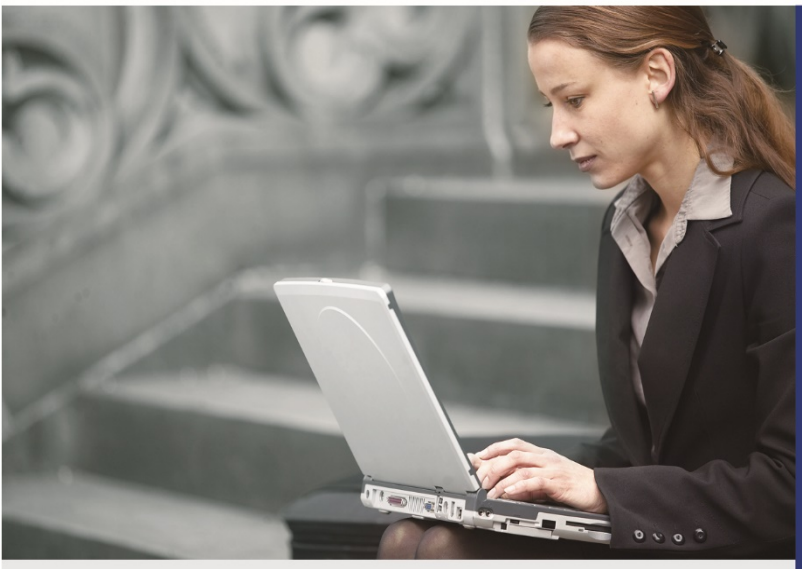
PLANET
Networking & Communication

User's Manual

Dual Band 802.11ax 1800Mbps Ceiling-mount Wireless Access Point w/802.3at PoE+ and 2 10/100/1000T LAN Ports

WDAP-C1800AX



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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:

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

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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHzHz band are restricted to indoor usage only.

FCC Radiation Exposure Statement

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

CE Compliance Statement

This device meets the RED 2014/53/EU requirements on the limitation of exposure of the general public to electromagnetic fields by way of health protection. The device complies with RF specifications when it is used at a safe distance of 20 cm from your body.

Safety

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

WEEE regulation

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

Revision

User Manual of PLANET 802.11ax Dual Band Ceiling-mount Wireless Access Point

Model: WDAP-C1800AX

Rev: 1.0 (Aug., 2021)

Part No. EM-WDAP-C1800AX_v1.0

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Chapter 1. Product Introduction

1.1 Package Contents

Thank you for choosing PLANET WDAP-C1800AX Wireless AP. Please verify the contents inside the package box.

Package Contents of WDAP-C1800AX			
WDAP-C1800AX	Quick Guide	Ethernet Cable	Mounting-Kit
			

Note

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

1.2 Product Description

Ultra-high-speed Wi-Fi 6 Wireless LAN Solution

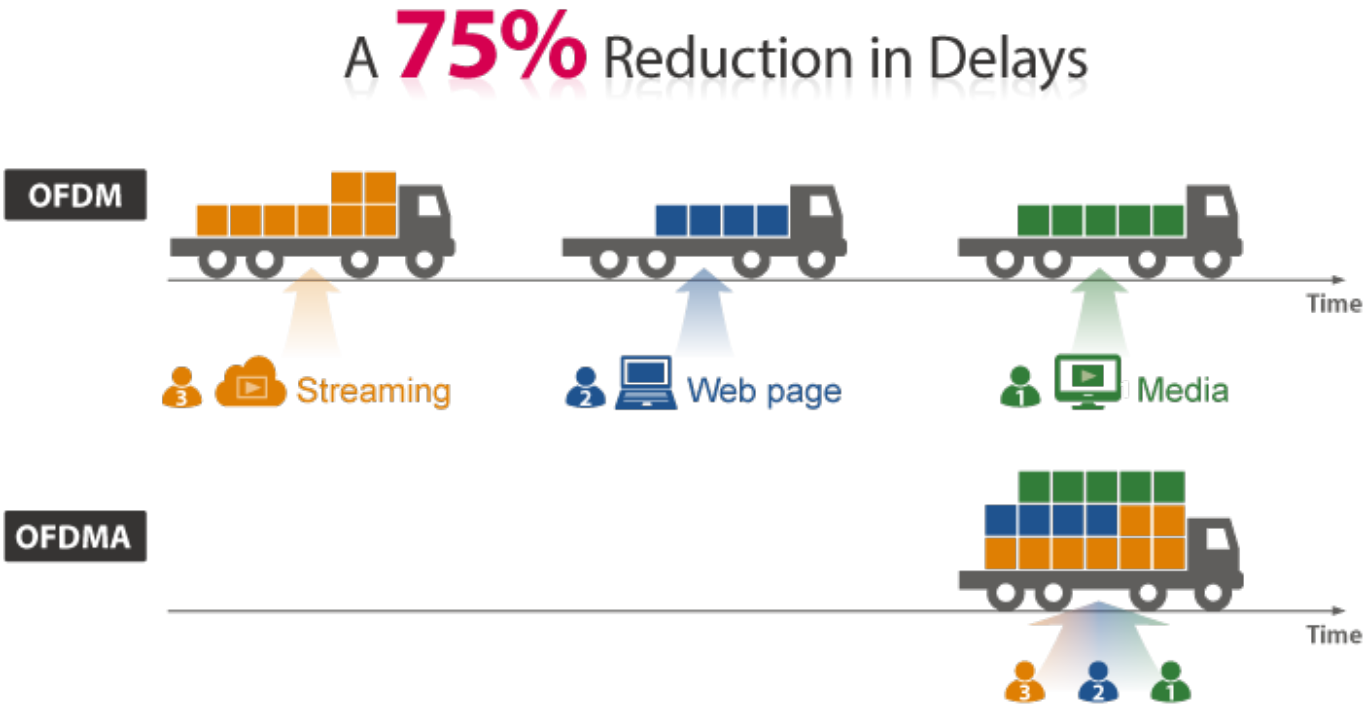
PLANET WDAP-C1800AX **1800Mbps Dual Band 802.11ax Wireless AP**, supporting **MU-MIMO, Wave 2.0, OFDMA and Seamless Roaming technology**, provides a maximum wireless speed of 1200Mbps in the 5GHzHz band and 600Mbps in the 2.4GHzHz band. The maximum number of client users is up to 250, ensuring more secure and robust connectivity with the adoption of Wi-Fi 6 technology.

Benefits of MU-MIMO, Wave 2, OFDMA and Seamless Roaming

The WDAP-C1800AX can be installed in public areas such as hotspots, airports and conferences as OFDMA, a multi-user version of OFDM, enables the concurrent AP to communicate (uplink and downlink) with multiple clients by assigning subsets of subcarriers called resource units (RUs) to the individual clients. With MU-MIMO and Seamless Roaming technologies, it provides a better Wi-Fi user experience, reducing the likelihood of users turning off Wi-Fi and putting more load on the cellular network. These technologies also can solve Wi-Fi congestion issues in open work spaces and conference rooms. The WDAP-C1800AX can offer more powerful throughput coverage of up to 250 client users.

OFDMA (Orthogonal Frequency Division Multiple Access) Benefits

- Helps transmit small and large packets together to reduce bandwidth burden and improve data transmission performance
- Transmitting data at the same time can effectively reduce the transmission delay for longer frame and low-speed transmission.
- Improves the overall traffic quality, and effectively uses bandwidth in an environment where multiple people use the Internet.
- Increases the number of devices that can be connected to the AP.
- Reduces the power consumption of the device by way of the use of low bandwidth.



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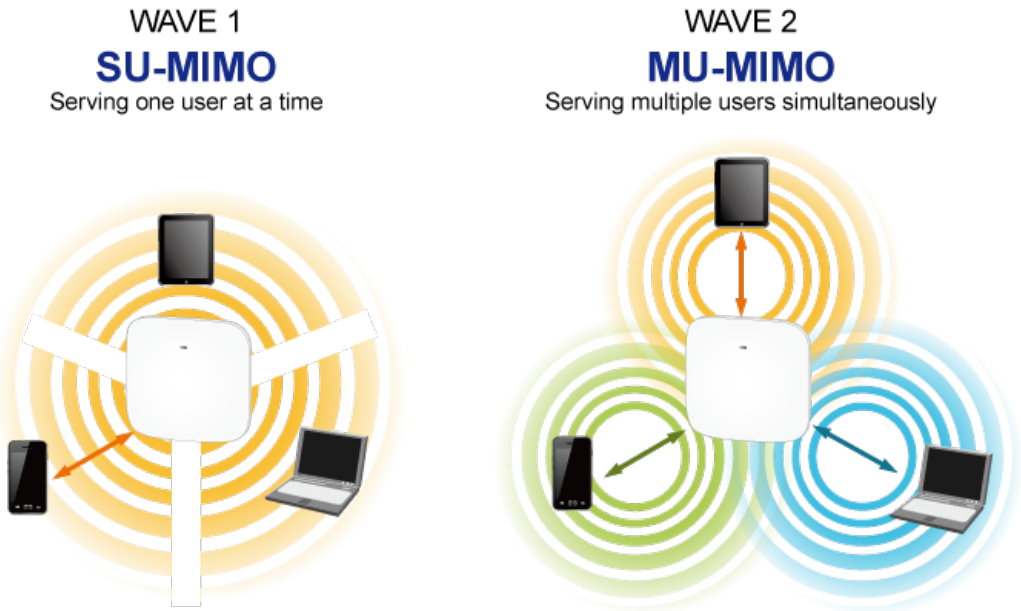


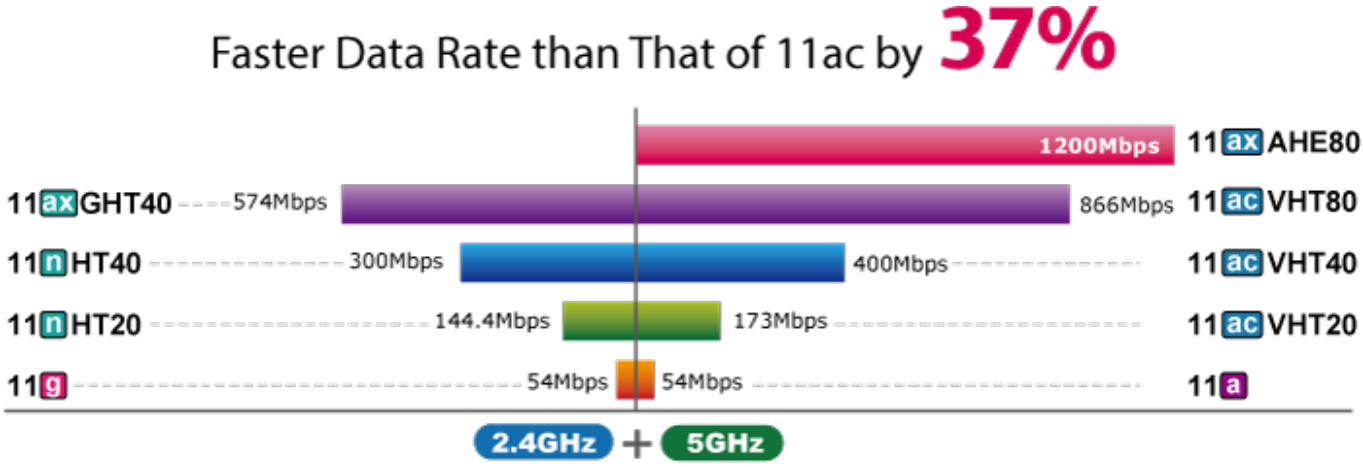
WPA3 Next Generation Security for Your WLAN Solution

WPA3 is the next generation Wi-Fi security technology that provides the most advanced security protocol to the market. WPA3 makes your connection more secure by preventing hackers from easily cracking your password no matter how simplified the password is. WPA3 can also provide more reliable password-based authentication, so it can better protect the security of individual users.

* WDAP-C1800AX only supports WPA3-Personal.

Super Power Dual band WLAN Solution

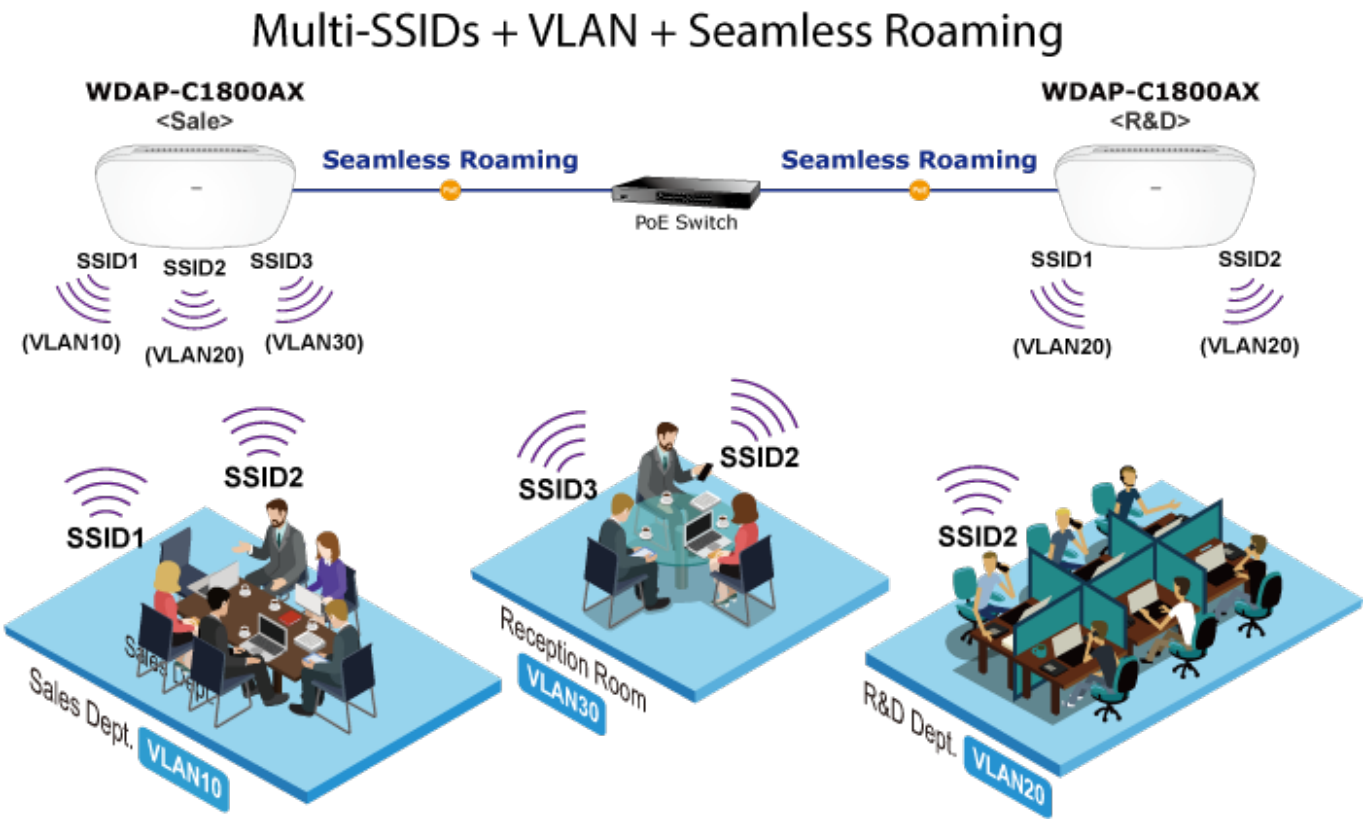
PLANET WDAP-C1800AX, adopting the IEEE 802.11ax Wi-Fi 6 standard, provides a high-speed transmission. The maximum wireless speed in 2.4GHzHz band is up to 11AXG_GHE40 of 574Mbps, and in the 5GHzHz band is up to 11AXA_AHE80 of 1201Mbps. Both the **2.4GHzHz and 5GHzHz** wireless connections can also be used simultaneously. Furthermore, the WDAP-C1800AX adopts the high-class Qualcomm Atheros SoC (System-on-a-Chip), which provides higher stability to meet the stringent requirements of the solution.



WDAP-C1800AX Data Transmission Rates *1800Mbps*

Advanced Security and Rigorous Authentication

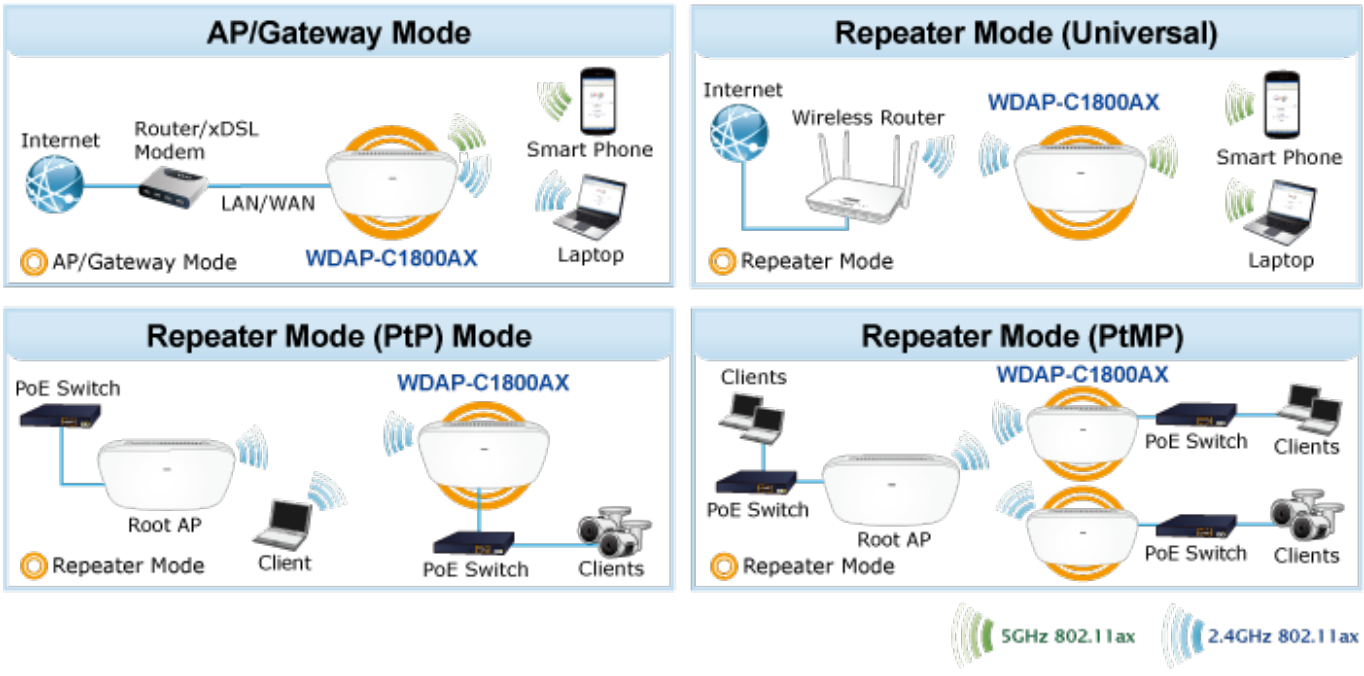
The WDAP-C1800AX supports WPA/WPA2PSK-TKIPAES and WPA3PSK-TKIPAES wireless encryptions, and also supports the WPA2/WPA3PSK-TKIPAES at the same time, which can effectively prevent eavesdropping by unauthorized users or bandwidth occupied by unauthenticated wireless access. Furthermore, any users are granted or denied access to the wireless LAN network based on the ACL (Access Control List) that the administrator pre-established. For management purposes, the IEEE 802.1Q VLAN supported allows multiple VLAN tags to be mapped to multiple SSIDs to distinguish the wireless access.



