralized Management Utility allows administrator monitoring and configuring

1.4 Product Specifications

Product	WDAP-C7400	
	900Mbps Dual Band 802.11n Wireless Ceiling Mount Access Point	
Hardware Specifications		
Interface	PoE Port:	1 x 10/100/1000Mbps Auto MDI/MDI-X RJ45 port
		※IEEE 802.3at compliant PD Port
	LAN Port:	1 x 10/100/1000Mbps Auto MDI/MDI-X RJ45 port
PoE	IEEE 802.3at	
Antenna	Built-in 3dBi dual-band antenna x3	
Reset Button	Reset button at rear panel	
	Press over 7 seconds to reset the device to factory default	
LED Indicators	PWR, 2.4GHz, 5GHz LED	
Material	Plastic	
Dimensions	200 x 200 x 40mm (L x W x H)	
Weight	450g	
Power Requirements	52~56V DC, 0.7A (max.), IEEE 802.3at 30W power source is required.	
Power Consumption	25W (max.)	
Wireless interface Specifications		
Standard	IEEE 802.11a/b/g/n	
	IEEE 802.3u/af/at	
Frequency Band	Simultaneous 2.4 GHz and 5 GHz	
	2.4GHz: 2.412~2.484GHz	
	5GHz: 5.745~5.825GHz	
Operating Channel	2.4GHz:	
	America/ FCC: 2.412~2.462GHz (11 Channels)	
	Europe/ ETSI: 2.412~2.472GHz (13 Channels)	
	5GHz:	
	IEEE 802.11a: 149, 153, 157, 161, 165	
	IEEE 802.11a/n: 149, 157	
	5GHz channel list will vary in different countries according to its Regulatory.	
Channel Width	20 or 20/40MHz	
Data Rate	2.4GHz: up to 450Mbps	
	5GHz: up to 450Mbps	
Transmission Distance	Indoor up to 100m	
	Outdoor up to 3.5Km (based on wall mount deployment, and the effective distance will vary in various environments.)	
RF Power	11a	1 - 54Mbps	21~22dBm
(Intentional Radiator)	11b	1 - 11Mbps	26.5~27.5dBm
	11g	6 - 9Mbps	26dBm
		12 - 18Mbps	25dBm
		24 - 36Mbps	24.5dBm
		48 - 54Mbps	23.5dBm
	11n	MCS 0-7	23dBm

		MCS 8-15	23dBm
		MCS 16-23	23dBm
Wireless Management Features			
Wireless Modes	Access Point		
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 clients, to let them cannot access mutually.		
	Supports 802.11e WMM (Wi-Fi Multimedia)		
Max. Supported Clients	Wire	20	
	Wireless	2.4GHz:	20
		5GHz:	25
System Management	Web-based (HTTP) management interface		
	SNMP management		
	Supports Planet Smart Discovery & Centralized Management Utility		
	System Log		

Chapter 2. Hardware Installation

Please follow the instructions below to connect WDAP-C7400 to the existing network devices and your computers.

2.1 Product Outlook

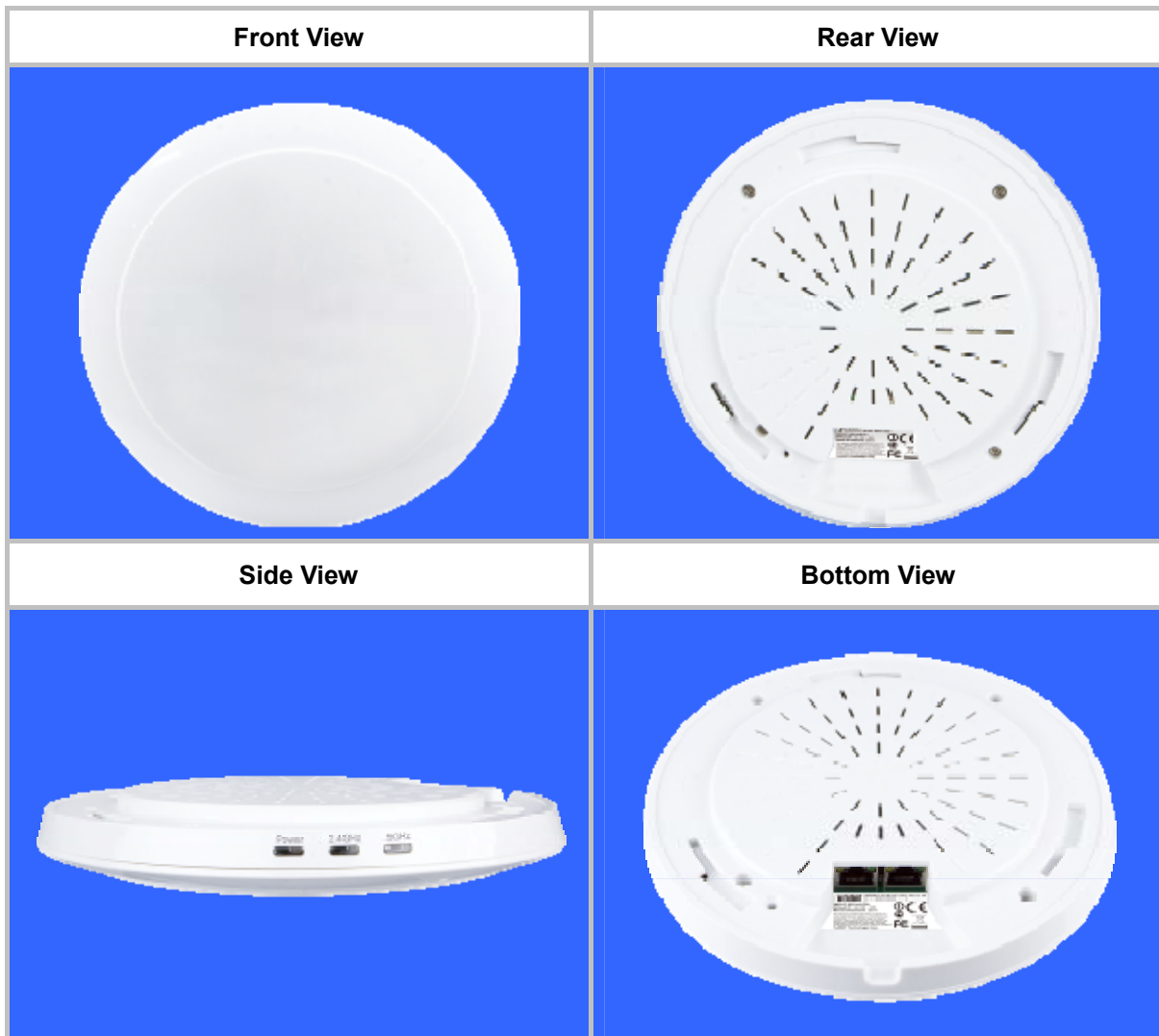- **Dimensions**: 200 x 200 x 40mm (L x W x H)

- **Diagram :**

Front View	Rear View
Side View	**Bottom View**

Figure 2-1 WDAP-C7400 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 WDAP-C7400.

Hardware Interface

Figure 2-2 WDAP-C7400 Panel Layout

2.1.2 Hardware Description

LED definition

LED (Left to Right)	COLOR	STATE	FUNCTION
PWR	Yellow	On	Device power on
		Flash	The system is working properly
		Off	Device power off
5GHz	Yellow	On	The 5GHz WiFi is activated
		Flash	Device is transmitting data wirelessly over 5GHz
2.4GHz	Yellow	On	The 2.4GHz WiFi is activated
		Flash	Device is transmitting data wirelessly over 2.4GHz

Button definition

Object	Description
Reset	Press the Reset button for over 7 seconds and then release it. The system will restore to the factory default settings.

Port definition

Object	Description
PoE Port **(802.3at PoE)**	10/100/1000Mbps RJ-45 port , Auto MDI/ MDI-X Connect PoE port to the IEEE 802.3at PoE switch to power on the device.
LAN Port	10/100/1000Mbps RJ-45 port , Auto MDI/ MDI-X Connect this port to the network equipment.

Chapter 3. Connecting to the AP

3.1 System Requirements

- Broadband Internet Access Service (Cable/xDSL/Ethernet connection)

- One IEEE 802.3at PoE Switch (supply power to the WDAP-C7400)

- PCs with a working Ethernet Adapter and an Ethernet cable with RJ-45 connectors

- PC of subscribers running Windows 98/ME, NT4.0, 2000/XP, Windows Vista / Win 7, MAC OS 9 or later, Linux, UNIX or other platforms compatible with **TCP/IP** protocols

- The above PC is installed with WEB Browser

> 1. The AP in the following instructions means PLANET WDAP-C7400.
> 2. It is recommended to use Internet Explore 7.0 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.

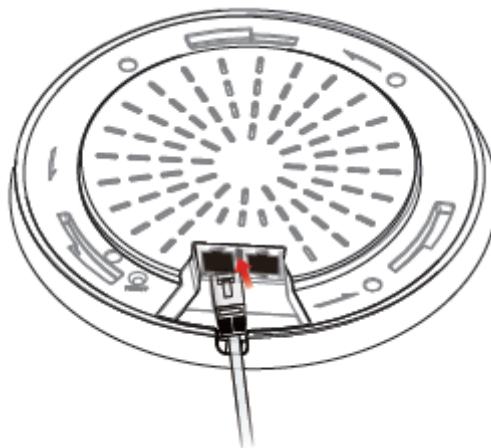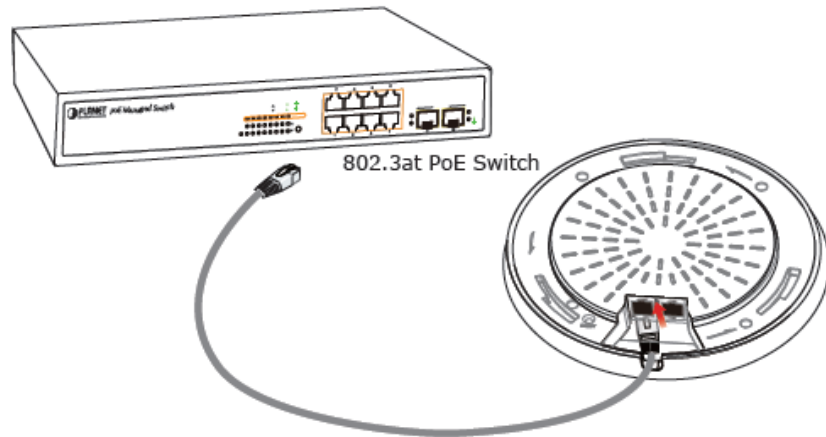**Step 1.** Plug the Ethernet cable into the PoE port.

Figure 3-1 WDAP-C7400 Installation Diagram-1

Step 2. Plug the other end of the Ethernet cable into the PoE switch.
   ※ IEEE 802.3at PoE switch is required.

Power Requirement: 802.3at 30W power source is required.

Figure 3-2 WDAP-C7400 Installation Diagram-2

Step 3. Mounting:
    (1) Attach the Ceiling Plate to the ceiling.
    (2) Mark each point in the Ceiling Plate for the screws.
    (3) Remove the Ceiling Plate to drill the points and insert the plastic wall-mounts.
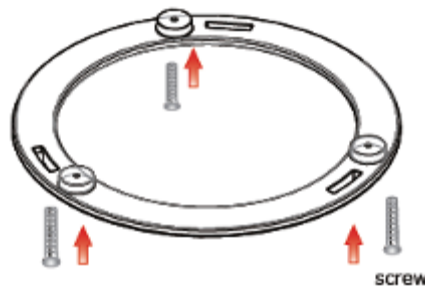   (4) Use screws to lock the Ceiling Plate by a screw driver.