Multiple Operation Modes for Various Applications

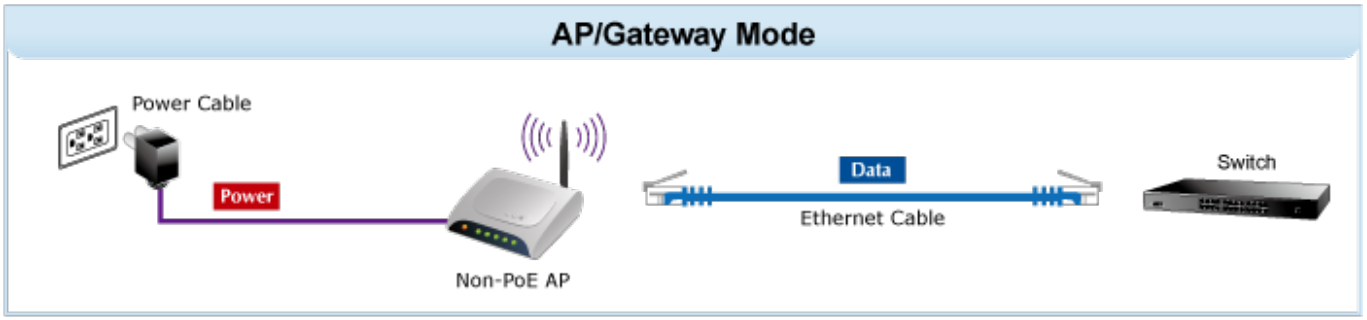
The WDAP-C1800AX supports the simplified usage modes of AP, Gateway and Repeater, through which they provide more flexibility for users when wireless network is established. Compared with general wireless access points, the WDAP-C1800AX offers more powerful and flexible capability for wireless clients.

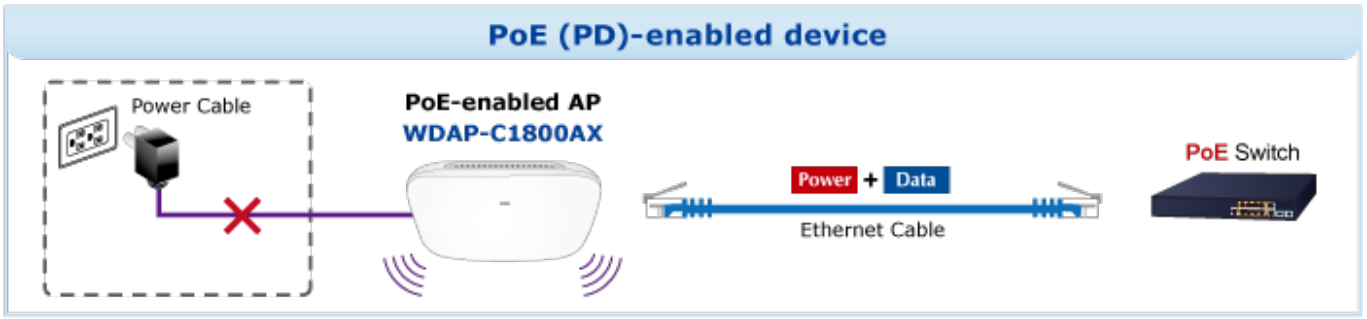
* In repeater mode, WPA3 encryption is not supported.



Ceiling-mount Design for Your Environment

With the standard IEEE802.3at Power over Ethernet (PoE) design, the WDAP-C1800AX can be easily installed in the areas where power outlets are not available. By supporting the standard IEEE 802.3at PoE PD power scheme, the WDAP-C1800AX can be powered and networked by a single UTP cable, effectively eliminating the needs of dedicated electrical outlets on the ceiling and reducing the cabling cost. Furthermore, the system administrator is able to arrange the PoE schedule of the WDAP-C1800AX by working with the managed PoE switch.





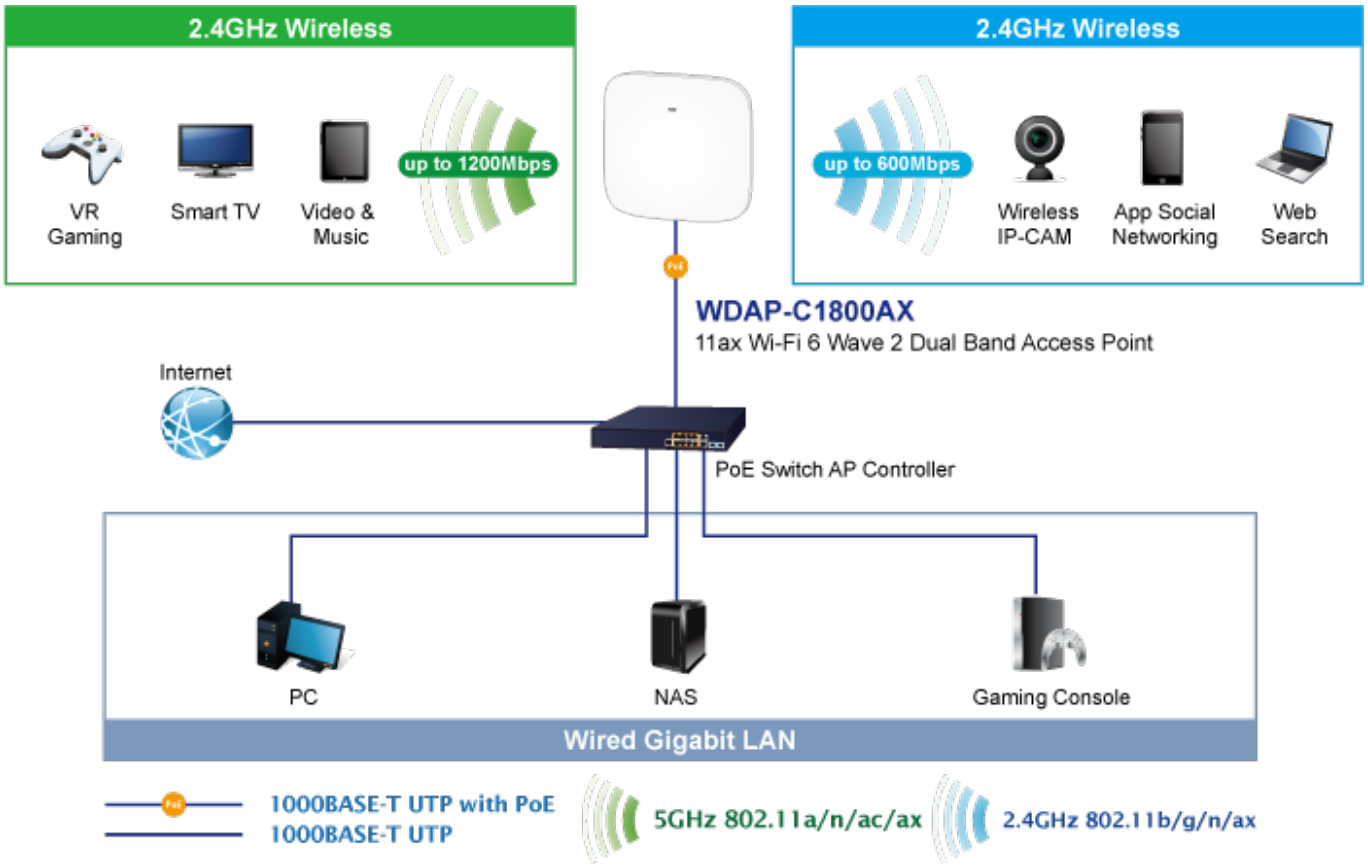
Optimized Efficiency in AP Management

The brand-new GUI configuration wizard helps the system administrator easily set up the WDAP-C1800AX step by step. Besides, the built-in Wi-Fi analyzer provides real-time channel utilization to prevent channel overlapping to assure greater performance. With the automatic transmission power mechanism, distance control and scheduling reboot setting, the WDAP-C1800AX is easy for the administrator to deploy and manage without on-site maintenance.

Applications

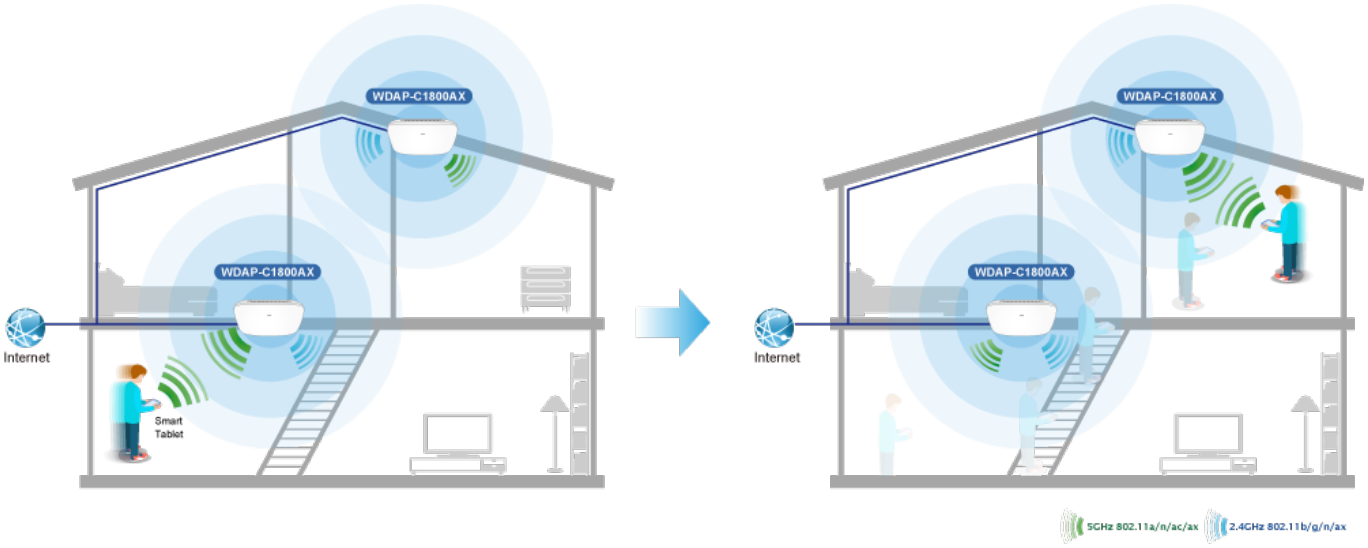
Extreme High Speed and Wi-Fi 6 Technology Make Wireless Transmission More Powerful

The WDAP-C1800AX delivers the dual band and more bandwidth to avoid signal interference and ensure the best Wi-Fi performance. It allows you to check e-mails and surf the Internet via the 2.4GHzHz band and simultaneously watch full high-definition (HD) video or any other multimedia application via one 5GHzHz band. Besides, many client users can be connected to Wi-Fi at the same time. The maximum number of client users is up to 250. Moreover, the Gigabit Ethernet port of the WDAP-C1800AX offers ultra-fast wired connections that utilize the maximum wireless bandwidth; therefore, users will experience a fast wireless speed of over 650Mbps. With the outstanding stability of high-speed wireless transmission, the WDAP-C1800AX can provide users with excellent experience in multimedia streaming with your mobile devices anywhere, anytime.



Seamless Roaming and Better Coverage

Moving between a traditional Wi-Fi AP or router and range extender, your Wi-Fi signal can experience lag or a dropped connection. With Seamless Roaming and intuitive technology, moving from room to room is never a problem now that your devices are switched to the strongest Wi-Fi signal automatically. The WDAP-W1800AX features advanced 2T2R MU-MIMO technology which reduces the effect of dead spot, so that it can get better coverage of the existing wireless network. Furthermore, the repeater mode supported by the WDAP-W1800AX helps to minimize the effort of installation, thus reducing cabling cost.


WDAP-C1800AX
WDAP-C1800AX
Internet
Smart Tablet
WDAP-C1800AX
WDAP-C1800AX
Internet
5GHz 802.11a/n/ac/ax
2.4GHz 802.11b/g/n/ax

1.3 Product Features

➢ **Industrial Compliant Wireless LAN**

- Compliant with the IEEE 802.11a/b/g/n/ac/ax wireless technology
- Equipped with 10/100/1000Mbps RJ45 ports, and auto MDI/MDI-X

➢ **RF Interface Characteristics**

- 802.11ax 2T2R architecture with data rate of up to 1800Mbps (600Mbps in 2.4GHzHz and 1200Mbps in 5GHzHz)
- High output power with multiply-adjustable transmit power control

➢ **Multiple Operation Modes and Wireless Features**

- Multiple operation modes: AP, gateway and repeater
- Supports OFDMA (orthogonal frequency division multiple access)
- Supports MU-MIMO (multi-user multiple-input multiple-output), Wave 2.0
- WMM (Wi-Fi multimedia) provides higher priority to multimedia transmitting over wireless
- Coverage threshold to limit the weak signal of clients occupying session
- Real-time Wi-Fi channel analysis chart and client limit control for better performance
- Support Terminal Seamless Roaming with 802.11k, 802.11v, and 802.11r

➢ **Secure Network Connection**

- Full encryption supported: WPA/WPA2PSK-TKIPAES, WPA3PSK-TKIPAES, WPA2/WPA3PSK-TKIPAES
- Supports 802.1Q VLAN and SSID-to-VLAN mapping
- Supports IP/Port/MAC address/URL filtering, DoS, SPI firewall
- Supports DMZ and port forwarding
- Bandwidth control per IP address to increase network stability

➢ **Easy Deployment and Management**

- Supports PLANET AP Controllers in AP mode
- Easy discovery by PLANET Smart Discovery
- Self-healing mechanism through system auto reboot setting
- System status monitoring through remote syslog server
- Gateway mode supports PLANET DDNS/Easy DDNS

Product Specifications

Product	**WDAP-C1800AX** Dual Band 802.11ax 1800Mbps Ceiling-mount Wireless Access Point
Hardware Specifications	
Interfaces	LAN 2 x 10/100/1000BASE-T RJ45 port Auto-negotiation and auto MDI/MDI-X
Antennas	Gain: 4 x Internal 5dBi antenna (2.4GHz x2, 5GHz x2)
Reset Button	Reset button on the rear side (Press over 5 seconds to reset the device to factory default)
LED Indicators	Power, SYS
Dimensions (W x D x H)	186 x 186 x 35.8 mm
Weight	380 ± 5GHz
Power Requirements	48V DC IN, 0.5A, IEEE 802.3at PoE+ or 12V DC IN, 2.0A from DC Jack (5.5 x 2.1mm)
Power Consumption	< 22W
Mounting	Ceiling Mount
Wireless Interface Specifications	
Standard	IEEE 802.11ax IEEE 802.11ac IEEE 802.11n IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11i IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3x flow control IEEE 802.11k, 802.11v, and 802.11r
Media Access Control	CSMA/CA
Data Modulation	802.11ax: MIMO-OFDMA (BPSK / QPSK / 16QAM / 64QAM / 256QAM, 1024QAM) 802.11ac: MIMO-OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11b: DSSS (DBPSK / DQPSK / CCK)
Band Mode	2.4GHz / 5GHz concurrent mode
Frequency Range	**2.4GHzHz:** FCC: 2.412~2.462GHz ETSI: 2.412~2.472GHz **5GHzHz:** FCC: 5.180~5.240GHz, 5.745~5.825GHzHz ETSI: 5.180~5.700GHz
Operating Channels	FCC: 36, 40, 44, 48, 52,54,60,64,149, 153, 157, 161, 165 (9 Channels) ETSI: 36, 40, 44, 48, 52,54,60,64,100, 104, 108, 112, 116, 132, 136, 140 (12

	Channels) **5GHzHz channel list may vary in different countries according to their regulations.**		
Max. Transmit Power (dBm)	FCC: up to 20 ± 1dBm ETSI: < 19dBm (EIRP)		
Receive Sensitivity	**Network Mode**	**Data Rate**	**Receive Sensitivity (dBm)**
	2.4GHzHz		
	802.11b	1Mbps	-98
		11Mbps	-90
	802.11g	6Mbps	-93
		54Mbps	-77
	802.11n HT20	MCS0	-92
		MCS7	-72
	802.11n HT40	MCS0	-90
		MCS7	-70
	802.11ax HT20	MCS0	-93
		MCS11	-63
	802.11ax HT40	MCS0	-91
		MCS11	-60
	5GHzHz		
	802.11a	6Mbps	-95
		54Mbps	-77
	802.11n HT20	MCS0	-93
		MCS7	-75
	802.11n HT40	MCS0	-91
		MCS7	-72
	802.11ac HT20	MCS0	-93
		MCS7	-74
	802.11ac HT40	MCS0	-91
		MCS7	-72
	802.11ac HT80	MCS0	-88
		MCS9	-62
	802.11ax HT20	MCS0	-93
		MCS11	-63
	802.11ax HT40	MCS0	-90
		MCS11	-60
	802.11ax HT80	MCS0	-87
		MCS11	-56
Software Features			
LAN	Static IP / Dynamic IP Supports IP MAC binding		
WAN	Static IP		

	Dynamic IP PPPoE
Wireless Mode	Access Point Gateway Repeater
Channel Width	20MHz, 40MHz, 80MHz
Encryption Security	WPA/WPA2PSK-TKIPAES, WPA3PSK-TKIPAES, WPA2/WPA3PSK-TKIPAES
Wireless Security	Enable/Disable SSID Broadcast Wireless Max. 32 MAC address filtering User Isolation
Max. SSIDs	8 (4 per radio)
Max. Clients	250 per radio (200 is suggested, depending on usage)
Wireless QoS	Supports Wi-Fi Multimedia (WMM)
Wireless Advanced	Auto Channel Selection 5-level Transmit Power Control Max (100%), Efficient (75%), Enhanced (50%), Standard (25%) or Min (12.5%) Client Limit Control, Coverage Threshold Wi-Fi channel analysis chart Seamless Roaming
Status Monitoring	Device status, wireless client List PLANET Smart Discovery DHCP client table System Log supports remote syslog server
VLAN	IEEE 802.1Q VLAN (VID: 1~4094) SSID-to-VLAN mapping to up to 4 SSIDs
Self-healing	Supports auto reboot settings per day/hour
Management	Remote management through PLANET DDNS/ Easy DDNS Configuration backup and restore Supports UPnP Supports IGMP Proxy Supports PPTP/L2TP/IPSec VPN Pass-through
Environment & Certification	
Temperature	Operating: 0 ~ 55 degrees C Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing) Storage: 5 ~ 90% (non-condensing)
Regulatory	CE, RoHS

Chapter 2. Hardware Installation

2.1 Product Outlook

WDAP-C1800AX

- **Dimensions:** 186 x 186 x 35.8mm
- **Weight:** 380 ±5GHz
- **Triple Viewing**

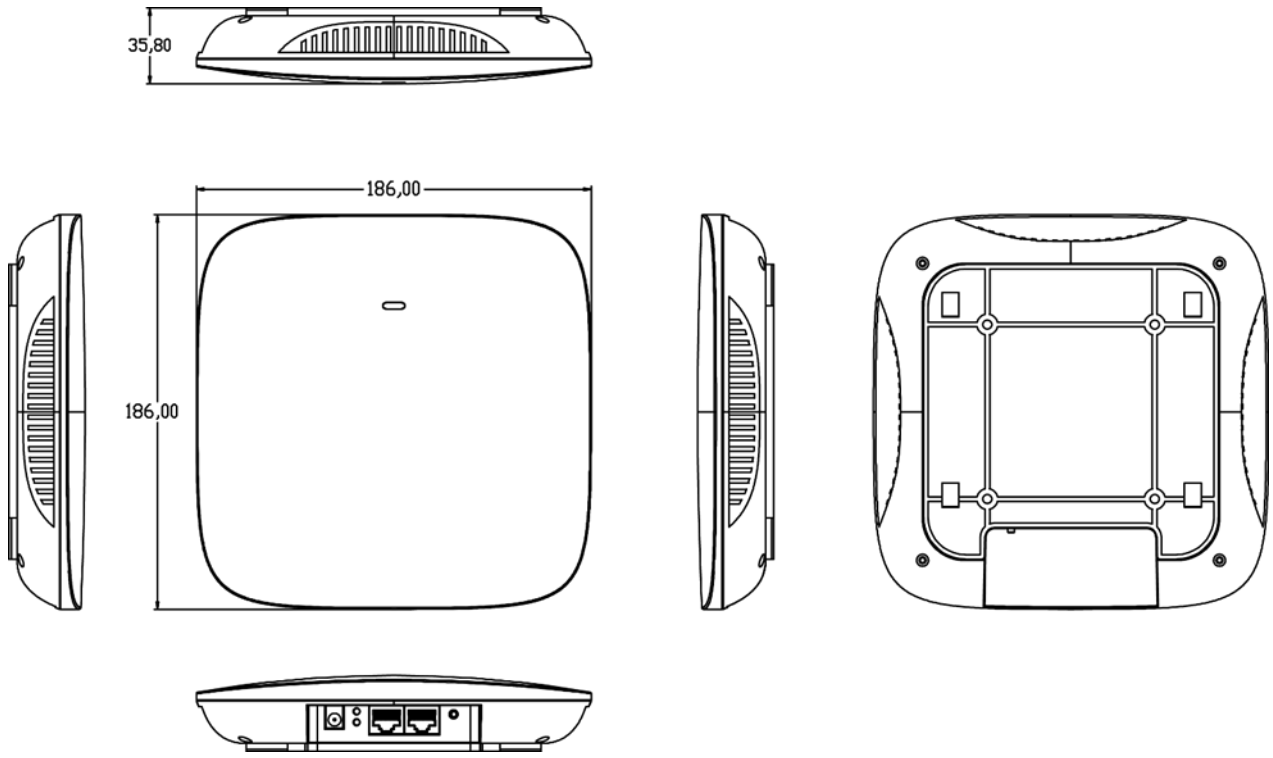


Figure 2-1 WDAP-C1800AX Triple Viewing

Front Panel

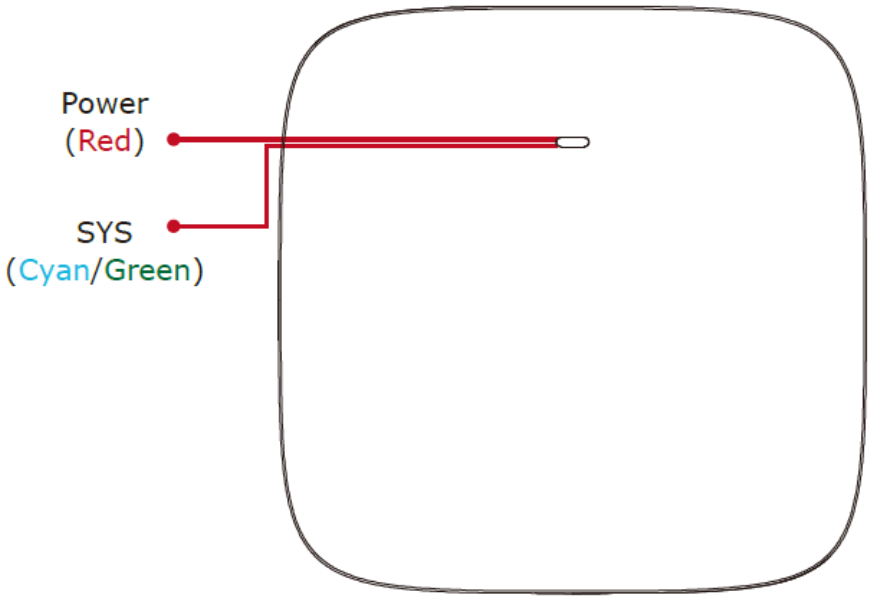


Figure 2-2 WDAP-C1800AX Front Panel

LED Definition

LED	STATUS	FUNCTION
PWR	On (Red)	The access point is on.
	Off	System is operating.
SYS	On	Wireless LAN is initializing.
	Blinking (Cyan/Green)	2.4GHzHz/5GHzHz wireless LAN is working.

- **Rear Panel**

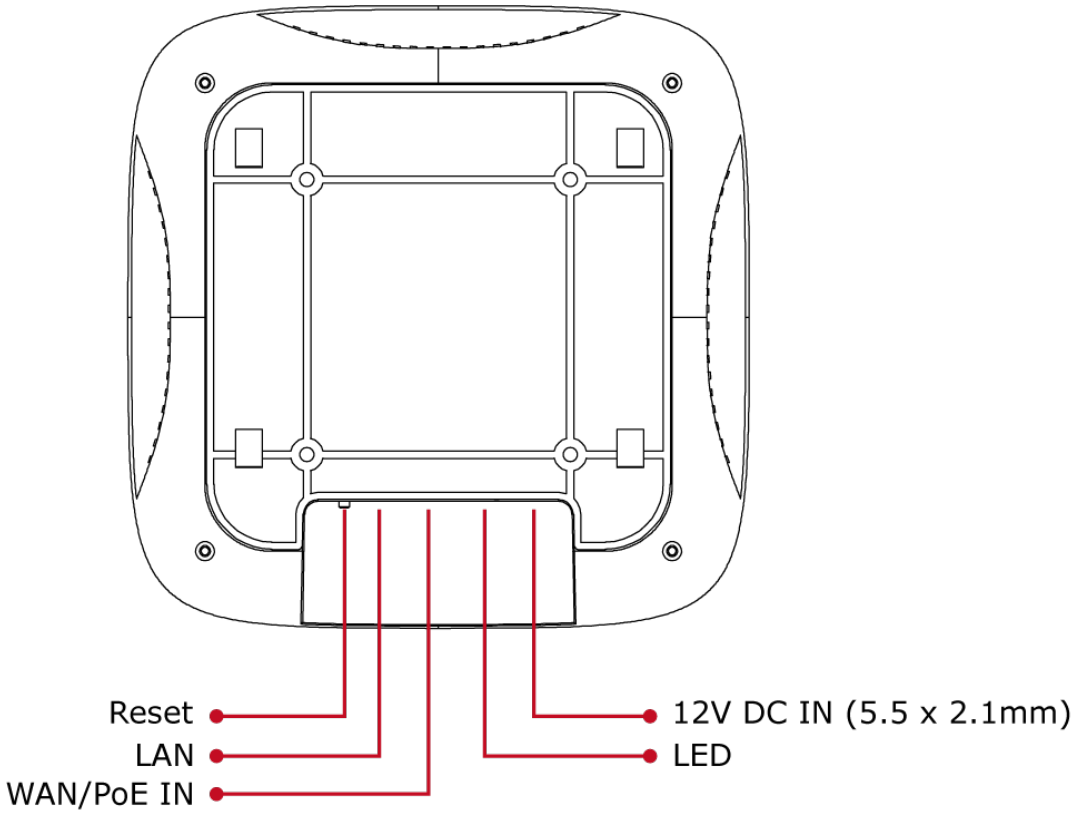


Figure 2-3 WDAP-C1800AX Rear Panel

- **Bottom Panel**

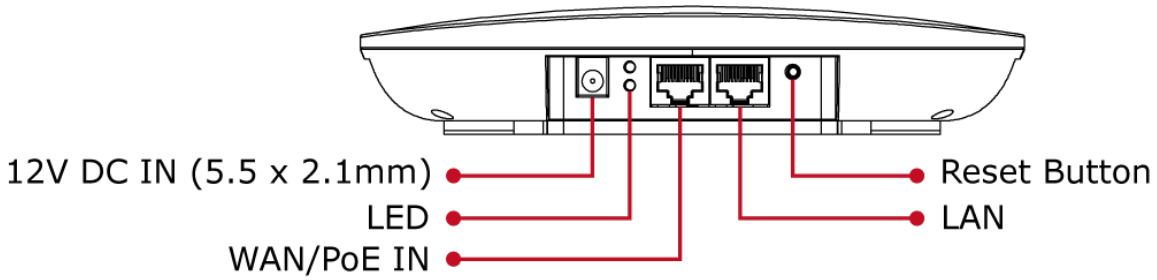


Figure 2-4 WDAP-C1800AX Bottom Panel

Port definition

Object	Description
12V DC	12V DC port for the power adapter(DC-Jack 5.5 x 2.1mm)
LED	The access point is on.
PoE	LAN port with Power over Ethernet (PoE) IN
LAN	LAN port connecting to the network equipment.
Reset	To restore to the factory default setting, press and hold the Reset Button for about 15 seconds, and then release it.

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-C1800AX)
- PCs with a working Ethernet adapter and an Ethernet cable with RJ45 connectors
- PCs 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

Note

1. The AP in the following instructions refers to PLANET WDAP-C1800AX.
2. It is recommended to use Internet Explorer 11, Firefox or Chrome 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.

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. Take the mounting bracket, put it on the target place by aligning the holes and fix it with the supplied screws.

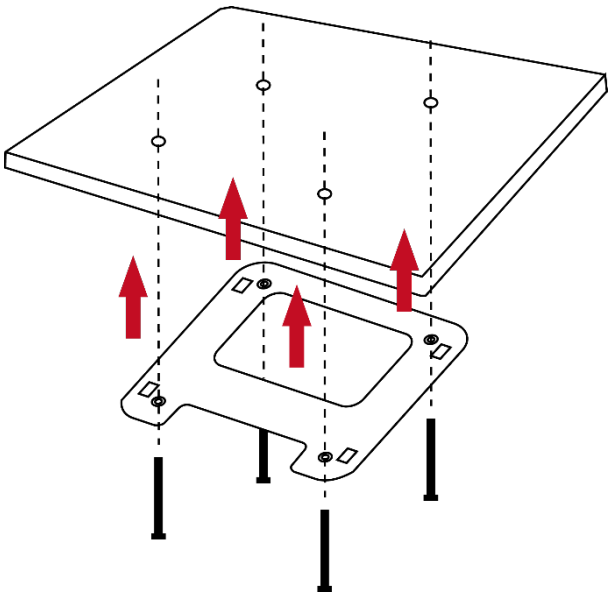


Figure 3-1 Mounting the Bracket

Step 2. Load the device into the mounting bracket, and be sure the device is mated with fixed screws. Then, lock the device in position and plug the Ethernet cable into the WDAP-C1800AX.

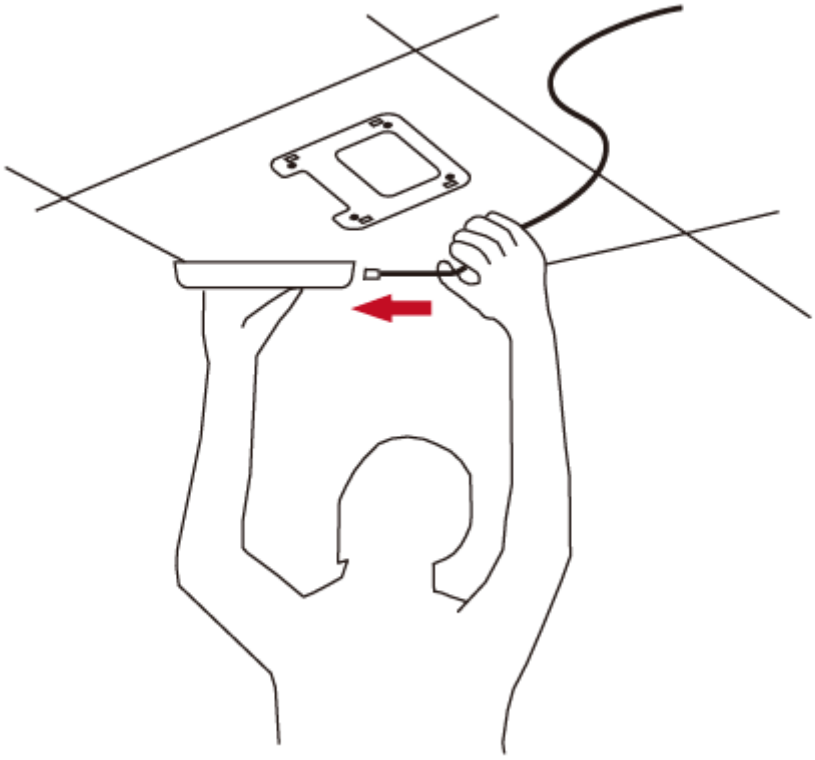


Figure 3-2 Connecting the Ethernet Cable

Step 3. Plug the other end of the Ethernet cable into the PoE switch.

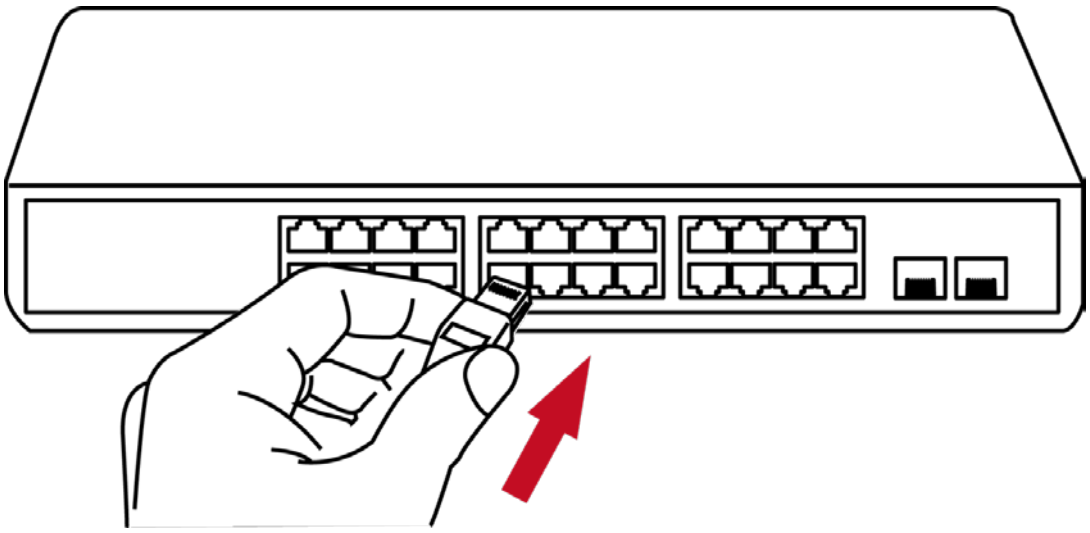


Figure 3-3 Connecting the PoE Injector

Chapter 4. Quick Installation Guide

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

Note

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

4.1 Manual Network Setup -- TCP/IP Configuration

The default IP address of the WDAP-C1800AX 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-C1800AX with your PC by plugging one end of an Ethernet cable in the LAN port of the AP and the other end in the LAN port of PC. The WDAP-C1800AX is powered by a PoE switch.

In the following sections, we'll introduce how to install and configure the TCP/IP correctly in **Windows 10**. 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-C1800AX 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.) and subnet mask is 255.255.255.0.

1 Select **Use the following IP address**, and then configure the IP address of the PC.

2 For example, the default IP address of the WDAP-C1800AX is 192.168.1.253 and the DSL router is 192.168.1.254, or you may choose from 192.168.1.1 to 192.168.1.252.