Figure 3-3 WDAP-C7400 Installation Diagram-3

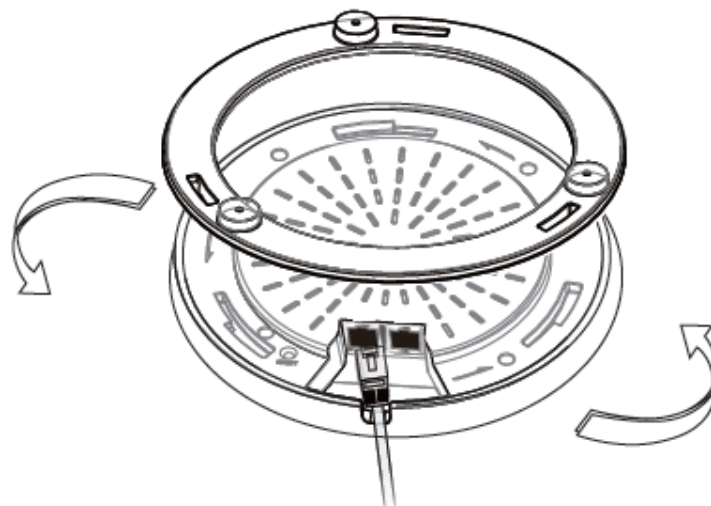**Step 4.** Attach the WDAP-C7400 to the Ceiling Plate to finish the installation.

Figure 3-4 WDAP-C7400 Installation Diagram-4

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.
Note	

4.1 Manual Network Setup - TCP/IP Configuration

The default IP address of the WDAP-C7400 is **192.168.1.253**. And the default Subnet Mask is 255.255.255.0. These values can be changed as you want. In this guide, we use all the default values for description.

Connect the WDAP-C7400 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 WDAP-C7400 by PoE switch through the PoE port.

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 (if the default IP address of the WDAP-C7400 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, and then configure the IP address of the PC.

2   For example, as the default IP address of the WDAP-C7400 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.
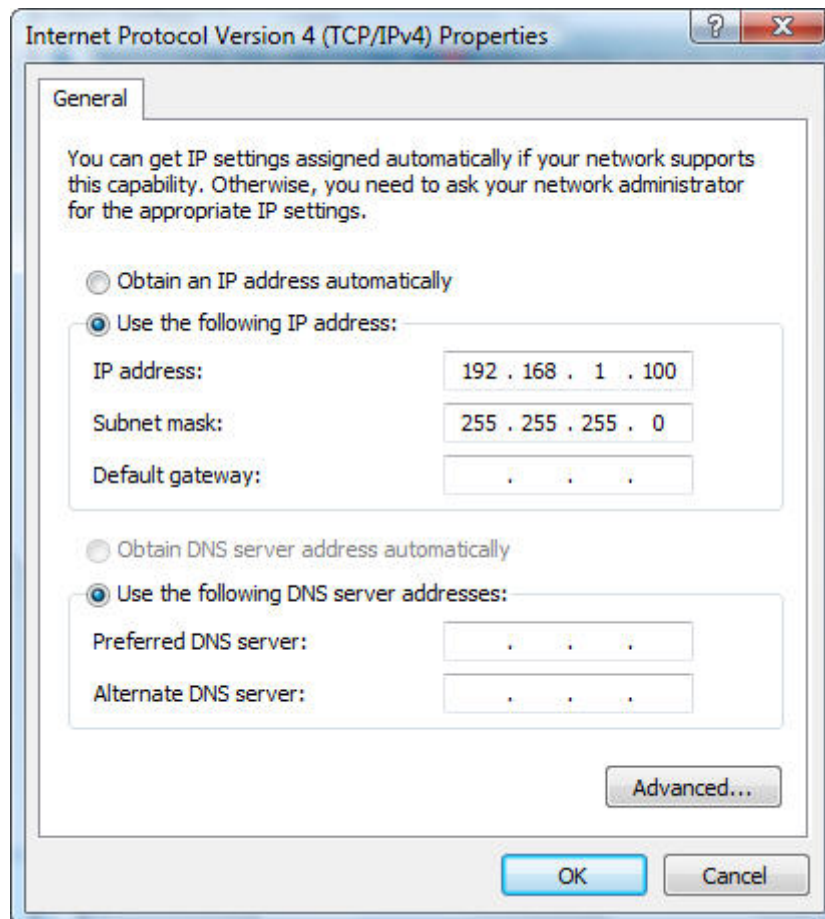
Figure 4-1 TCP/IP Setting

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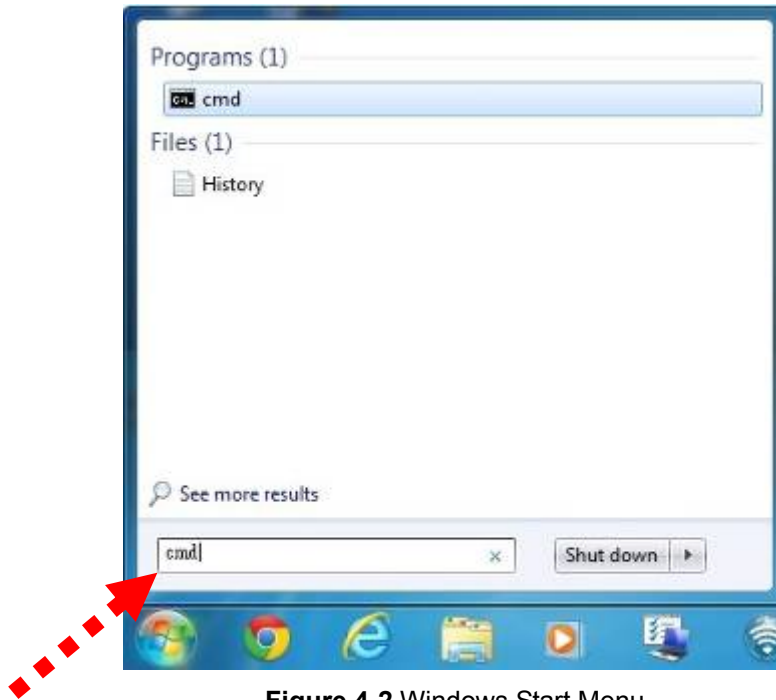
2. Type "**cmd**" in the Search box.

Figure 4-2 Windows Start Menu

3. Open a command prompt, and type ping **192.168.1.253**, 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 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 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.
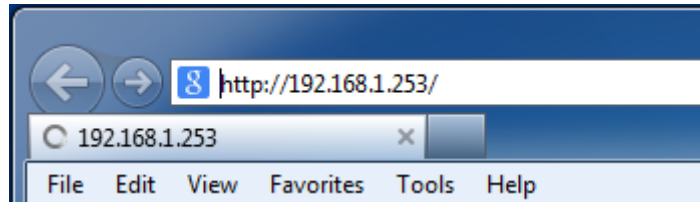
Figure 4-5 Login by default IP address

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**

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 6 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 related helpful info.

5.1 Status

On this page, you can view information about the current running status of the WDAP-C7400, including LAN interface, wireless interface settings and status, and firmware version information.

■   **Status**

Figure 5-2 LAN Status

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

Object	Description
• **Device Name**	Displays AP's Model Name.
• **System Time**	Displays the System Time.
• **Up Time**	Displays the System Up Time.
• **Number of Wireless Clients**	Displays the total number of connected wireless clients.
• **Firmware Version**	Displays the current firmware version.
• **Hardware Version**	Displays the current hardware version.
• **MAC Address:**	Displays AP's LAN MAC address.
• **IP Address:**	Displays LAN IP address.
• **Subnet Mask:**	Displays LAN subnet mask.

■ Wireless Status

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

Figure 5-3 Wireless information

The page includes the following fields:

Object	Description
• **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:**	Displays current security Mode.

■ **Statistics**

Statistics displays current traffic of PCs on your LAN.

You can view the bandwidth usage on your LAN using the statistics feature, for better management of network resources.

Figure 5-4 Statistics information

The page includes the following fields:

Object	Description
• **SSID:**	Displays current SSID.
• **Total RX Traffic(MB):**	Displays total received traffic in Mbps.
• **Total RX Packets:**	Displays current received packets.
• **Total TX Traffic(MB):**	Displays total transmitted traffic in Mbps.

• **Total TX Packets:**	Displays current transmitted packets.

■ Client List

This section displays what devices connect to the WDAP-C7400.

Figure 5-5 Client List information

The page includes the following fields:

Object	Description
• **MAC address:**	Displays MAC address of the current hosts connected to the AP.
• **Link Rate:**	Displays the connection rate of each host.

5.2 Network

"**Network**" page about the LAN setting.

5.2.1 LAN Settings

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

Figure 5-6 LAN settings

The page includes the following fields:

Object	Description
• **IP Address:**	Enter the IP address of your AP 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
• **Preferred DNS Server:**	Enter the Preferred Domain Name System provided from your ISP.
• **Alternate DNS Server(Optional):**	Enter the Alternate Domain Name System provided from your ISP.
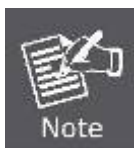
Note	1. If you change the IP Address of LAN, you must use the new IP Address to login the AP. 2. When the IP address of the WDAP-C7400 is changed, the clients on the network often need to wait for a while or even reboot before they can access the new IP address. For an immediate access to the AP, please flush the netbios cache on the client computer by running the "nbtstat –r" command before using the device name of the WDAP-C7400 to access its Web Management page.

5.3 Wireless

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

5.3.1 Basic – 2.4GHz

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

Figure 5-7 Wireless Basic Settings – 2.4GHz

The page includes the following fields:

Object	Description
• **Select Wireless Network:**	Select one of the Multiple-SSID for the network configuration. There are max. 8 SSID supported. ※ **Any settings modified in this page will be applied to all SSIDs.**
• **Wireless:**	Click "Enable" to enable the wireless signal.
• **SSID Broadcast:**	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 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.
• **SSID:**		SSID (Service Set Identifier) is the unique name of the wireless network. It is recommended to modify this name for wireless client to recognize wireless signals.
• **Country:**		Select your country from the list and the supported channel list will be modified to the channels that allows in your country.
• **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 450Mbps.
• **Channel:**		Specify the effective channel (from 1 to 13 according to different country's regulatory or set to Auto) of the wireless network. This device supports the following channel: America/ FCC: Chanel 1~11 (11 Channels) Europe/ ETSI: Channel 1~13 (13 Channels) ※ **The above channel list will vary according to different countries' regulatory.**
• **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 (20/40) 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 Capable:**		To enhance wireless multimedia transfer performance (on-line video and voice). If you are not clear about this, enable it.
• **APSD Capable:**		It is used for auto power-saved service. The default is enabled.
• **Max Client:**		To set the maximum number of clients that may connect to this device. The default suggested value is 30, and the max. is 124.