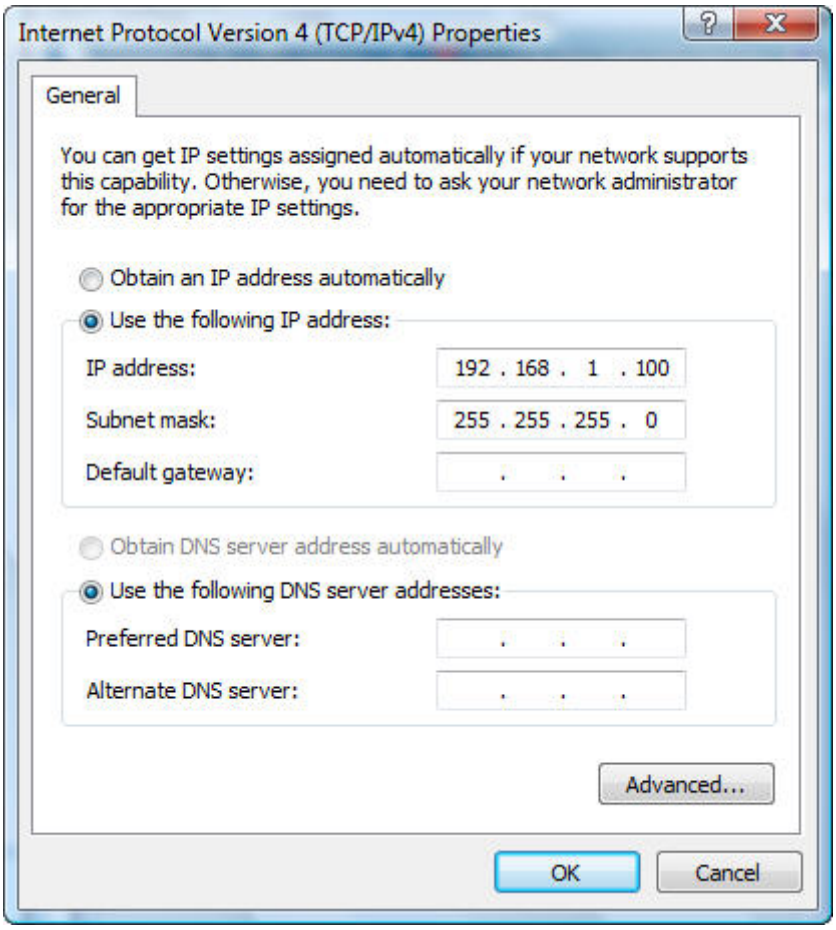


Figure 4-1 TCP/IP Setting

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 10** OS. Please follow the steps below:

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

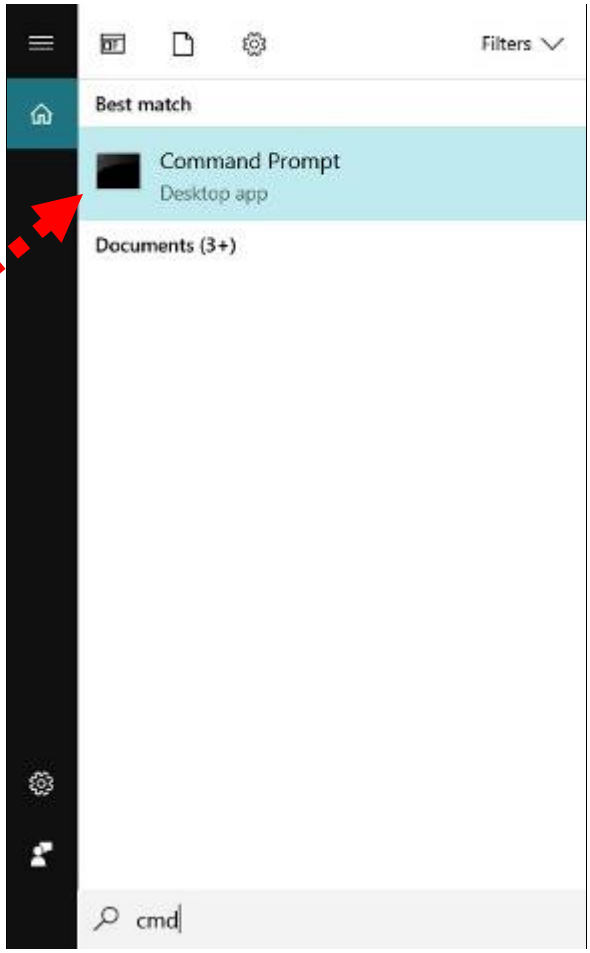


Figure 4-2 Windows Start Menu

3. Open a command prompt, 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.

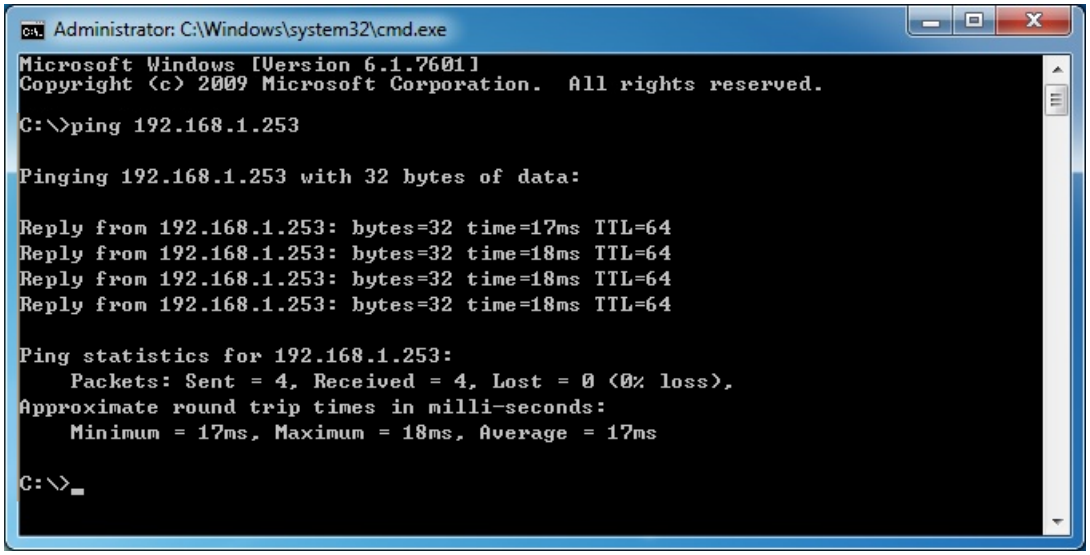


Figure 4-3 Successful Result of Ping Command

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

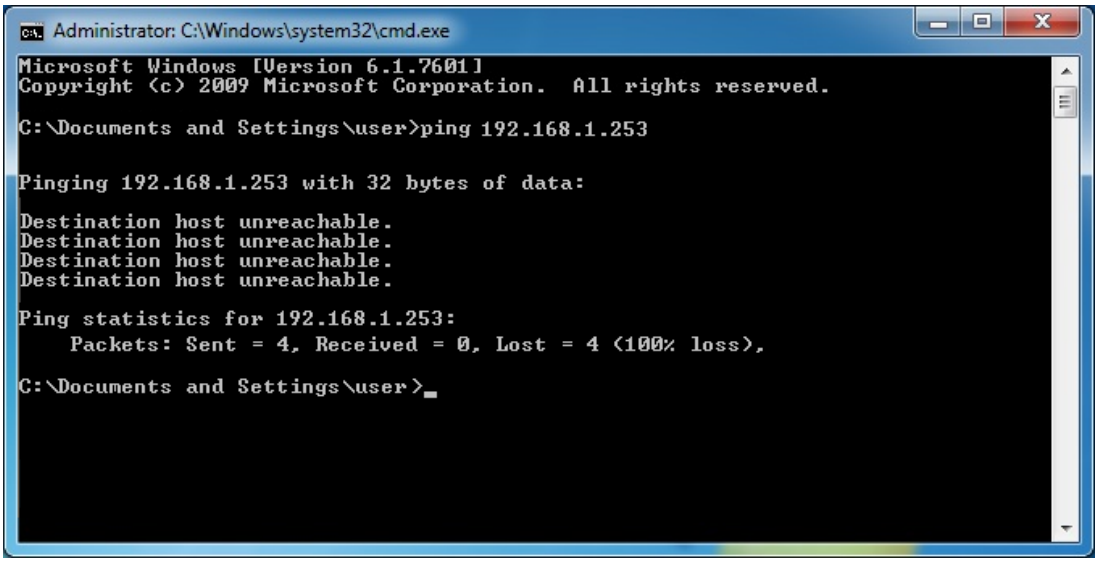


Figure 4-4 Failed Result of Ping Command

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.

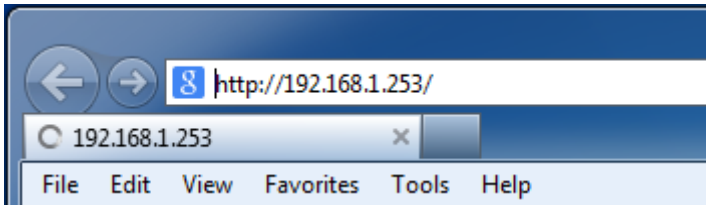


Figure 4-5 Login by Default IP Address

After a moment, a login window will appear. Enter **admin** for the password in lower case letters. Then click **LOGIN** or press the **Enter** key.

Figure 4-6 Login Window

Default IP Address: **192.168.1.253**

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, uncheck **Using Proxy** and click **OK** to finish it.

Chapter 5. Configuring the AP

This chapter delivers a detailed presentation of AP's functionalities and features 3 main items below, allowing you to manage the AP with ease.

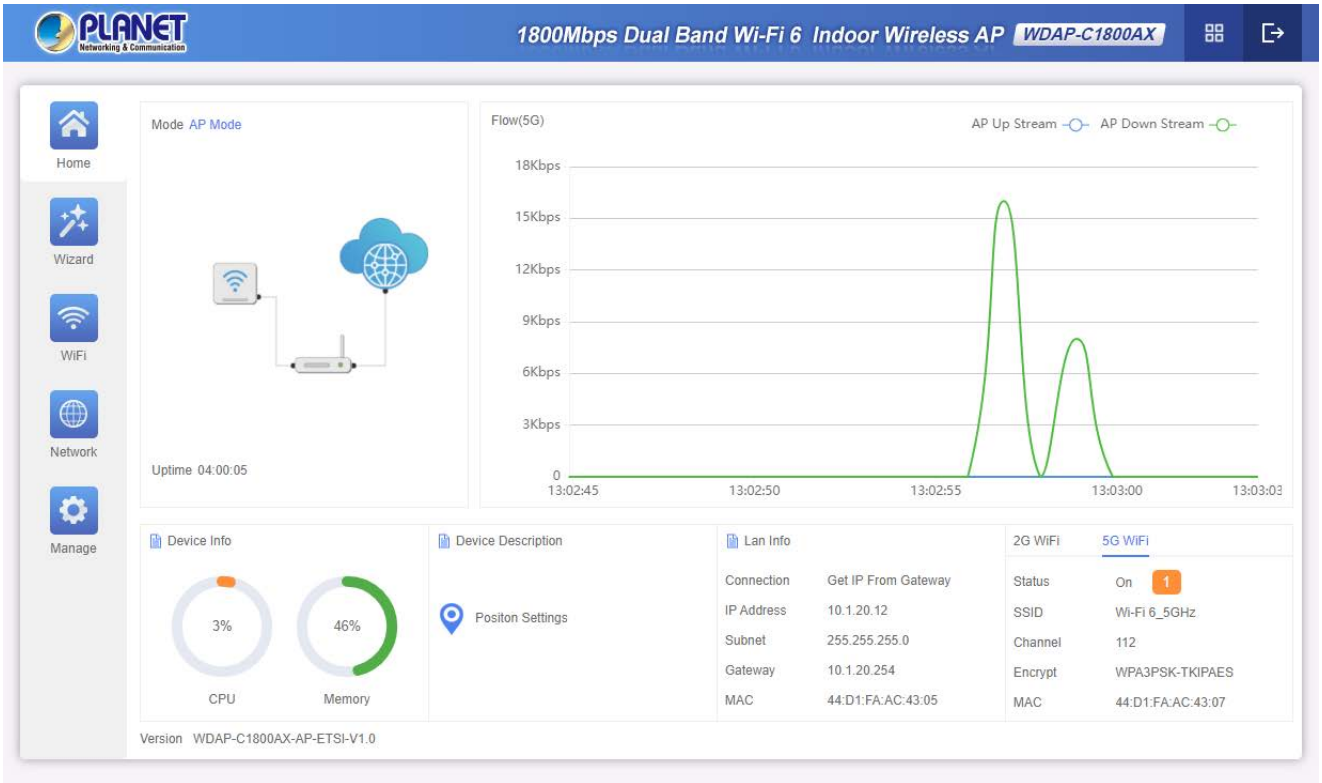


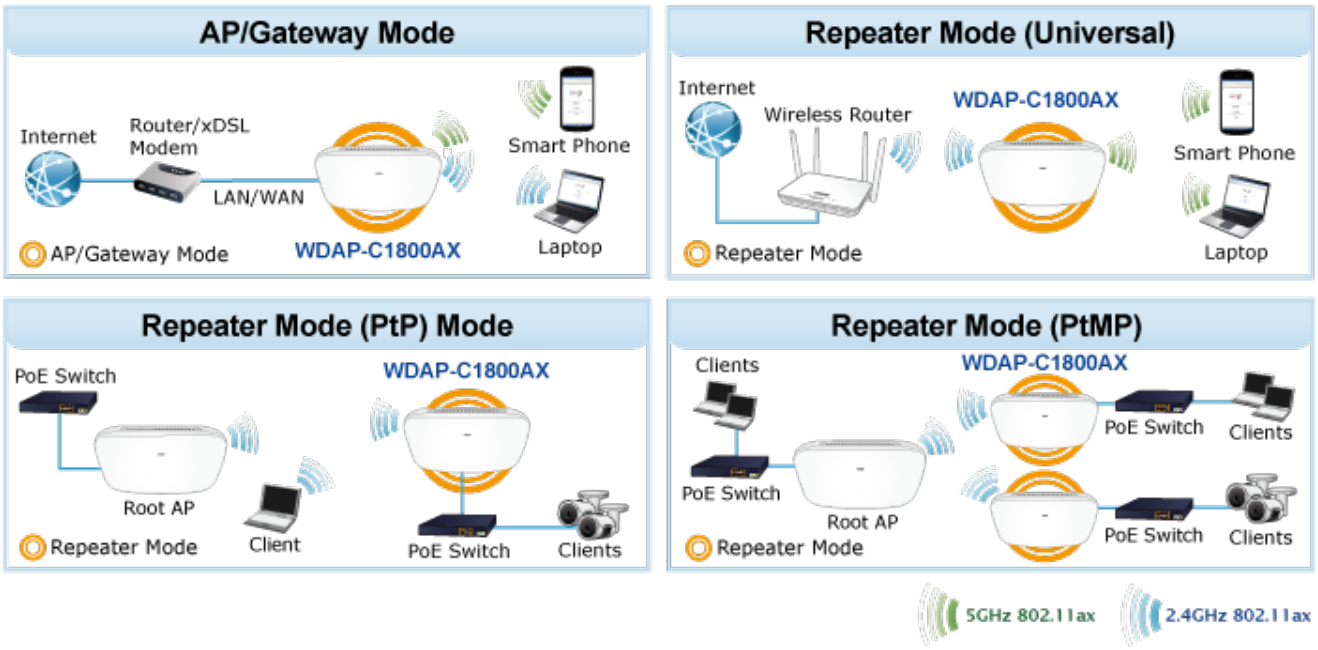
Figure 5-1 Main Menu

The page includes the following fields:

Object	Description
Mode	It shows the current mode status.
Device Info	It shows the CPU/memory usage.
Device Description	You can enter the device description.
Flow (2.4G/5G Wi-Fi)	It shows the Upstream/Downstream graph.
Lan Info	It shows the device IP mode, LAN IP, subnet, gateway and MAC address.
Wi-Fi Info	It shows the Wi-Fi status, SSID, channel, Encrypt, MAC address and client list.
Version	It shows the firmware version (Double-click to show more detailed info.)

5.1 Wizard

The Wizard guides you to configuring the WDAP-C1800AX in a different mode, including Gateway, Repeater and AP modes.



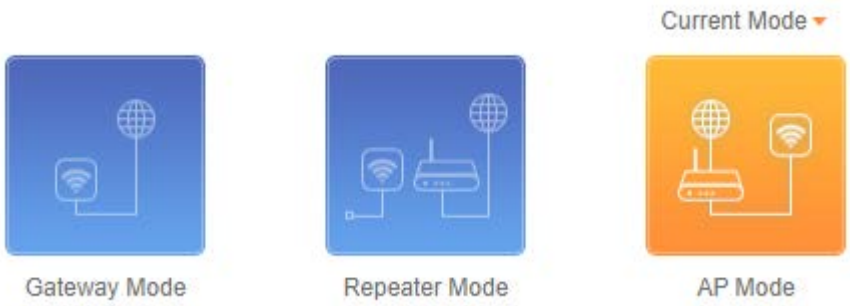


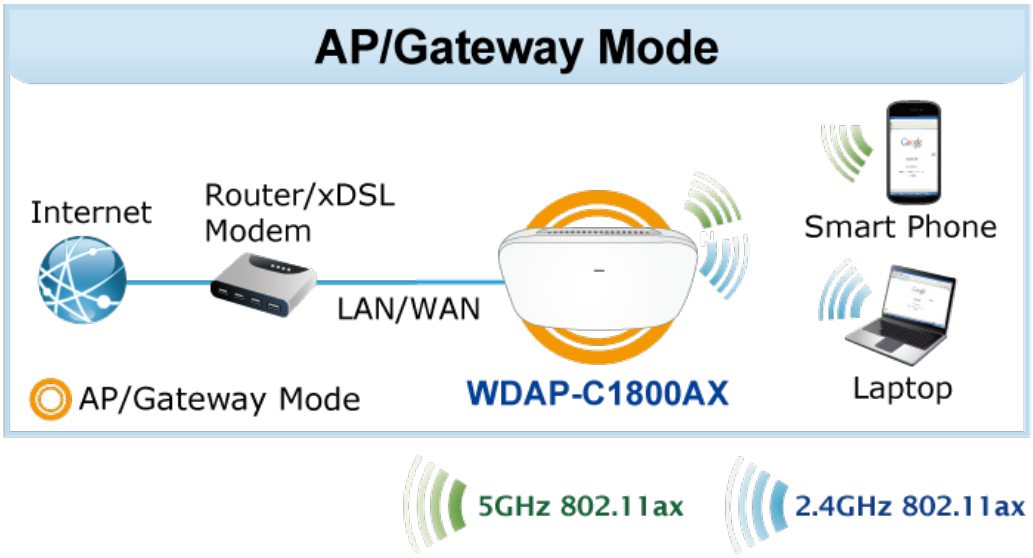
Figure 5-2 Operation Mode

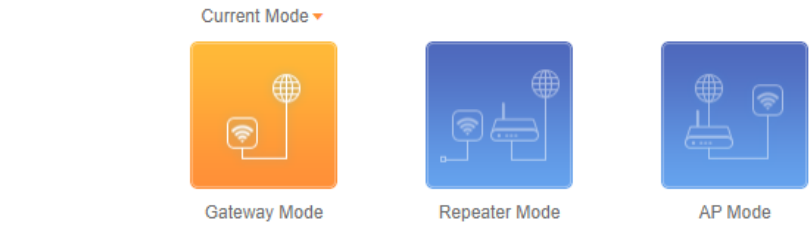
Note

The default operation mode is AP Mode.

5.2 Gateway Mode (Router)

Click “**Wizard**” → “**Gateway Mode**” and the following page will be displayed. This section allows you to configure the Gateway mode.





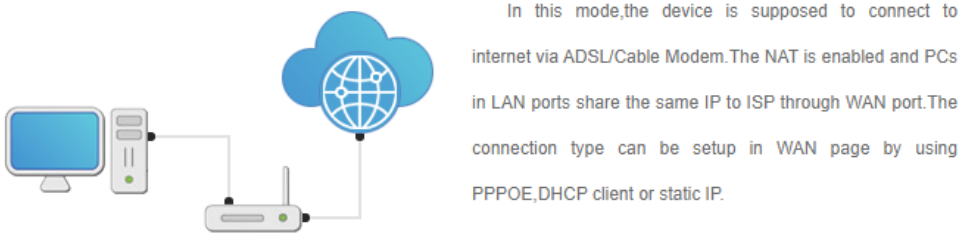


Figure 5-3 Gateway Mode

5.2.1 WAN Settings

Static IP

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

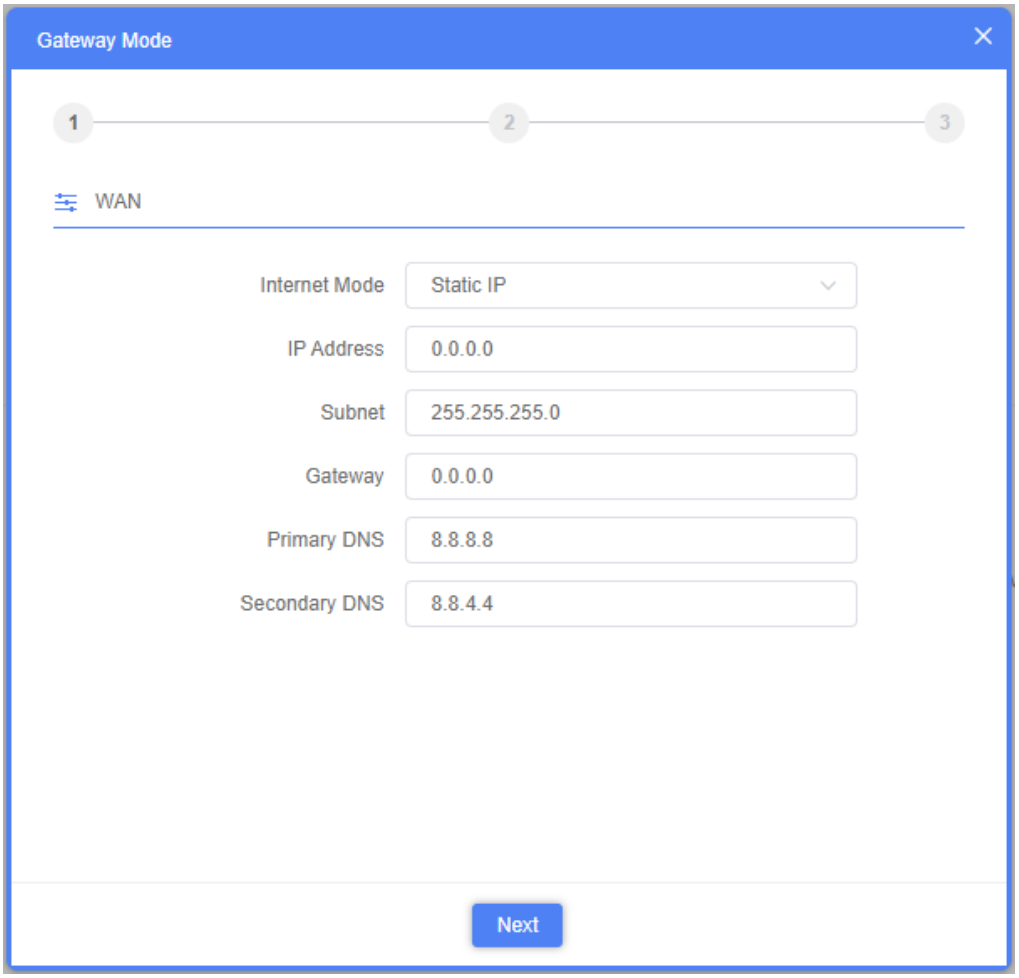


Figure 5-4 Gateway -- Static IP

The page includes the following fields:

Object	Description
Internet Mode	Select static IP or DHCP or PPPoE mode to connect to internet
IP Address	Enter the WAN IP address provided by your ISP. Enquire your ISP if you are not clear
Subnet	Enter WAN Subnet Mask provided by your ISP
Gateway	Enter the WAN Gateway address provided by your ISP
Primary DNS	Enter the necessary DNS address provided by your ISP, or not
Secondary DNS	Enter the secondary DNS address provided by your ISP, or not

PPPoE (ADSL)

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

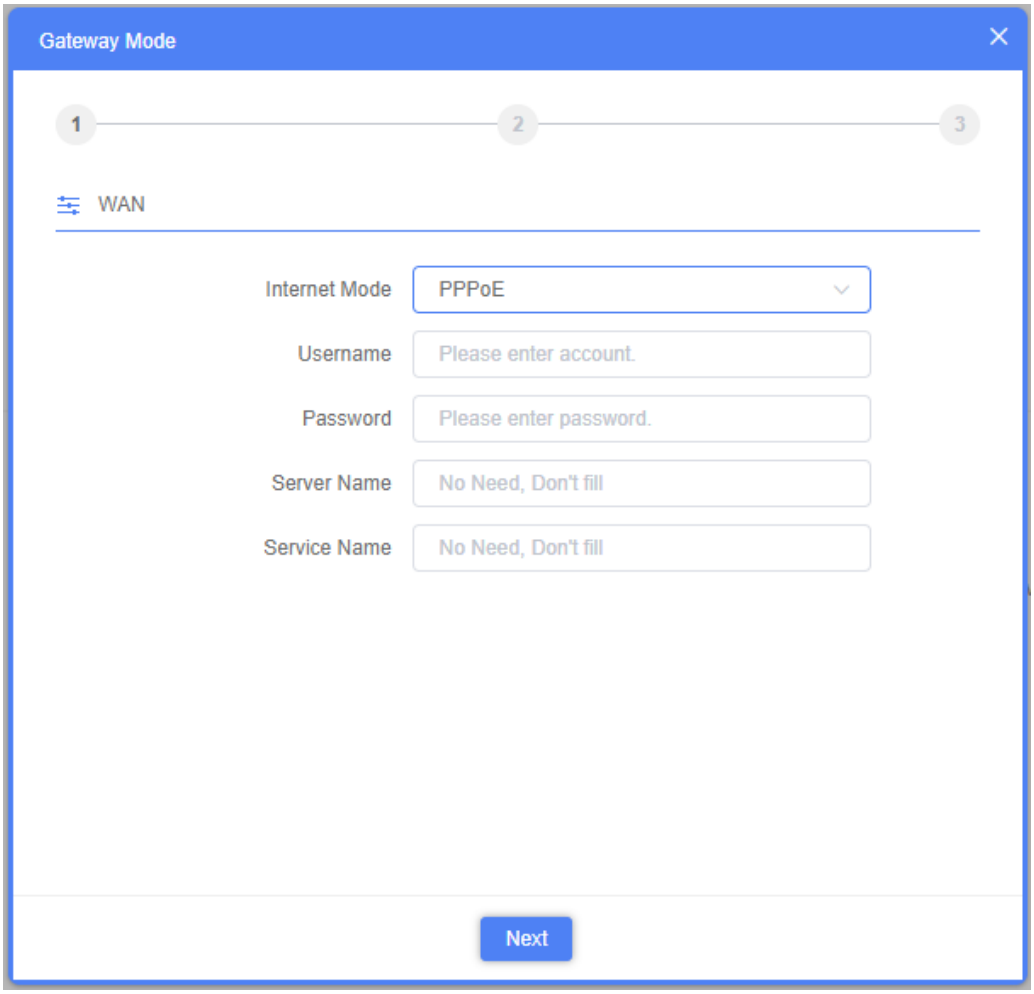


Figure 5-5 Gateway – PPPoE

The page includes the following fields:

Object	Description
Username	Enter the PPPoE User Name provided by your ISP
Password	Enter the PPPoE password provided by your ISP
Server Name	Enter the server name provided by your ISP, or not
Service Name	Enter the service name provided by your ISP, or not

DHCP

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

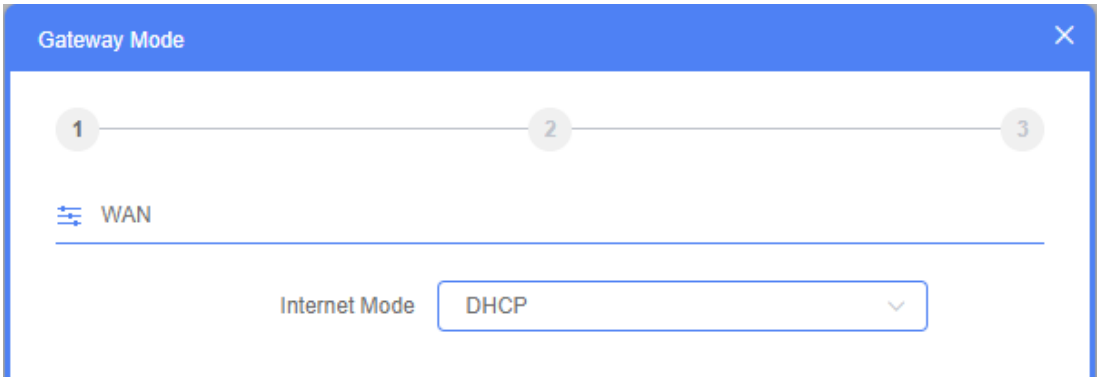
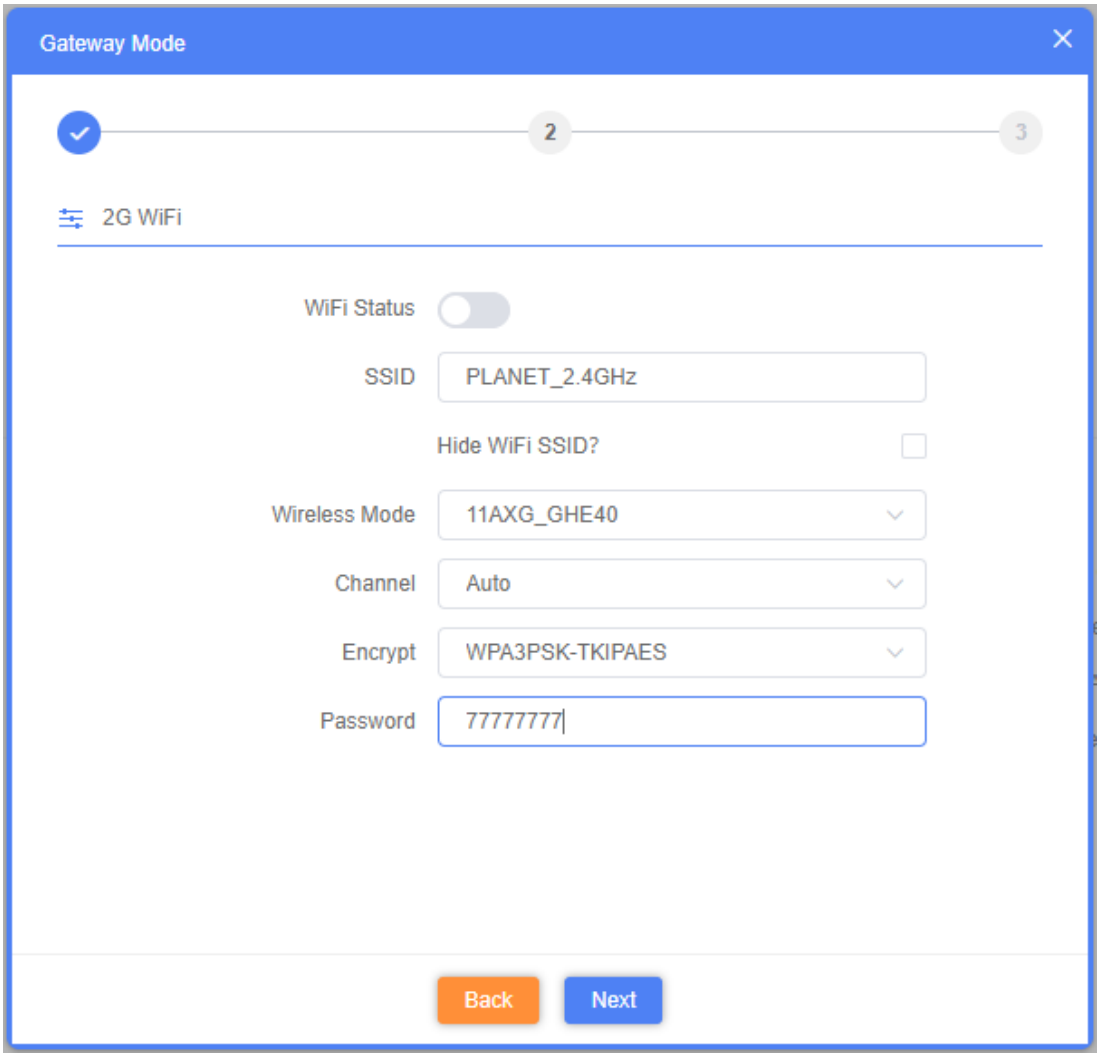


Figure 5-6 Gateway – DHCP

5.2.2 Wireless



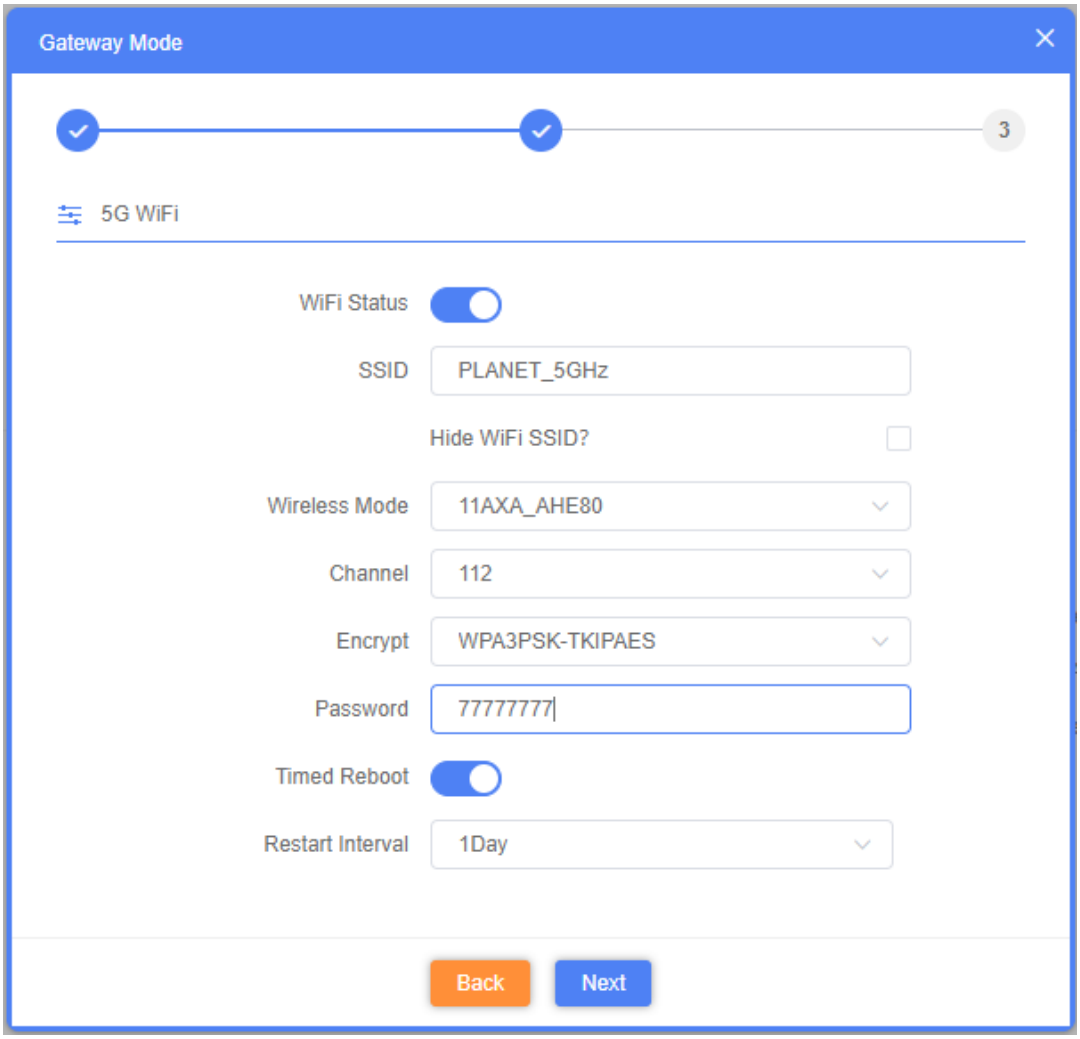


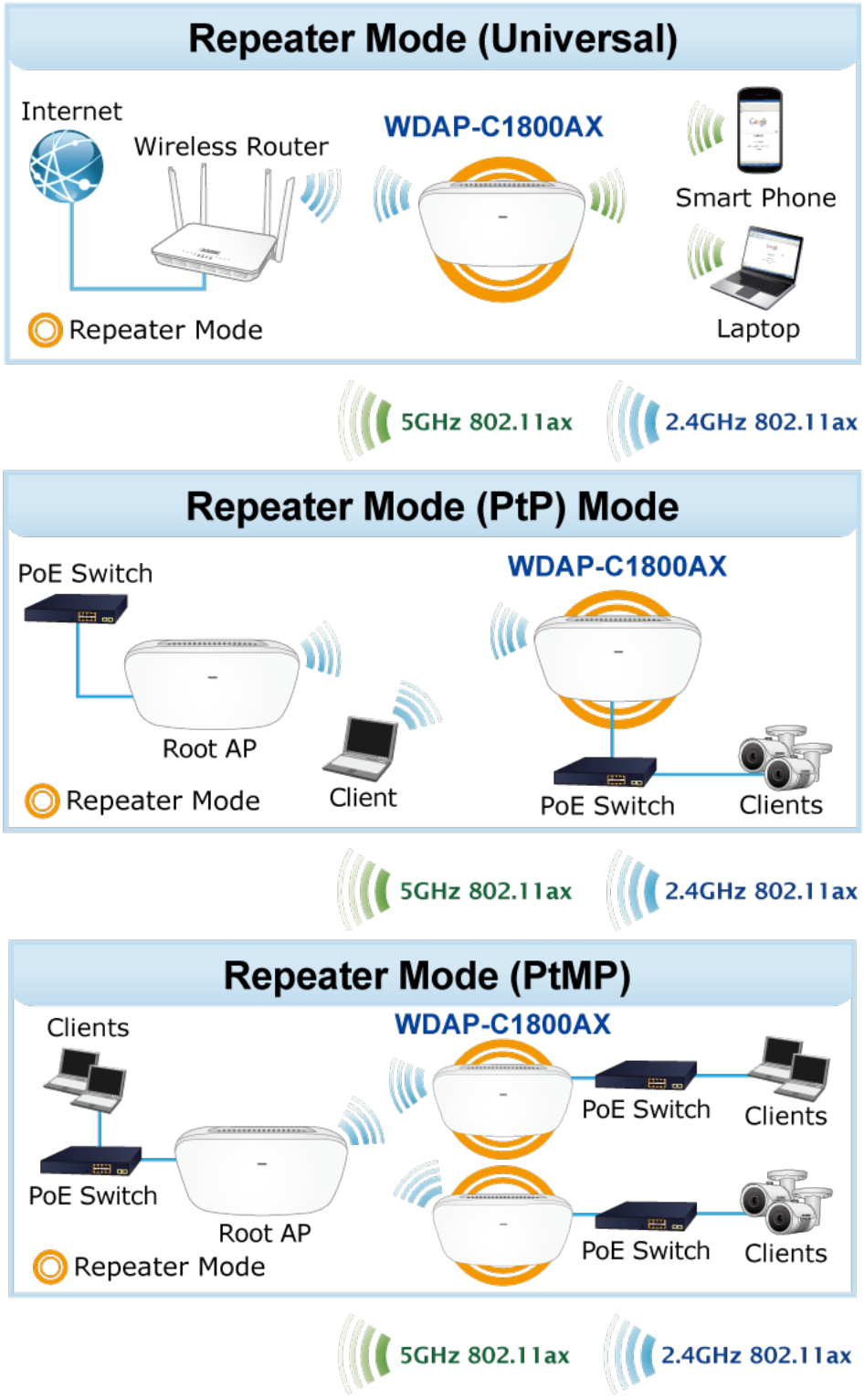
Figure 5-7 Gateway – Wireless

The page includes the following fields:

Object	Description
Wi-Fi Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable wireless LAN
SSID	It is the wireless network name. The default SSID is **"PLANET_2.4G"** and **"PLANET_5G"**
Hide WiFi SSID?	Select **check box** to hide wireless LAN or not
Wireless Mode	Select Wi-Fi mode for 802.11a/b/g/n/ac/ax, channel width, "**20MHz**" or "**40MHz**" or "**80MHz**".
Channel	Select the operating channel you would like to use. The channel range will be changed by selecting a different domain.
Encryption	Select the wireless encryption. The default is **None**
Password	Enter the password of Wi-Fi
Timed Reboot	Select **ON** (**Blue**) or **OFF** (**Gray**) to restart for clock
Restart Interval	Set time to restart for day (1 to 10 Days)

5.3 Repeater Mode (Universal Repeater)

Click “**Wizard**” → “**Repeater Mode**” and the following page will be displayed. This section allows you to configure the Repeater mode.



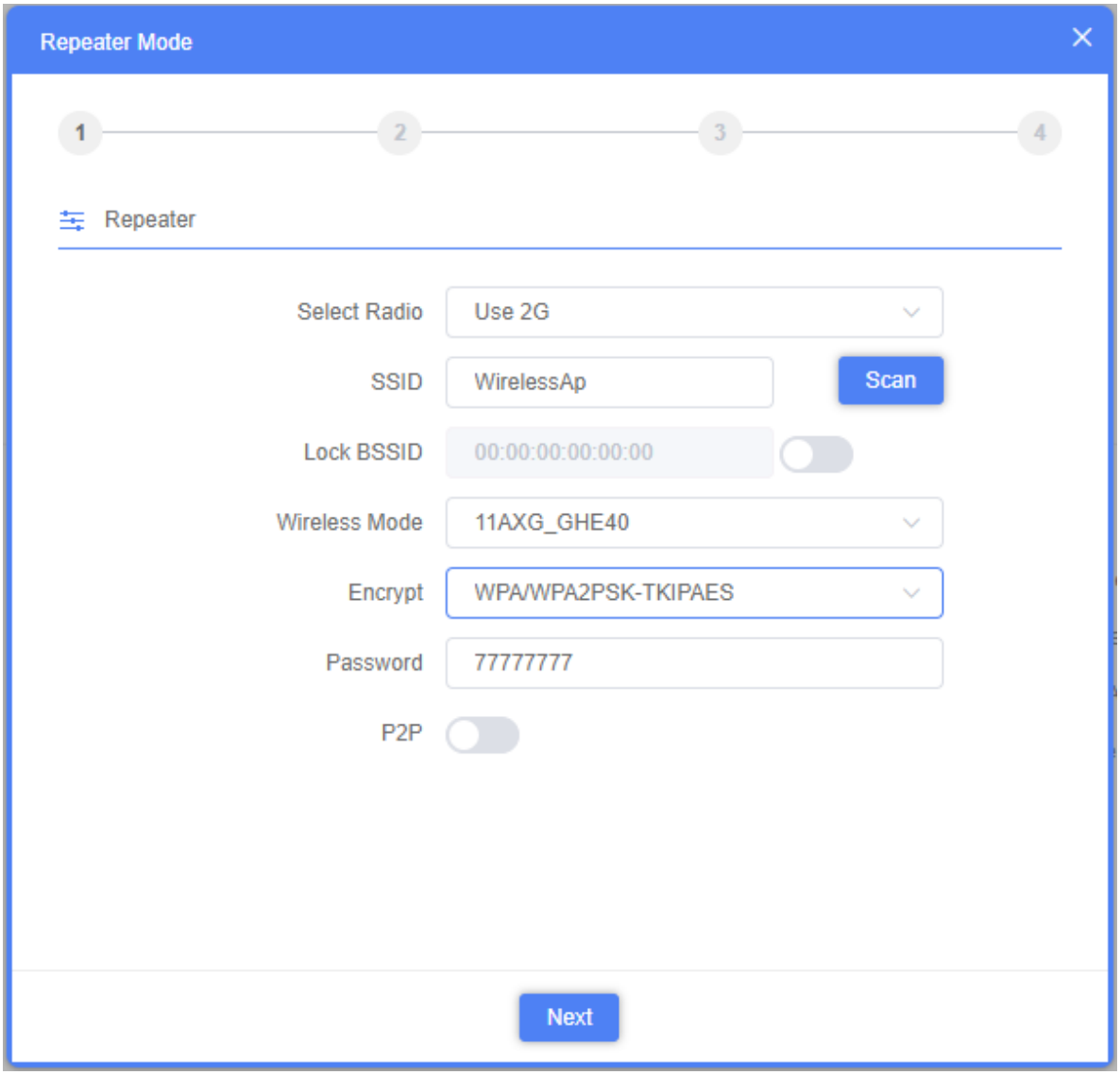


Figure 5-8 Repeater Mode

The page includes the following fields:

Object	Description
Select Radio	Select "**2.4GHz**" or "**5GHz**" wireless LAN.
SSID	Enter the root AP's SSID or press "**Scan**" to select.
Lock BSSID	Check to lock the root AP's MAC address.
Wireless Mode	Select Wi-Fi mode for 802.11a/b/g/n/ac/ax, channel width, "**20MHz**" or "**40MHz**" or "**80MHz**".
Encryption	Select the wireless encryption of root AP. The default is "**NONE**". ※ **Not Support WPA3**
Password	Enter the password of root AP.
P2P	Enable switch for Point to Point function.

Press **Scan** to show the root AP that you need to repeat and press **Choice** to select the AP.

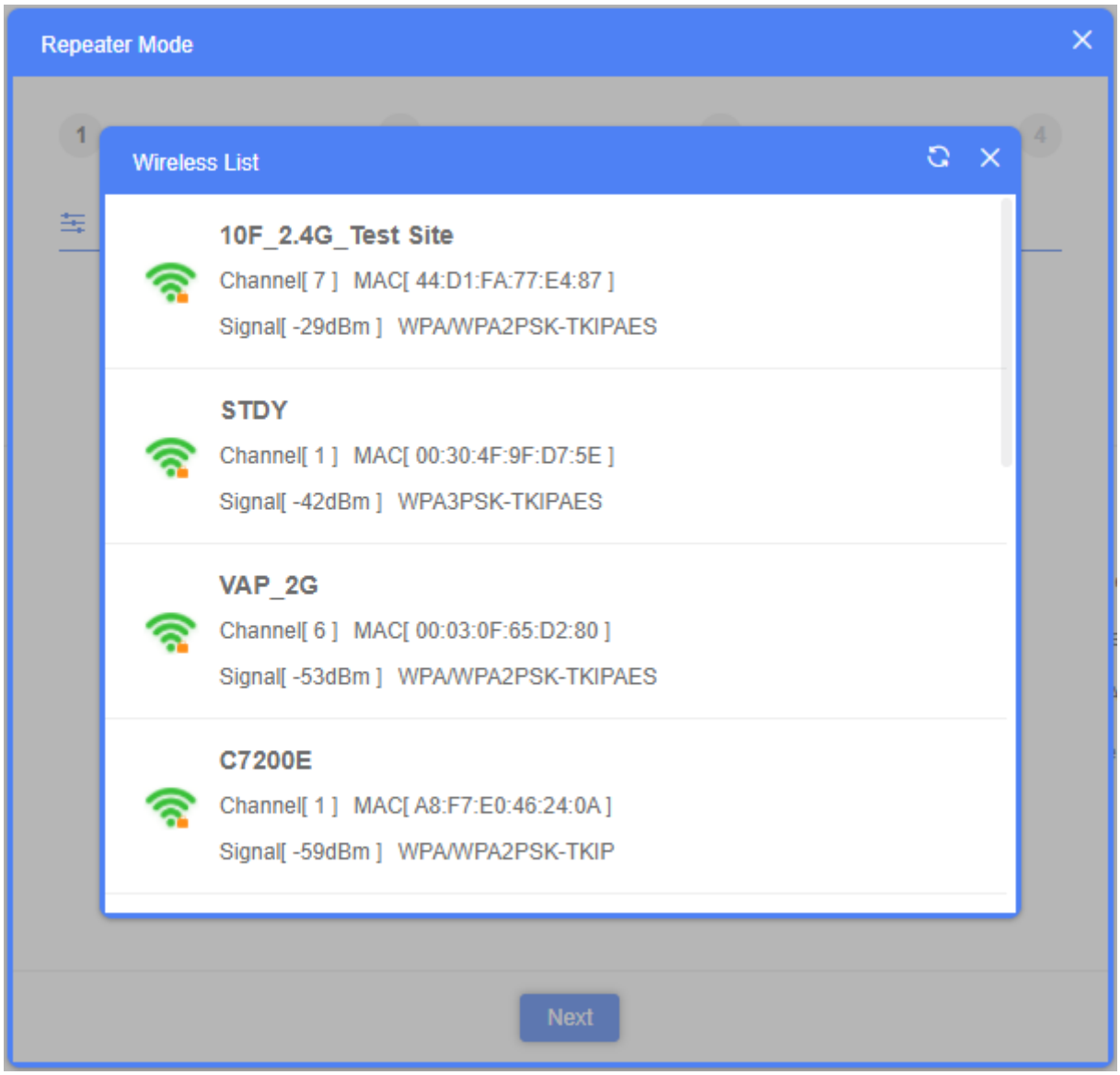


Figure 5-9 Repeater Mode -- Scan Root AP

Set up the repeater wireless network

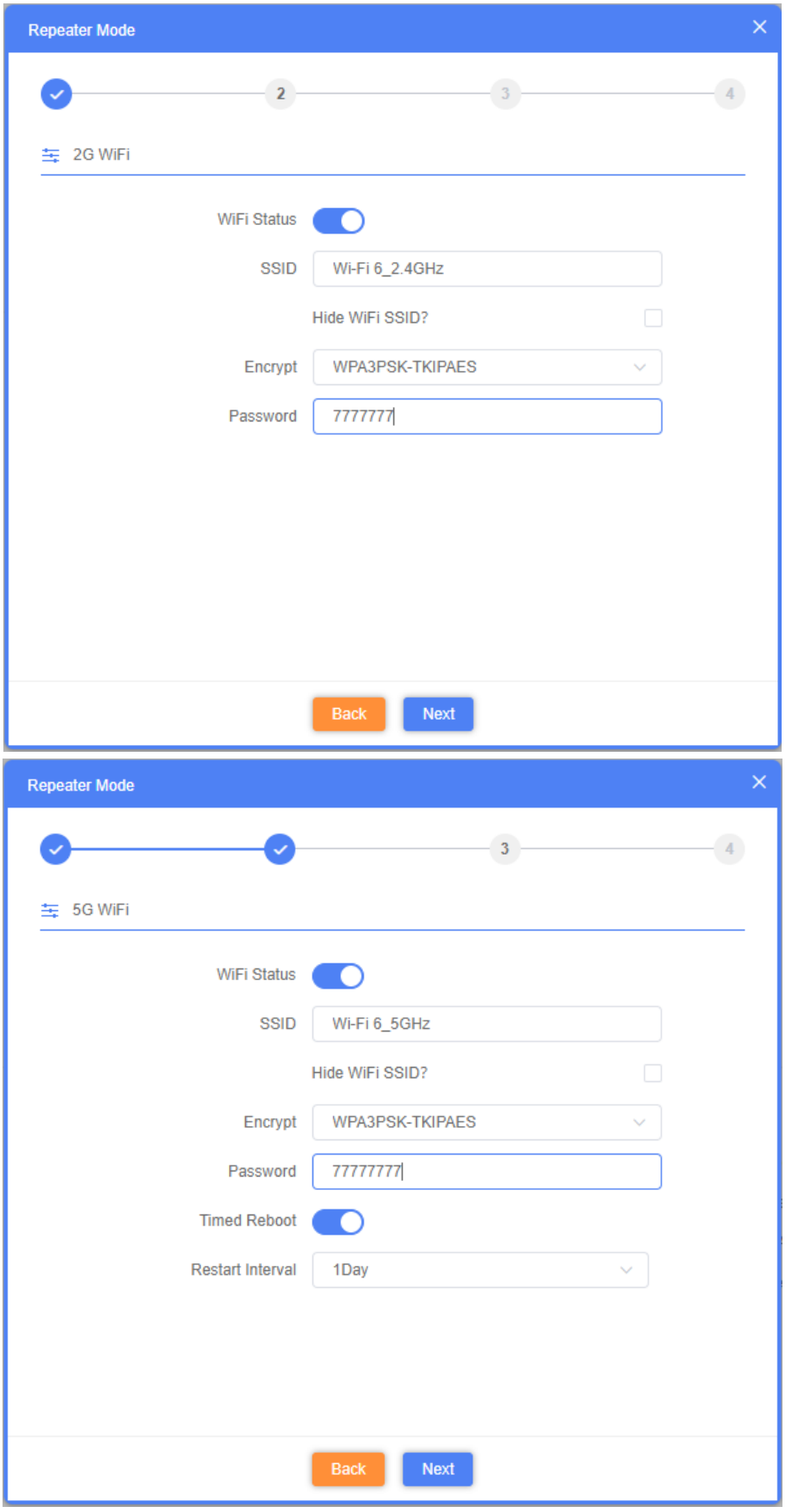


Figure 5-10 Repeater Mode – Setting up Wi-Fi

The page includes the following fields:

Object	Description
Wi-Fi Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable wireless LAN.
SSID	It is the wireless network name. The default SSID is "**PLANET_2.4G**" and "**PLANET_5G**".
Hide WiFi SSID?	Select **check box** to hide wireless LAN or not
Encryption	Select the wireless encryption. The default is "**None**".
Password	Enter the password of Wi-Fi
Timed Reboot	Select **ON** (**Blue**) or **OFF** (**Gray**) to restart for clock
Restart Interval	Set time to restart for day (1 to 10 Days)