5.3.2 Basic – 5GHz

Figure 5-8 Wireless Basic Settings – 5GHz

The page includes the following fields:

Object	Description
• **Select Wireless Network:**	Select one of the Multiple-SSID for the network configuration. There are max. 2 SSID supported. ※ **Any settings modified in this page will be applied to all SSIDs.**
• **Wireless:**	Click "Enable" to enable the wireless signal.
• **SSID Broadcast:**	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 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.
• **SSID:**	SSID (Service Set Identifier) is the unique name of the wireless network. It is recommended to modify this name for wireless client to recognize wireless signals.
• **Country:**	Select your country from the list and the supported channel list will be

	modified to the channels that allows in your country.	
• Wireless Mode:	**11a/n mixed Mode**	Allow 11a/n-compliant client device to connect with the AP with auto- negotiation speed. The maximum speed is 450Mbps.
	11a Mode	Allow the wireless client to connect with the device in 11a mode at the maximum speed of 54Mbps.
• Channel:	Specify the effective channel or set to Auto of the wireless network. This device supports the following channel: IEEE 802.11a: 149, 153, 157, 161, 165 IEEE 802.11a/n: 149, 157 ※ **The above channel list will vary according to different countries' regulatory.**	
• WMM Capable:	To enhance wireless multimedia transfer performance (on-line video and voice). If you are not clear about this, enable it.	
• APSD Capable:	It is used for auto power-saved service. The default is enabled.	
• Max Client:	To set the maximum number of clients that may connect to this device. The default suggested value is 30, and the max. is 124.	

5.3.3 Security

You can configure the security settings for the wireless network on this page.

Figure 5-9 Wireless Security Settings

There are following encryption types in AP-Security Mode.

Object	Description
• Select Wireless Network:	Select the SSID for your network.

	Disable	The wireless security function can be enabled or disabled. If disabled, the wireless stations will be able to connect to the AP without encryption. It is recommended strongly that you choose one of following options to enable security.
	WEP Mode	WEP (Wired Equivalent Privacy), a basic encryption method. 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. Enter 5 or 13 valid ASCII characters (0-9,a-z,A-Z,@,*,-,_ only) if you select ASCII or enter 10 or 26 valid Hex characters (0-9,a-f,A-F only) if you select Hex.
• **Security Mode:**	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 Enterprise	With warrant (username, password and etc.) offered by user, this kind of authentication can be realized with specific RADIUS server. This is the common way to be adopted in large enterprise network.
	WPA2 Enterprise	You can use a RADIUS server to authenticate wireless stations and provide the session key to encrypt data during communication. It uses TKIP or CCMP (AES) to change the encryption key frequently.

5.3.4 WDS

WDS (Wireless Distribution System) feature can be used to extend your existing 2.4G or 5G wireless network coverage. Here we present you how to configure such feature in 2.4GHz, which also applies to 5GHz.
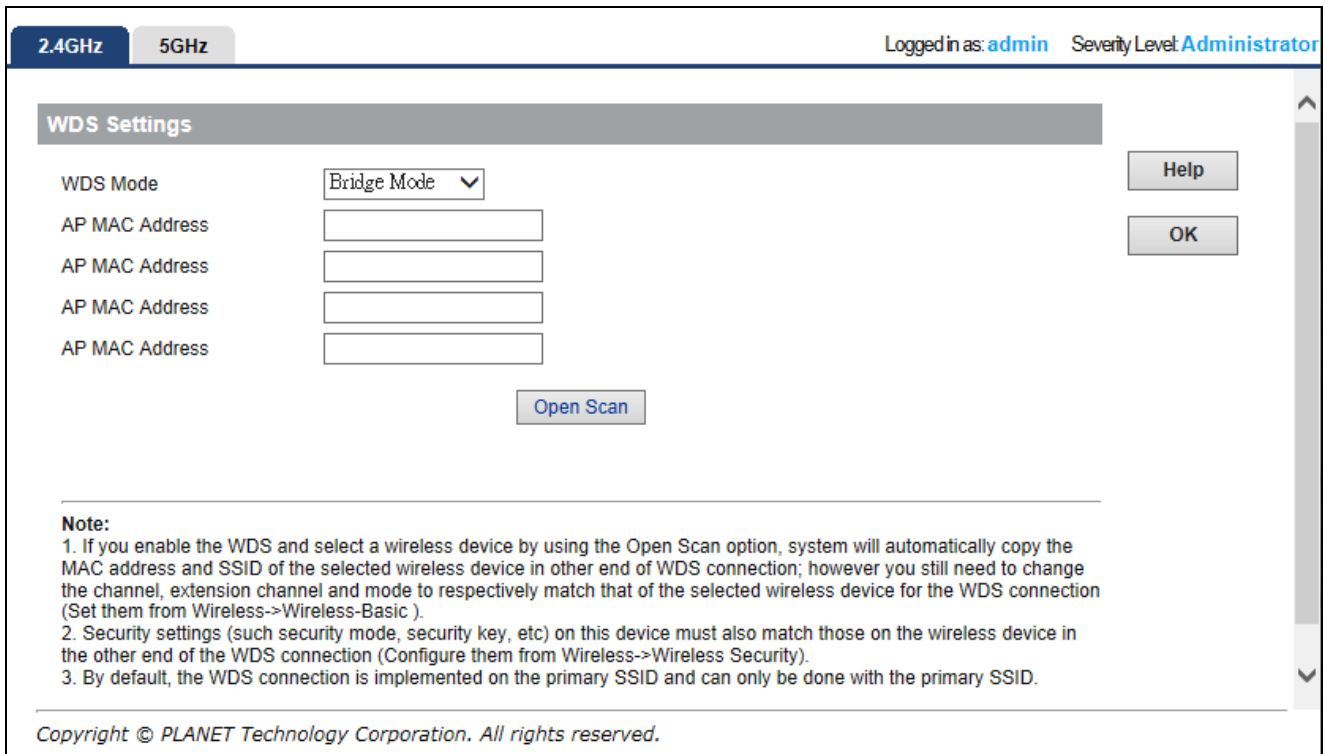
Figure 5-10 WDS

The page includes the following fields:

Object	Description
• **WDS Mode:**	Select "Bridge Mode" or "Repeater Mode". **Bridge Mode**: The WDAP-C7400 will connect to the remote slave APs via WDS, the max. slave APs up to 4. **Repeater Mode**: The WDAP-C7400 will connect to the root AP via WDS, and then able to broadcasting the SSID for the wireless clients. The first SSID will be used for WDS connection, and the second SSID will be used for providing access for wireless clients.
• **AP MAC** • **Address:**	Enter the MAC address of the remote AP that you want to associate to.
Open Scan/ **Re-scan:**	Click "Open Scan" to automatically discover the remote AP. The button will be displayed as "Re-scan" once you have used it. Click "Re-scan" to discover the remote AP again.

1. If you already know **WDAP-C7400-2's** MAC address, then you can manually enter it on **WDAP-C7400-1** and click "**OK**".

2. Or you can use the Open Scan option.

1) Click the "**Open Scan**" button to search and select **WDAP-C7400-2's** SSID, confirm on the appearing dialogue box and then click "OK". **WDAP-C7400-2's** MAC address will be added automatically.

Figure 5-11 WDS Settings

2) Press "OK" and then reboot to save your settings.

Figure 5-12 WDS Settings - Finished

3) Repeat the previous procedure in the second WDAP-C7400.

4) If Repeater mode is used in the second WDAP-C7400 upon finishing the previous procedure, you can use a wireless client to connect to the second WDAP-C7400's default SSID (default_2.4G_1) to test if you are able to connect to the first WDAP-C7400 through the repeater's connection.

The following hints should be carefully noted:
1) The encryption method should be the same in both APs if configured.
   To configure WDS security, please refer to the section 5.3.3.

2) For better performance, please adjust the following parameters:
   a)Max Clients: set to default or less (< 30)
   b)Channel Bandwidth: 20/40
   c)Encryption: WPA2-PSK/AES
   d)Multiple-SSID: disabled

3) To reduce interference, please site survey to check the channel occupied status. Then configure to the channel that is not used by too many wireless equipment.

4) Please reduce the output power (Wireless-> Advanced-> TX Power Percentage) for short distance connection to prevent near-field effect.

5) Both APs must be configured to the same channel.

5.3.5 Universal Repeater

Choose menu "**Wireless → Universal Repeater**". You can repeat the wireless signal of the root AP with the WDAP-C7400. After the configuration is done, please click the "OK" button to save the settings.

Figure 5-13 Universal Repeater Settings

The page includes the following fields:

Object	Description
• **Universal Repeater Mode:**	Select "Enable" to enable the Universal Repeater mode.
• **Interface:**	Select "2.4G" or "5G" interface for the Universal Repeater connection.
• **SSID:**	The current SSID. Once selected the root AP, the SSID will became to the SSID of root AP's.
• **MAC** • **Address:**	Enter the MAC address of the root AP that you want to associate to.
Channel:	Select the channel that the same with the root AP's.
Security Mode:	Configure the security setting that the same with the root AP's.

1. If you already know **root AP's** MAC address, then you can manually enter it on **WDAP-C7400** and click "**OK**".

2. Or you can use the Enable Scan option.

1) Click the "**Enable Scan**" button to search and select **root AP's** SSID, confirm in the appearing dialogue box and then click "OK". **Root AP's** MAC address will be added automatically.

Figure 5-14 Universal Repeater Settings - Finished

2) Press "OK" to reboot to save your settings.

3) Now, you can use a wireless client (smart phone, laptop…) to site survey the repeater's SSID of the WDAP-C7400 (the SSID should be "**Default_2.4G_1**"), and then will be able to connect to it.

5.3.6 Wireless Access Control

Choose menu "**Wireless → Wireless Access Control**". You can choose to allow or deny the computer of specified MAC address to wirelessly connect with the WDAP-C7400 on this page. After the configuration is done, please click the "OK" button to save the settings.

Figure 5-15 Wireless Access Control

The page includes the following fields:

Object	Description
• Select Wireless Network:	Select the SSID that required limit the access authority.
• MAC Address Filter:	You can choose to set the Allow, Deny or disable this function.
• MAC Address:	Enter the MAC address you want to allow or deny to connect to the WDAP-C7400 in the field. Then, click "Add" to add the MAC address to the control list.
• Wireless Client List:	The table displayed the current access control list. You can select some MAC address, and click the "Delete" button to delete it.

To deny a PC at the MAC address of 00:30:4F:00:00:01 to connect to your wireless network, do as follows:

Step 1. Select "**Deny**" from MAC Address Filter drop-down menu.

Step 2. Enter 00:30:4F:00:00:01 in the MAC address box and click "**Add**".