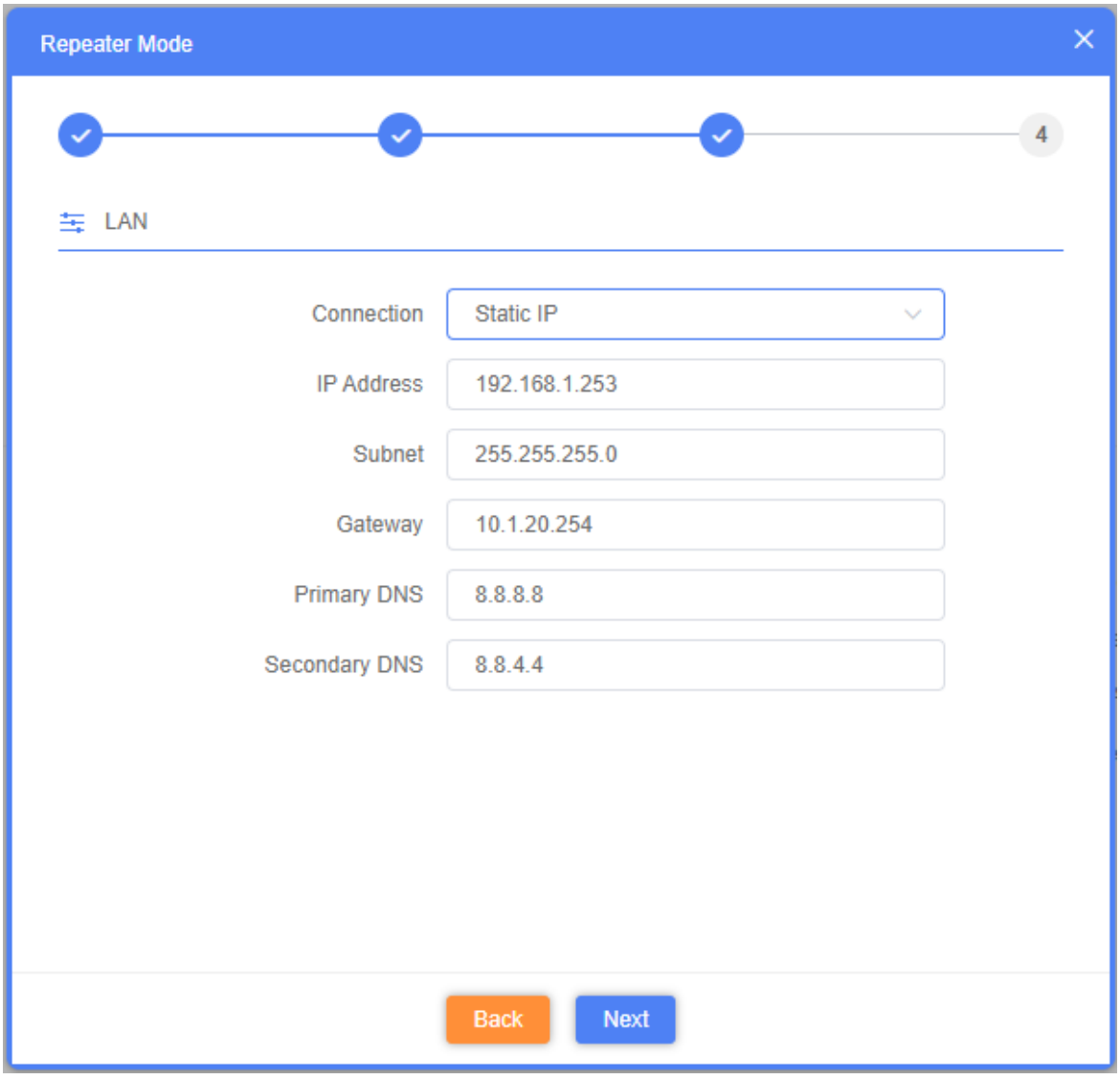


Figure 5-11 Repeater Mode – Setting up device IP

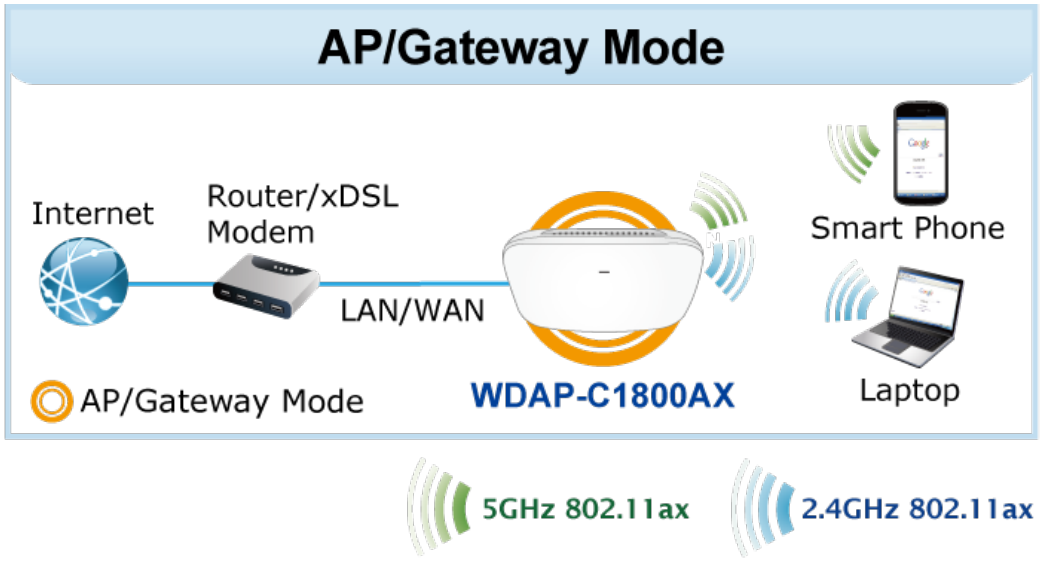
The page includes the following fields:

Object	Description
Connection	Select “**Static IP**” or “**DHCP Client**” for setting up device IP.
IP Address	Enter the AP static IP address.
Subnet	Enter the network mask.
Gateway	Enter the default gateway IP address.
Primary DNS	Enter the primary DNS IP address, or not.
Secondary DNS	Enter the secondary DNS IP address, or not.

Enter the LAN IP address.

5.4 AP Mode

In the AP mode, the AP wireless interface and cable interface bridge together. Click "**Wizard**" → "**AP Mode**" and the following page will be displayed. This section allows you to configure the AP mode.



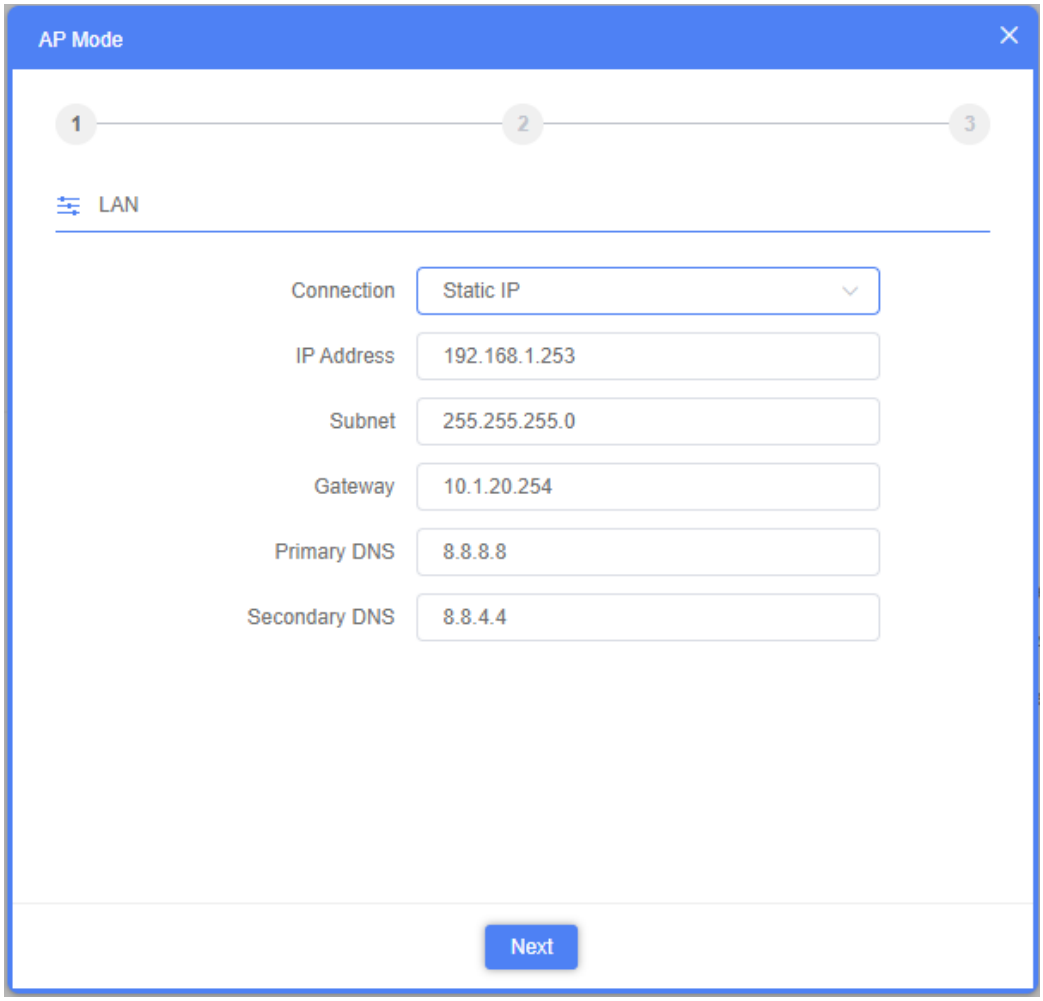
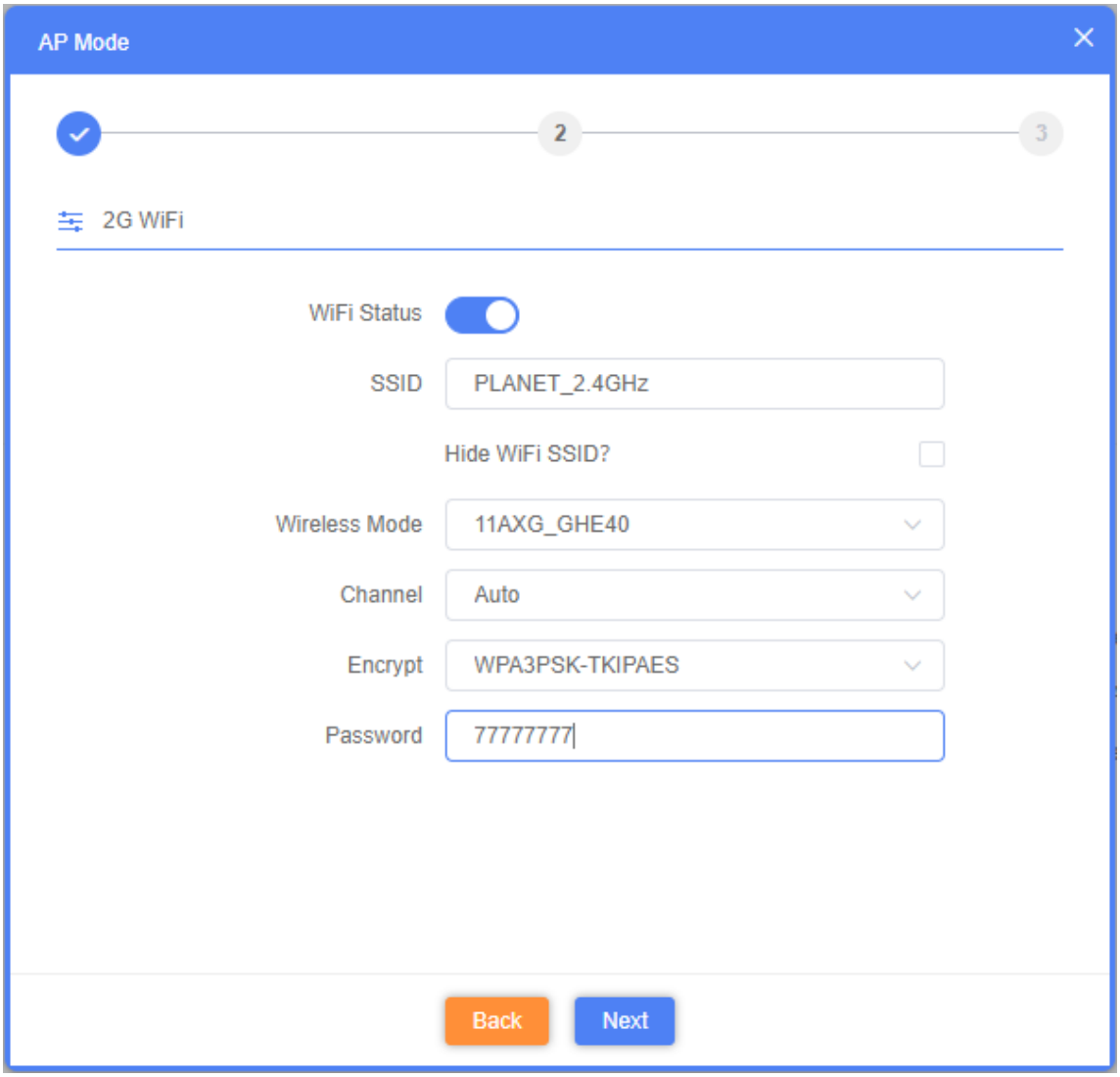


Figure 5-12 AP Mode

The page includes the following fields:

Object	Description
Connection	Select “**Static IP**” or “**DHCP Client**” for setting up device IP.
IP Address	Enter the AP static IP address.
Subnet	Enter the network mask.
Gateway	Enter the default gateway IP address.
Primary DNS	Enter the primary DNS IP address, or not.
Secondary DNS	Enter the secondary DNS IP address, or not.

Enter the LAN IP address.



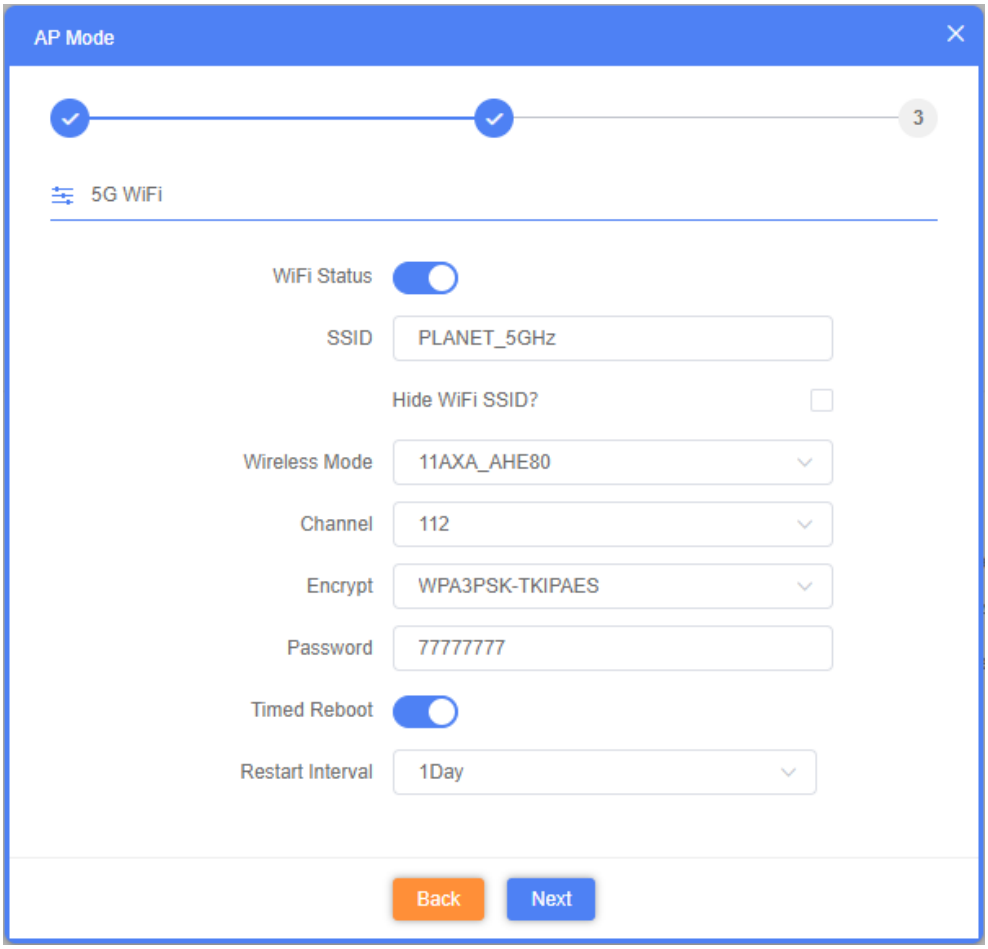


Figure 5-13 AP Mode – Set up Wi-Fi

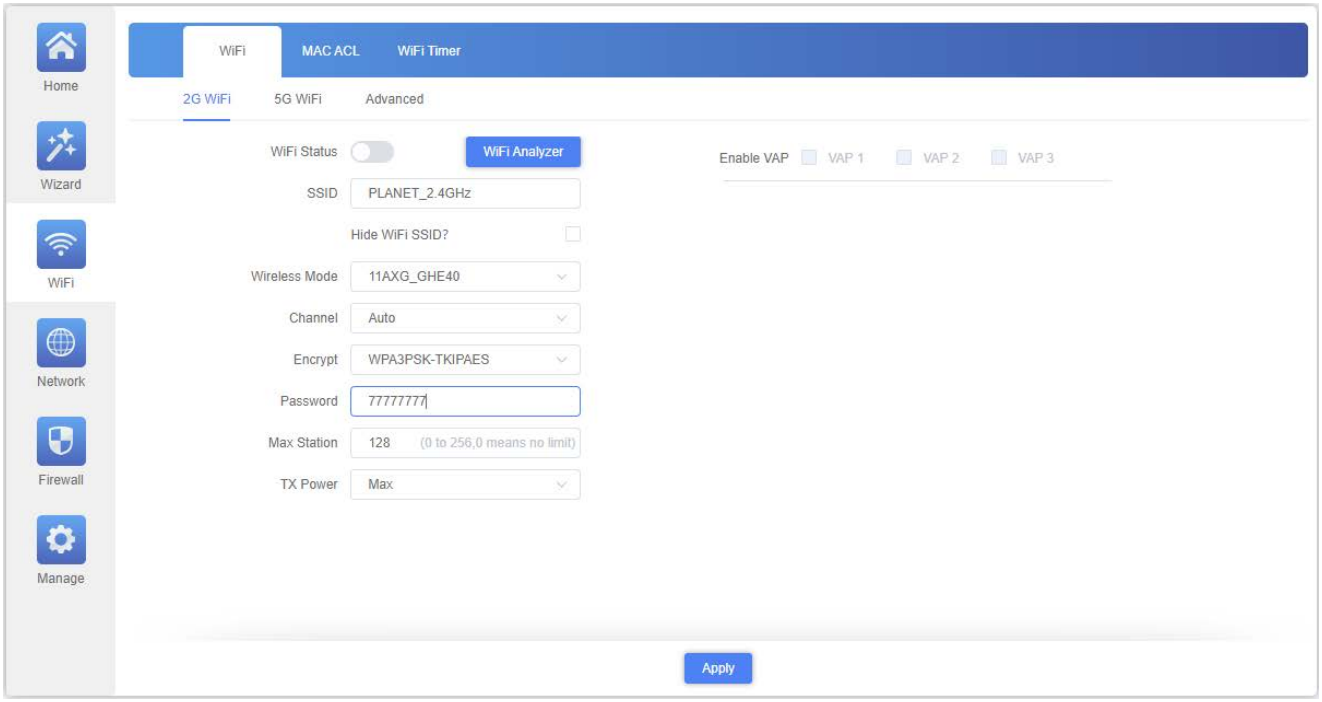
The page includes the following fields:

Object	Description
Wi-Fi Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable wireless LAN.
SSID	It is the wireless network name. The default SSID is "**PLANET_2.4G**" and "**PLANET_5G**".
Hide WiFi SSID?	Select **check box** to hide wireless LAN or not
Wireless Mode	Select Wi-Fi mode for 802.11a/b/g/n/ac/ax, channel width, "**20MHz**" or "**40MHz**" or "**80MHz**".
Channel	Select the operating channel you would like to use. The channel range will be changed by selecting a different domain.
Encryption	Select the wireless encryption. The default is "**None**".
Password	Enter the password of Wi-Fi
Timed Reboot	Select **ON** (**Blue**) or **OFF** (**Gray**) to restart for clock
Restart Interval	Set time to restart for day (1 to 10 Days)