Step 3. Click the "**OK**" button to save your settings and you can add more MAC addresses, if you like, simply repeat the above steps.
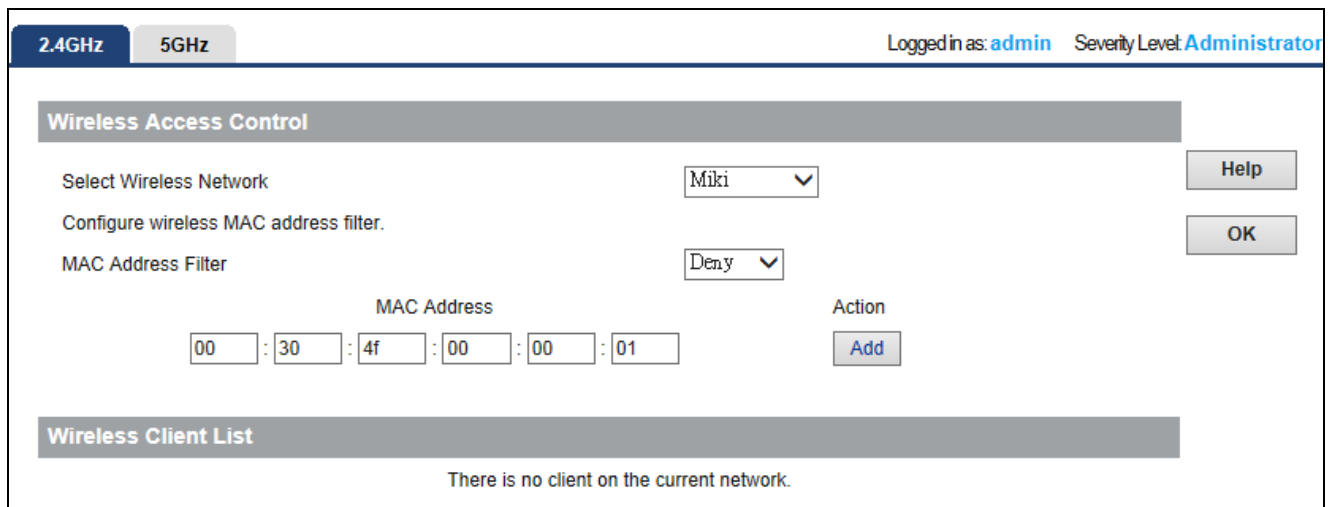
Figure 5-16 Wireless Access Control – Add a client

5.4 Advanced

This section allows you to configure advanced settings, including **RF Preamble**, **Beacon interval, Fragment threshold, RTS threshold** and **DTIM interval**, etc.

Figure 5-17 Advanced

The page includes the following fields:
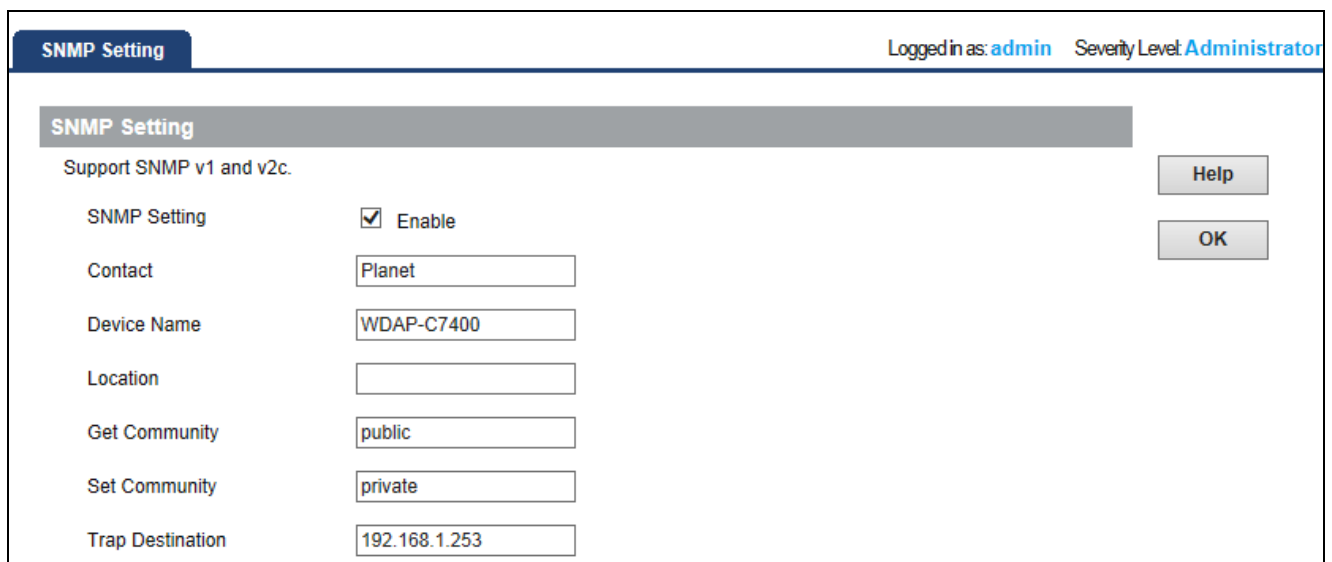
Object	Description
• **RF Preamble:**	A preamble is a signal used in network communications to synchronize transmission timing between two or more systems The default setting is **Long.**
• **Beacon Interval:**	A time interval between any 2 consecutive Beacon packets sent by device. **Note:** Do NOT change the default value of 100 unless necessary.
• **Fragment Threshold:**	Enter a Fragment Threshold (256-2346). Any wireless packet exceeding such set value will be divided into several fragments. **Note:** DO NOT change the default value of 2346 unless necessary
• **RTS Threshold:**	If a packet exceeds such set value, RTS/CTS scheme will be used to reduce collisions. Set it to a smaller value provided that there are distant clients and interference. For normal SOHO, it is recommended to keep the default value unchanged; otherwise, device performance may be degraded
• **DTIM Interval:**	A time interval between any two consecutive broadcast and multicast packet messages sent by the device to clients. When such packets arrive at device's buffer, the device will send **DTIM (delivery traffic indication message)** and DTIM interval to wake clients up for receiving these packets.
• **TX Power Percentage:**	Set the wireless output power level. The default value is **100**.

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.

Figure 5-18 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. Once enabled, you will need third-party SNMP software to use the SNMP function.

The page includes the following fields:

Object	Description
• **SNMP Setting:**	Select "Enable" to enable the SNMP option.
• **Contact:**	Set the name to access the AP. Usually set the administrator's name.
• **Device Name:**	Set the AP's name, such as "**WDAP-C7400**".
• **Location:**	Set the AP's network location.
• **Get Community:**	Indicates the community read access string to permit reading this AP's SNMP information.
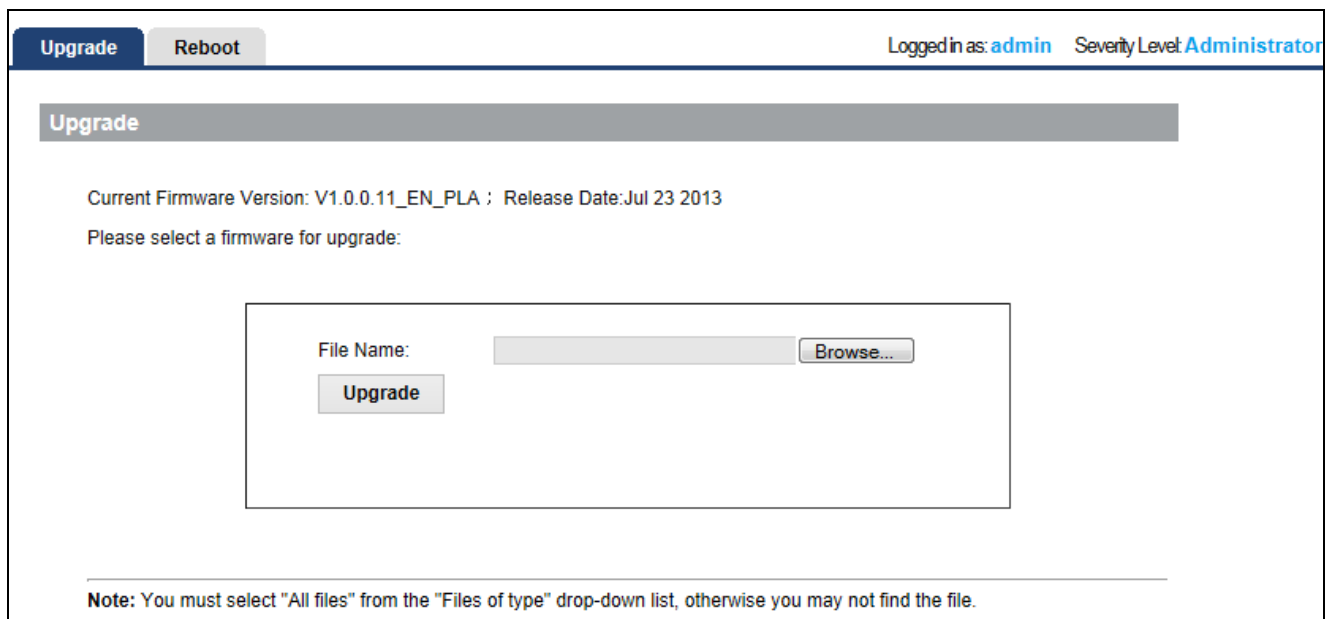
	The default is **Public**.
• **Set Community:**	Indicates the community write access string to permit reading and re-writing this AP's SNMP information. The default is **Private**.
• **Trap Destination:**	The IP address of the WDAP-C7400.

5.6 Tools

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

5.6.1 Upgrade

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 5-19 Firmware Upgrade

To update firmware, do as follows:

1. Click "**Browse**" 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.

5.6.2 Reboot

This page is used to reboot wireless access point. Rebooting the device makes the settings configured go into effect.
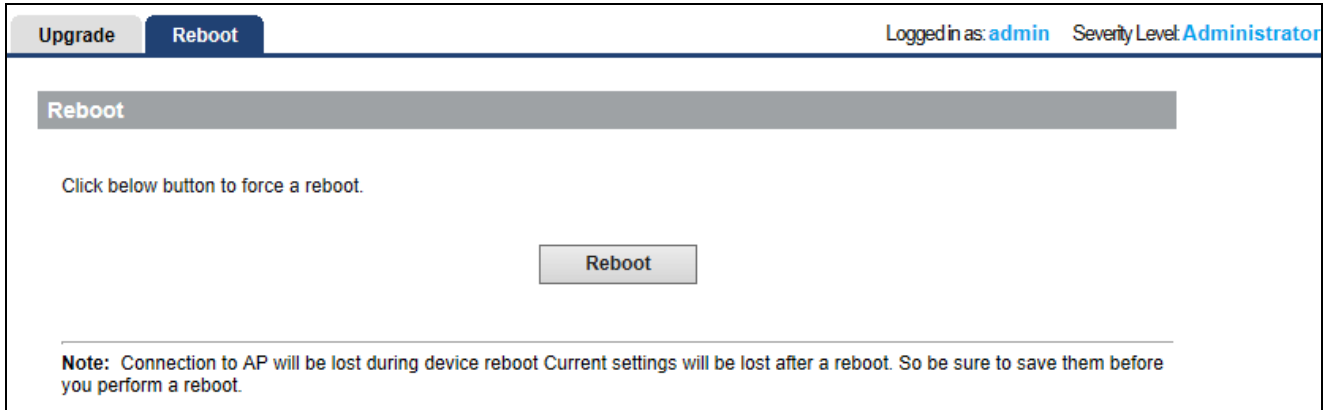
Figure 5-20 Reboot

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

5.6.3 System 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 → System 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 "**OK**" button to save the settings.

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

Figure 5-21 Time Settings

The page includes the following fields:

Object	Description
• **Sync with Internet Time Servers:**	Select it to update the system time by synchronizing with a public time server over the Internet.
• **Sync Interval:**	Configure the interval of synchronizing time.
• **Time Zone:**	Select the time zone of the country you are currently in. The router will set its time based on your selection.
• **Custom Time:**	Input current time manually.
• **Copy Local Time:**	Copy local time to the system.

5.6.4 Syslog

The section is to view the system log. Click the "Refresh" to update the log. Click "Clear" to clear all shown information. If the log is over 150 records, it will clear them automatically.

Figure 5-22 System Log

■ **Refresh:** Click this button to update the log.

■ **Clear:** Click this button to clear the current log.

5.6.5 Log Settings

The section is to configure the remote system log server. Click "Add" to add the log server.

Figure 5-23 Log Settings

The page includes the following fields:

Object	Description
• **Log Server IP:**	Enter the remote log server's IP address.
• **Log Server Port:**	Enter the remote log server's service port.
• **Enable:**	Check the box to enable the remote log server.

5.6.6 Configuration Management

This section allows you to back up current settings or to restore the previous settings configured on the device. Choose menu "**Tools → Backup Settings → Backup & Restore**" to back up or reset the configuration of the WDAP-C7400.

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.
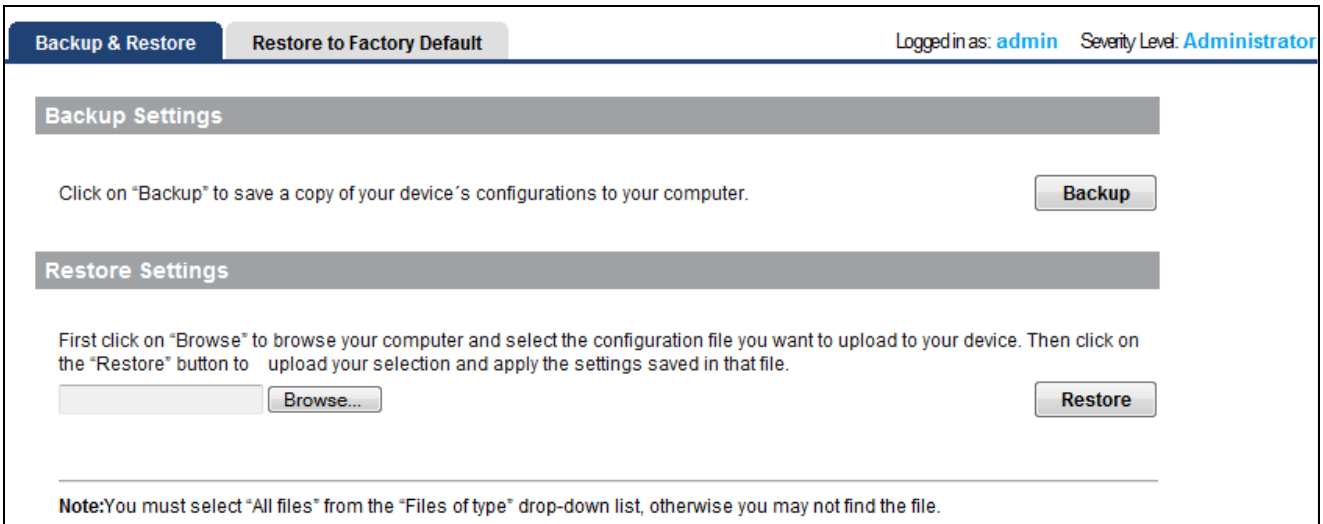
Figure 5-24 Backup & Restore

The page includes the following fields:

Object	Description
Backup:	Once you have configured the device 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 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.

5.6.7 Restoring 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.
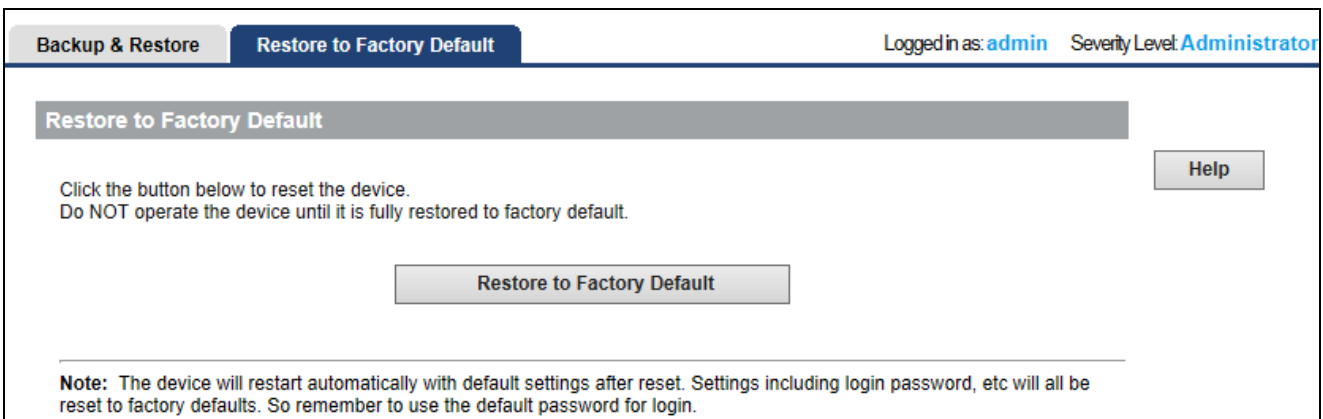
Figure 5-25 Restore to Factory Default

- **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

    Default SSID_2.4G : Default_2.4G_1

    Default SSID_5G : Default_5G_1

    Wireless Encryption Type: None

5.6.8 User Management

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 is "admin". This page will allow you to add or modify the user name and password.

Choose menu "**Tools → User Management**" to change the user name and password which is inputted to access the web UI of the WDAP-C7400.

Figure 5-26 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.

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

5.6.9 Troubleshoot

This section allows the user to determine the router packets are talking to particular host.
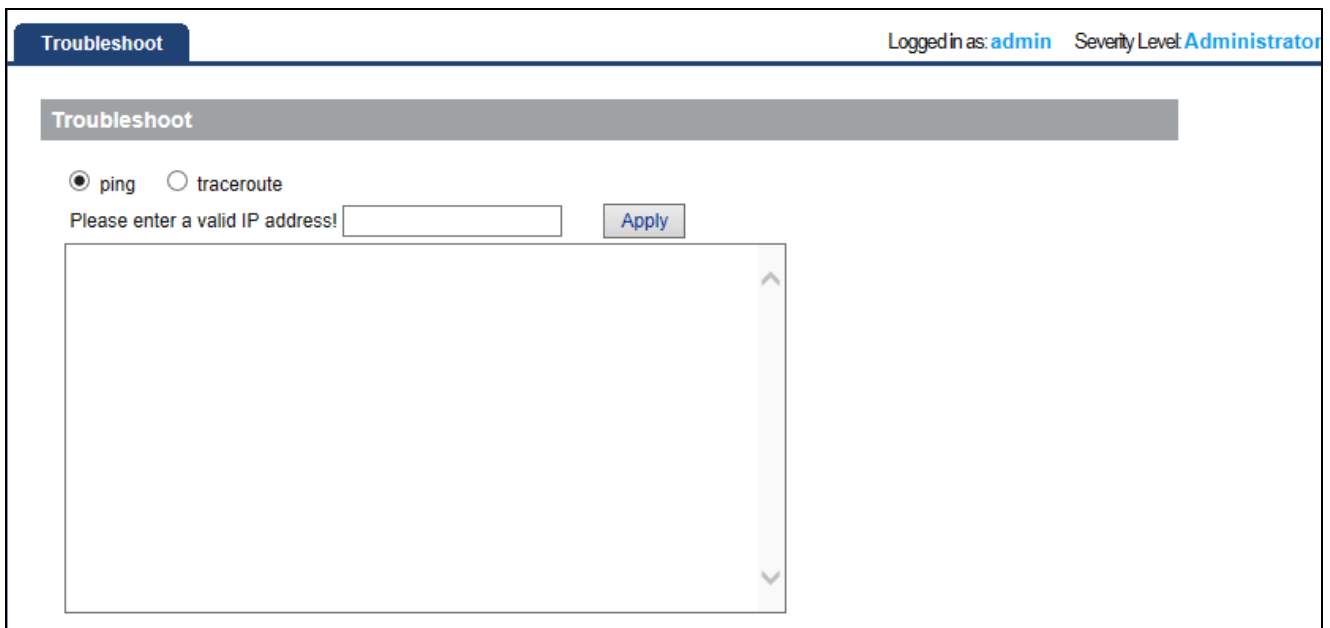
Figure 5-27 Troubleshoot

5.6.10 LED Control

To turn off all LED, please click "**Turn off all LEDs**".
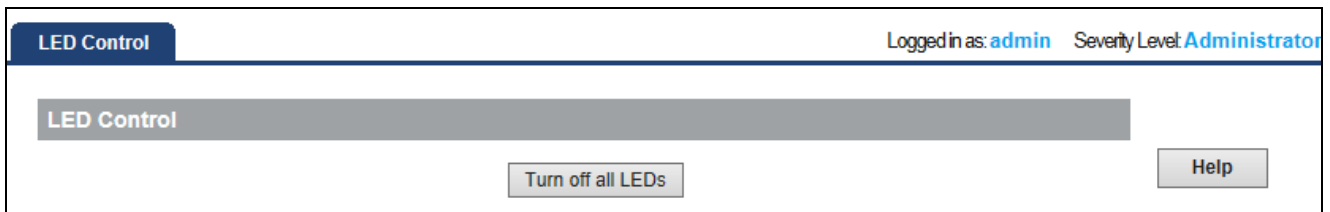
Figure 5-28 LED Control

5.6.11 Exit

To logout the WDAP-C7400, please select "**Exit**" from the left-side menu.

Chapter 6. Quick Connection to a Wireless Network

In the following sections, the **default SSID** of the WDAP-C7400 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
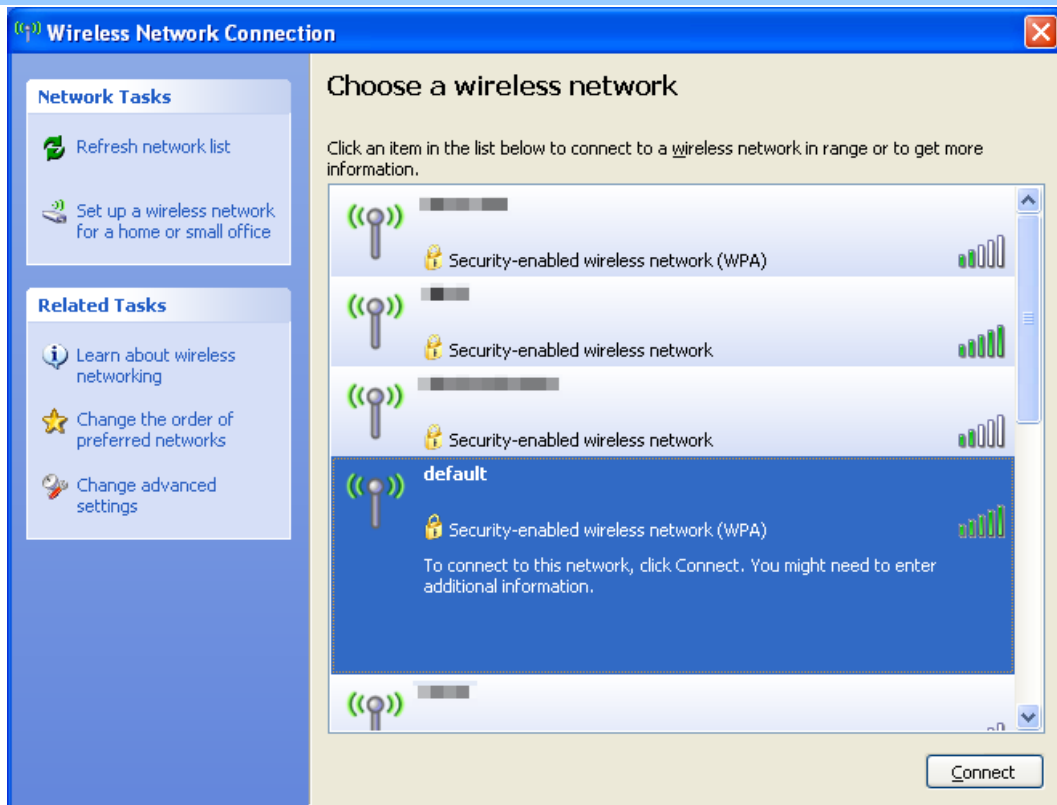
Figure 6-2 Choose a wireless network

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 5.3.3

    (3) Click the [Connect] button
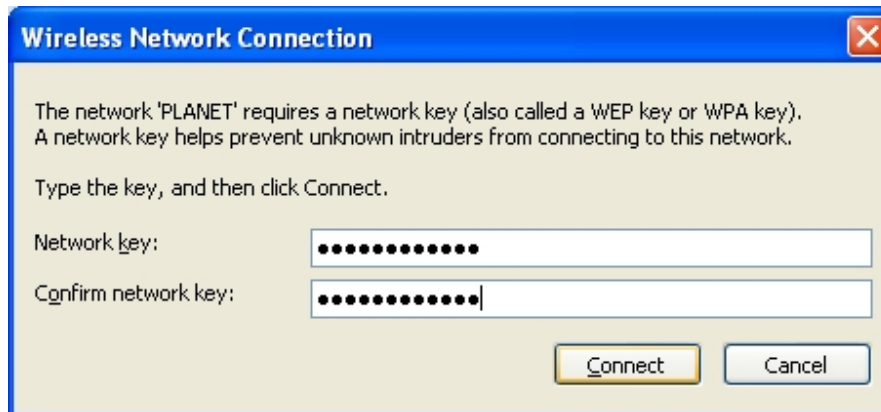
Figure 6-3 Enter the network key

Step 5: Check if "**Connected**" is displayed
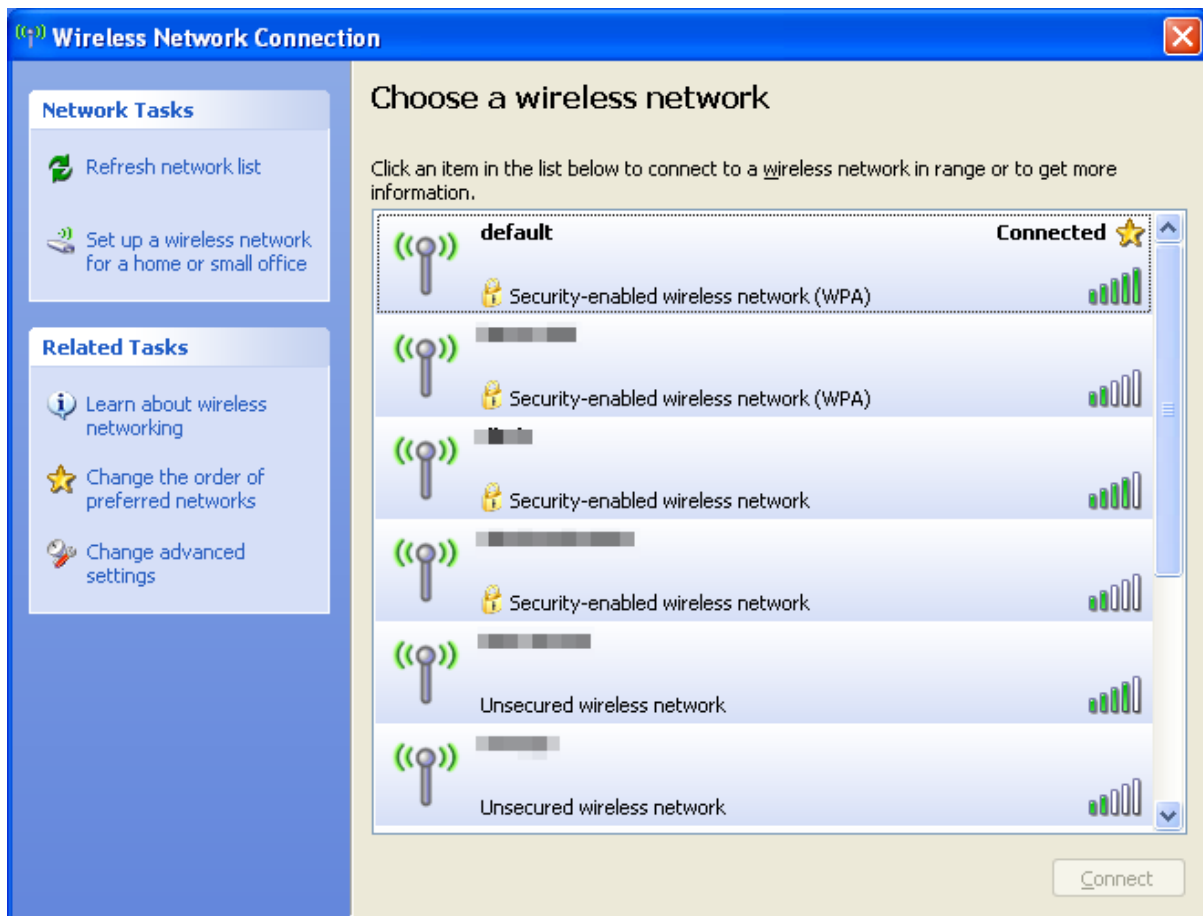
Figure 6-4 Choose a wireless network -- Connected

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

6.2 Windows 7 (WLAN AutoConfig)

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

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

Figure 6-5 Network icon

Step 2: Highlight and select the wireless network (SSID) to connect
      (1) Select SSID [**default**]
      (2) Click the [**Connect**] button
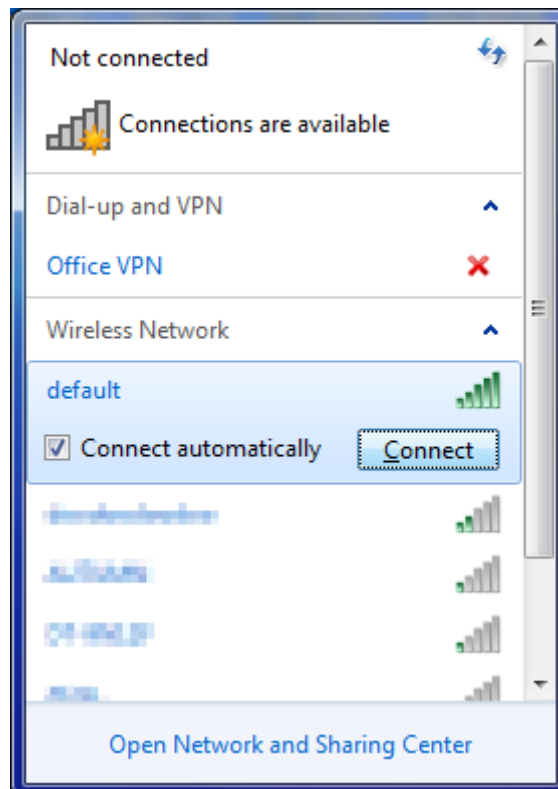
Figure 6-6 WLAN AutoConfig

	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 5.3.3

      (3) Click the [OK] button

Figure 6-7 Type the network key
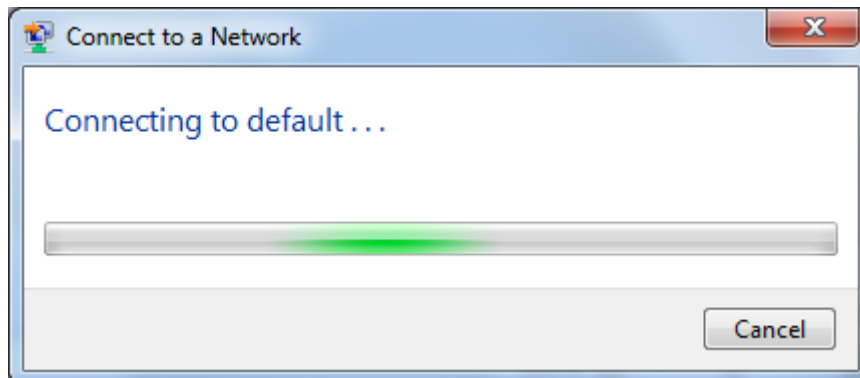
Figure 6-8 Connecting to a Network

Step 5: Check if "**Connected**" is displayed
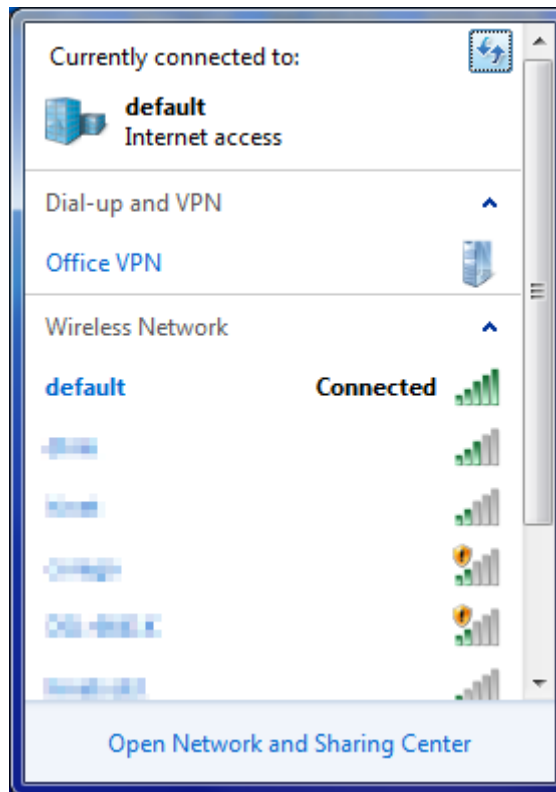
Figure 6-9 Connected to a Network

6.3 Mac OS X 10.x

In the following sections, the default SSID of the WDAP-C7400 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 5.3.3

 (2) Click the [OK] button

Figure 6-12 Enter the Password

If you will be connecting to 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.
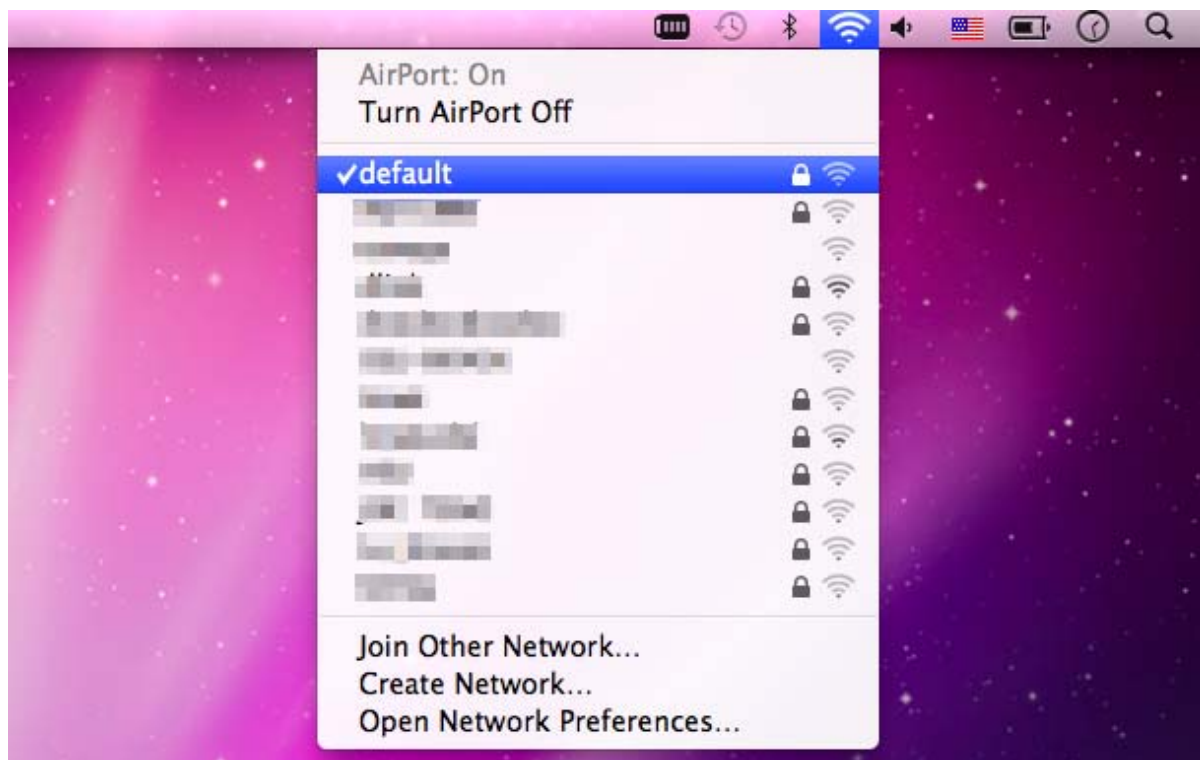
Figure 6-13 Connected to the Network

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 Preference** or **Applications**
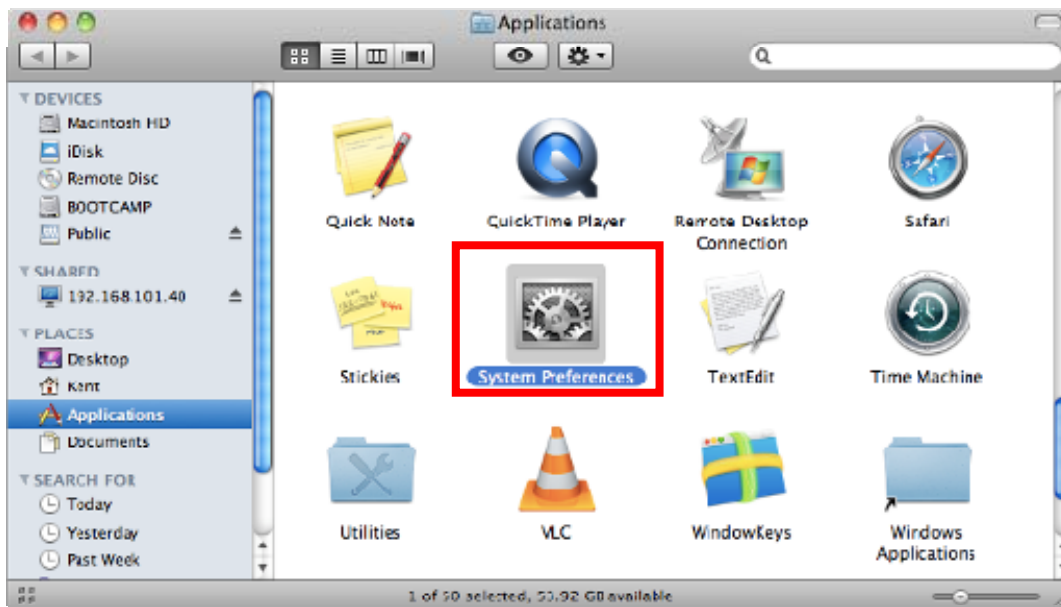
Figure 6-14 System Preferences

Step 2: Open **Network Preference** by clicking on the [**Network**] icon
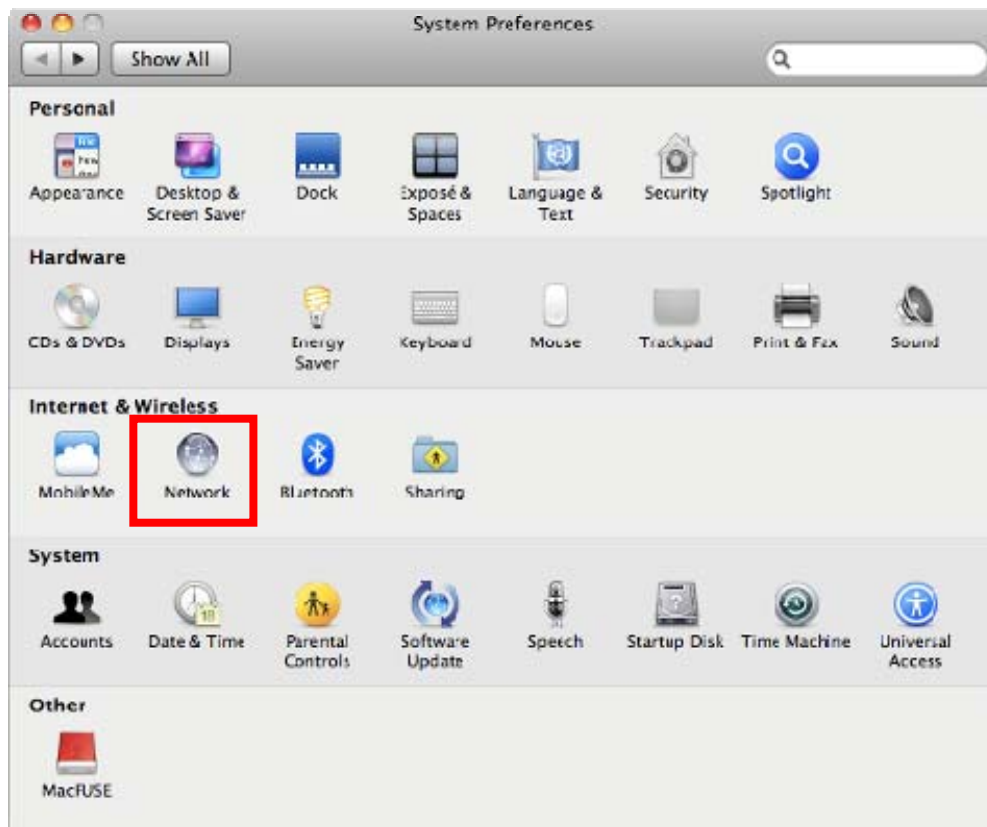
Figure 6-15 System Preferences -- Network

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 "Not network selected".
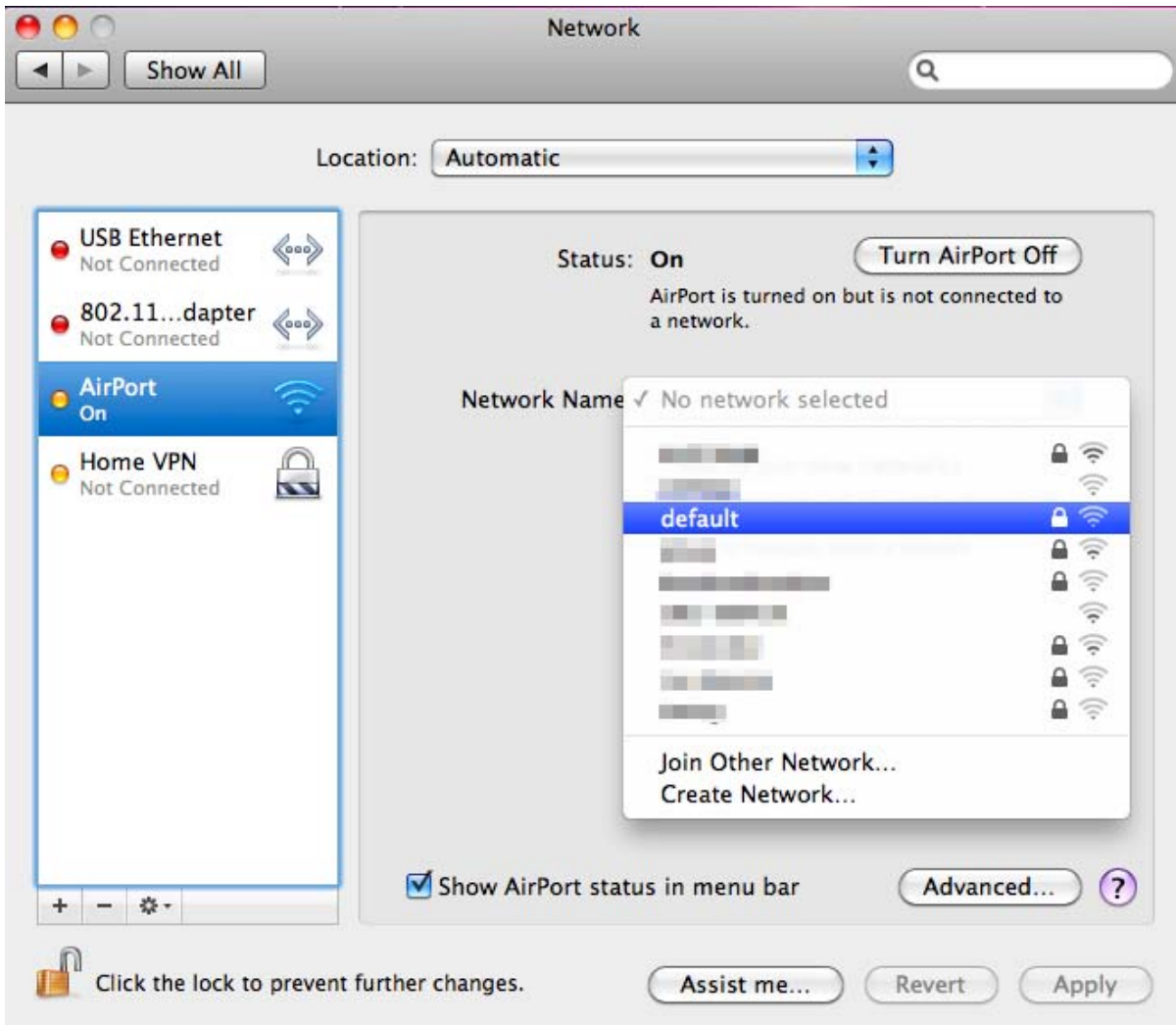
Figure 6-16 Select the Wireless Network

6.4 iPhone / iPod Touch / iPad

In the following sections, the **default SSID** of the WDAP-C7400 is configured to "**default**".

Step 1: Tap the [**Settings**] icon displayed in the home screen
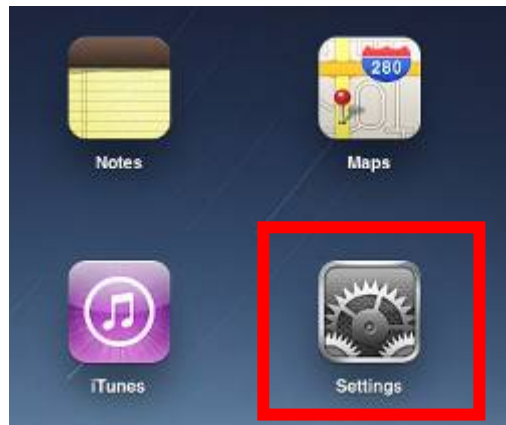
Figure 6-17 iPhone – Settings icon

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 5.3.3

    (3) Tap the [**Join**] button
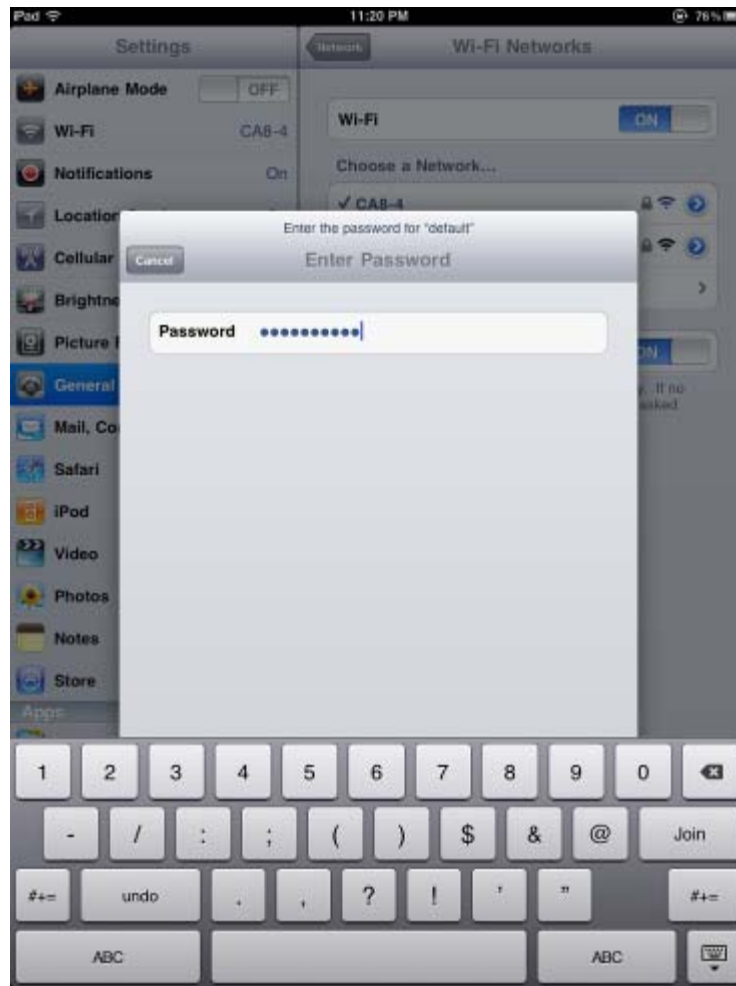
Figure 6-21 iPhone -- Enter the Password

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

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

Figure 6-22 iPhone -- Connected to the Network

Appendix A: Planet Smart Discovery Utility

To easily list the WDAP-C7400 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.

Planet_Utility.exe
PLANET Corp.

Step 3: Press **"Refresh"** button for current connected devices in the discovery list as shown in the following screen:
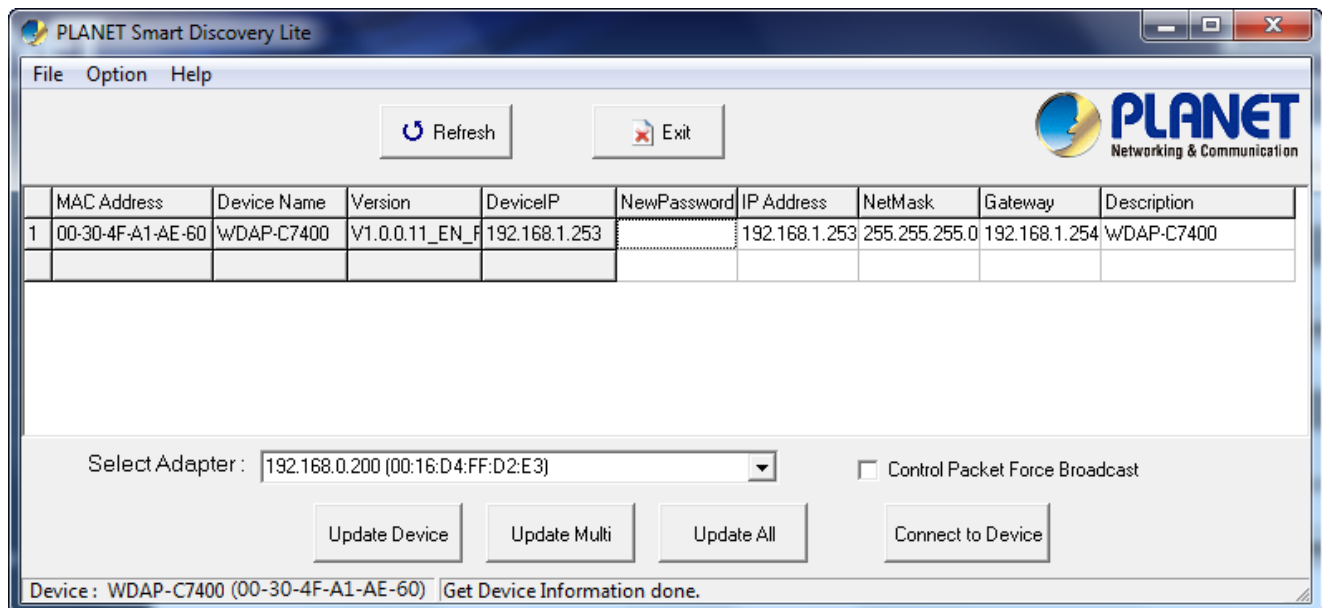
Step 3: Press **"Connect to Device"** button and then the Web login screen appears.

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

Appendix 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.	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.	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.	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.	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.	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	WDAP-C7400
	900Mbps Dual Band 802.11n Wireless Ceiling Mount Access Point
Hardware Specifications	

Interface	PoE Port:	1 x 10/100/1000Mbps Auto MDI/MDI-X RJ45 port
		※IEEE 802.3at compliant PD Port
	LAN Port:	1 x 10/100/1000Mbps Auto MDI/MDI-X RJ45 port
PoE	IEEE 802.3at	
Antenna	Built-in 3dBi dual-band antenna x3	
Reset Button	Reset button at rear panel	
	Press over 7 seconds to reset the device to factory default	
LED Indicators	PWR, 2.4GHz, 5GHz LED	
Material	Plastic	
Dimensions (W x D x H)	200 x 200 x 40mm (L x W x H)	
Weight	450g	
Power Requirements	52~56V DC, 0.7A (max.), IEEE 802.3at 30W power source is required.	
Power Consumption	25W (max.)	
Wireless interface Specifications		

Standard	IEEE 802.11a/b/g/n		
	IEEE 802.3u/af/at		
Frequency Band	Simultaneous 2.4 GHz and 5 GHz		
	2.4GHz: 2.412~2.484GHz		
	5GHz: 5.745~5.825GHz		
Operating Channel	2.4GHz:		
	America/ FCC: 2.412~2.462GHz (11 Channels)		
	Europe/ ETSI: 2.412~2.472GHz (13 Channels)		
	5GHz:		
	IEEE 802.11a: 149, 153, 157, 161, 165		
	IEEE 802.11a/n: 149, 157		
	5GHz channel list will be varying in different countries according to its Regulatory.		
Channel Width	20 or 20/40MHz		
Data Rate	2.4GHz: up to 450Mbps		
	5GHz: up to 450Mbps		
Transmission Distance	Indoor up to 100m		
	Outdoor up to 3.5Km (based on wall mount deployment, and the effective distance will be vary in various environments.)		
RF Power	11a	1 - 54Mbps	21~22dBm
(Intentional Radiator)	11b	1 - 11Mbps	26.5~27.5dBm
	11g	6 - 9Mbps	26dBm
		12 - 18Mbps	25dBm
		24 - 36Mbps	24.5dBm

		48 - 54Mbps	23.5dBm
	11n	MCS 0-7	23dBm
		MCS 8-15	23dBm
		MCS 16-23	23dBm
Wireless Management Features			
Wireless Modes	Access Point		
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 clients, to let them cannot access mutually.		
	Supports 802.11e WMM (Wi-Fi Multimedia)		
Max. Supported Clients	Wire	20	
	Wireless	2.4GHz:	20
		5GHz:	25
System Management	Web-based (HTTP) management interface		
	SNMP management		
	Supports Planet Smart Discovery & Centralized Management Utility		
	System Log		

Appendix D: Glossary

- ➤ **802.11n -** 802.11n builds upon previous 802.11 standards by adding MIMO (multiple-input multiple-output). MIMO uses multiple transmitter and receiver antennas to allow for increased data throughput via spatial multiplexing and increased range by exploiting the spatial diversity, perhaps through coding schemes like Alamouti coding. The Enhanced Wireless Consortium (EWC) [3] was formed to help accelerate the IEEE 802.11n development process and promote a technology specification for interoperability of next-generation wireless local area networking (WLAN) products.

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

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

- ➤ **DDNS** (**D**ynamic **D**omain **N**ame **S**ystem) **-** The capability of assigning a fixed host and domain name to a dynamic Internet IP Address.

- ➤ **DHCP** (**D**ynamic **H**ost **C**onfiguration **P**rotocol) **-** A protocol that automatically configure the TCP/IP parameters for the all the PC(s) that are connected to a DHCP server.

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

- ➤ **DNS** (**D**omain **N**ame **S**ystem) **-** An Internet Service that translates the names of websites into IP addresses.

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

- ➤ **DSL** (**D**igital **S**ubscriber **L**ine) **-** A technology that allows data to be sent or received over existing traditional phone lines.

- ➤ **ISP** (**I**nternet **S**ervice **P**rovider) **-** A company that provides access to the Internet.

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

- ➤ **NAT** (**N**etwork **A**ddress **T**ranslation) **-** NAT technology translates IP addresses of a local area network to a different IP address for the Internet.

- ➤ **PPPoE** (**P**oint to **P**oint **P**rotocol **o**ver **E**thernet) **-** PPPoE is a protocol for connecting remote hosts to the Internet over an always-on connection by simulating a dial-up connection.

➢ **SSID -** A **S**ervice **S**et **Id**entification is a thirty-two character (maximum) alphanumeric key identifying a wireless local area network. For the wireless devices in a network to communicate with each other, all devices must be configured with the same SSID. This is typically the configuration parameter for a wireless PC card. It corresponds to the ESSID in the wireless Access Point and to the wireless network name.

➢ **WEP** (**W**ired **E**quivalent **P**rivacy) **-** A data privacy mechanism based on a 64-bit or 128-bit or 152-bit shared key algorithm, as described in the IEEE 802.11 standard.

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

➢ **WLAN** (**W**ireless **L**ocal **A**rea **N**etwork) **-** A group of computers and associated devices communicate with each other wirelessly, which network serving users are limited in a local area.

EC Declaration of Conformity

For the following equipment:

*Type of Product: 900Mbps Dual Band Ceiling Mount Wireless Access Point
*Model Number: WDAP-C7400

* 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 here with 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 55022	(2007+A2:2010)
EN 55024	(2010)
EN 300 328 V1.7.1	(2006-10)
EN 301 489-17 V2.1.1	(2009-05)
EN 301 489-1 V1.9.2	(2011-09)
EN 62311	(2008)
EN 60950-1	(2006+A11:2009+A1:2010+A12:2011)

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   <u>**Kent Kang**</u>

Position / Title :   <u>**Product Manager**</u>

<u>**Taiwan**</u>   <u>**20 Sep., 2013**</u>
Place   *Date*   *Legal Signature*

PLANET TECHNOLOGY CORPORATION

EC Declaration of Conformity

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