5.5 Wi-Fi

5.5.1 2.4GHz/5GHz Wi-Fi

5.5.1.1. Basic



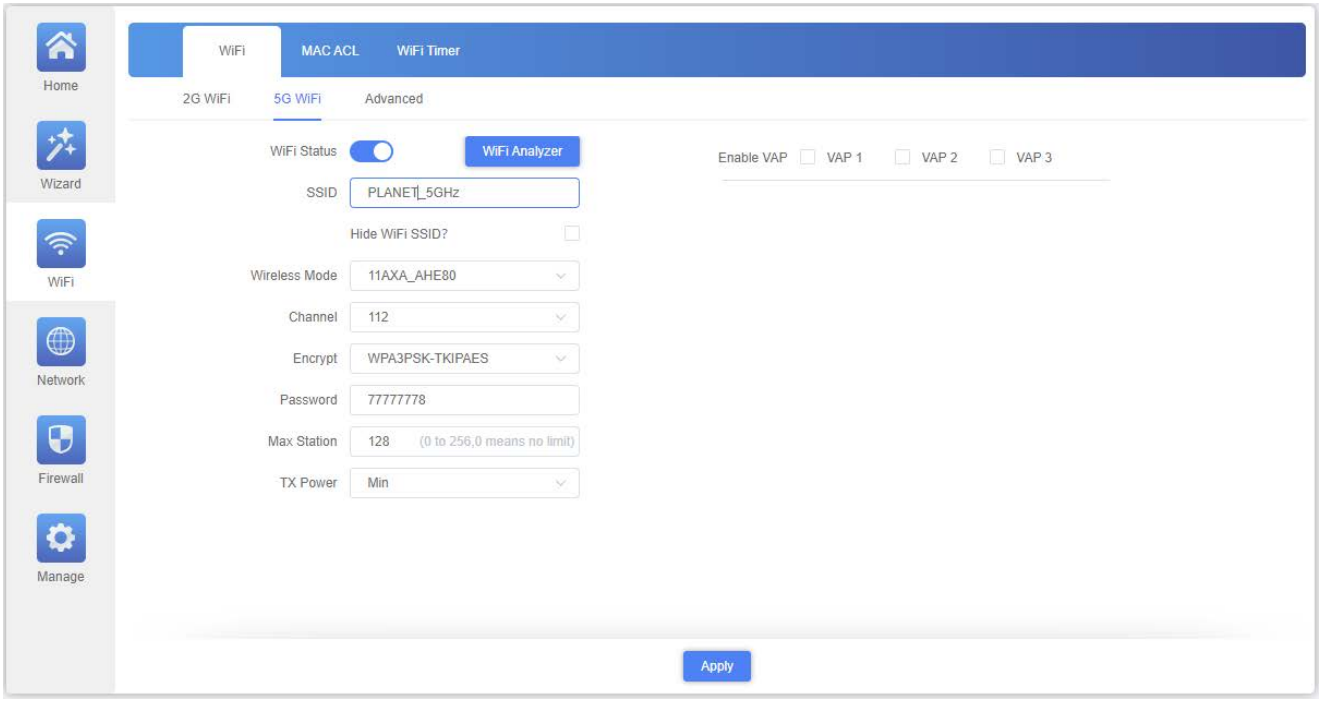


Figure 5-14 Basic

The page includes the following fields:

Object	Description
Wi-Fi Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable wireless LAN.
SSID	It is the wireless network name. The default SSID is "**PLANET_2.4G**" and "**PLANET_5G**".
Hide WiFi SSID?	Select **check box** to hide wireless LAN or not
Wireless Mode	Select Wi-Fi mode for 802.11a/b/g/n/ac/ax, channel width, "**20MHz**" or "**40MHz**" or "**80MHz**".
Channel	It shows the channel of the CPE. Default 2.4GHz is channel 6.and 5GHz is channel 36.
Encryption	Select the wireless encryption. The default is "**None**".
Password	Enter the password of Wi-Fi
Max Station	Enter the Max. wireless client of Wi-Fi radio
TX Power	The range of transmit power is **Max (100%)**, **Efficient (75%)**, **Enhanced (50%), Standard (25%)** or **Min (12.5%)**. In case of shortening the distance and the coverage of the wireless network, input a smaller value to reduce the radio transmission power.
Wi-Fi Analyzer	Press this button to analyze local area wireless signal.

5.5.1.2. VAP

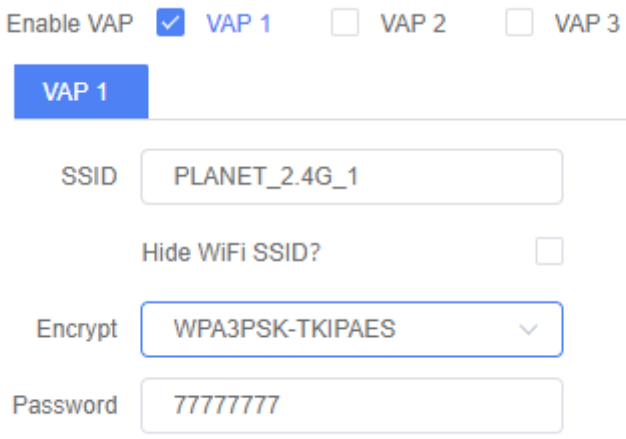


Figure 5-15 VAP

Select VAP1~VAP3 to enable virtual AP.

The page includes the following fields:

Object	Description
Enable VAP	Select **check box** to enable the virtual AP

SSID	It is the wireless network name. The default 2.4GHz SSID is "**PLANET_2.4GHz_1**" to "**PLANET_2.4GHz_3**" and 5GHz SSID is "**PLANET_5GHz_1**" to "**PLANET_5GHz_3**".
Hide WiFi SSID?	Select **check box** to hide wireless LAN or not
Encrypt	Select the wireless encryption. The default is "**None**".
Password	Enter the password of virtual Wi-Fi

5.5.2 MAC ACL

5.5.2.1. MAC ACL

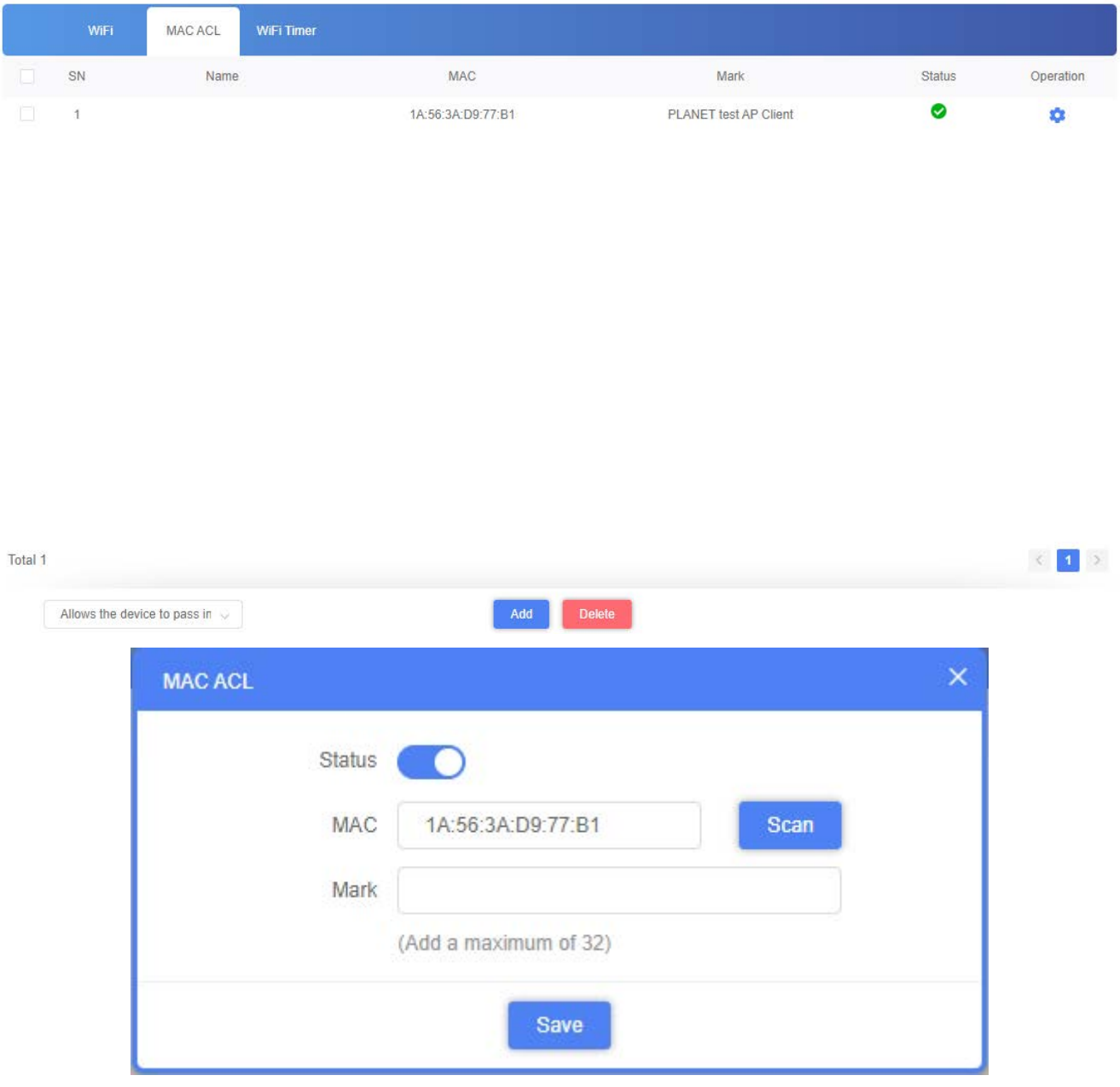


Figure 5-16 MAC ACL

The page includes the following fields:

Object	Description
Add	Press the "**Add**" button to add end-device that is scanned from wireless network and mark them.
Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable ACL function
Scan	Press the "**Scan**" button to detect client device
Mark	Enter the description for client device
Save	Press the "**Save**" button to save the rule.
Delete	Press the "**Delete**" button to delete device from list.
ACL Status	Select the rule of ACL; default is **Disable**. Blacklist: **Prohibited rules within the device** Whitelist: **Allows the devices to pass**

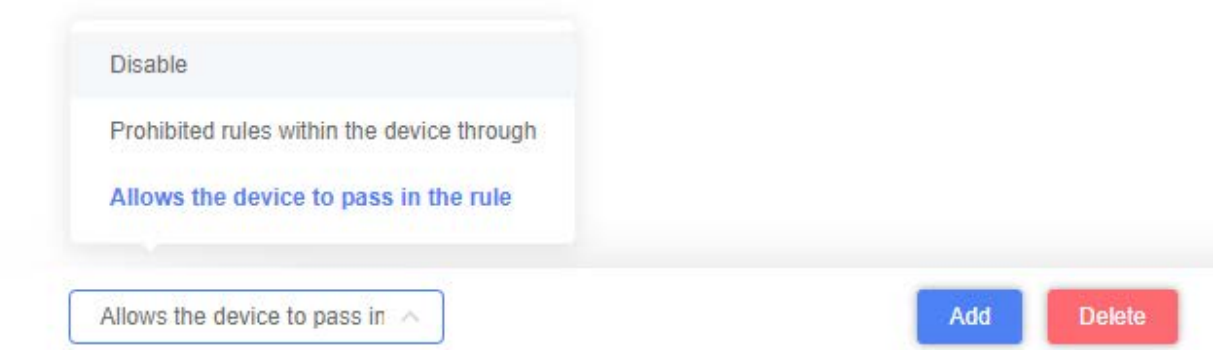


Figure 5-17 ACL status

5.5.3 Wi-Fi Timer Off

5.5.3.1. Wi-Fi Timer Off

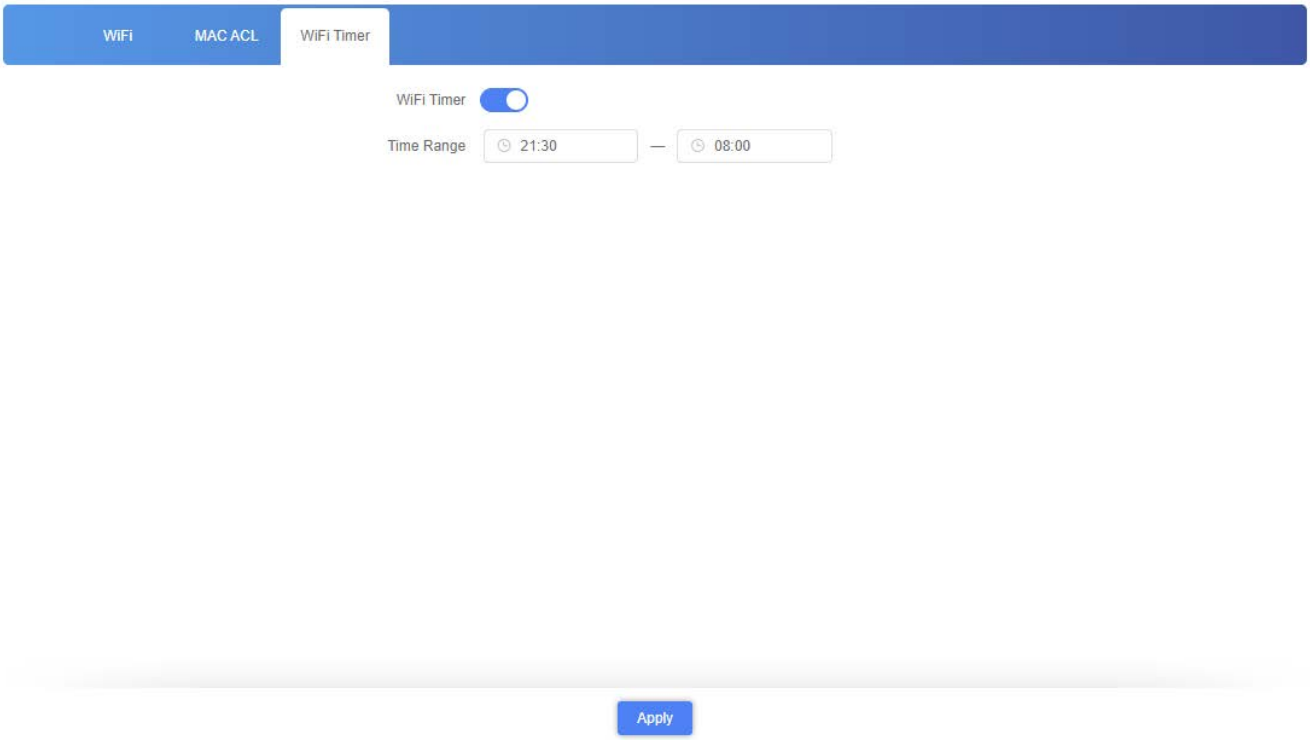


Figure 5-18 Wi-Fi Timer Off

The page includes the following fields:

Object	Description
Wi-Fi Timer Off	Select ON (**Blue**) or OFF (**Gray**) to enable or disable timer.
Time Frame	Choose the time frame of Wi-Fi.

5.5.4 Advanced

5.5.4.1. Advanced

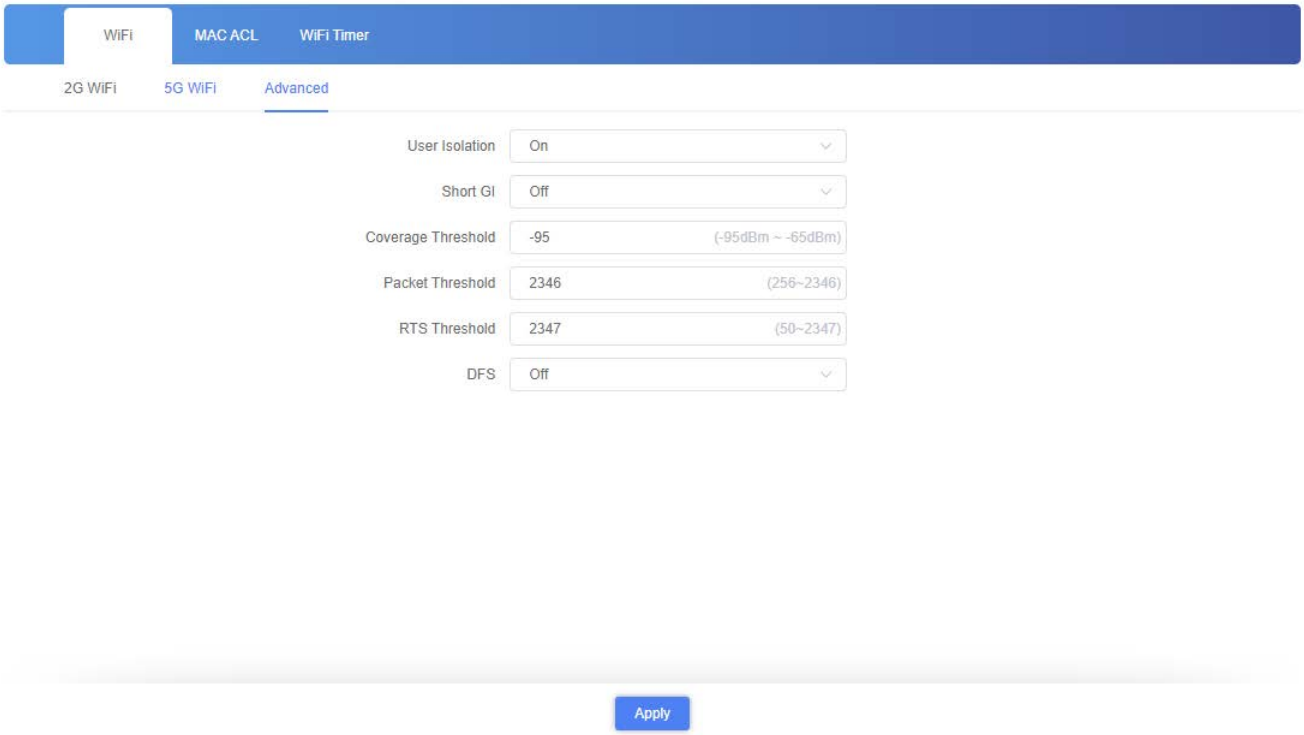


Figure 5-19 Advanced

The page includes the following fields:

Object	Description
User Isolation	Enable it to isolate each connected wireless client so that they cannot access mutually
Short GI	Guard intervals are used to ensure that distinct transmissions do not interfere with one another
Coverage Threshold	The coverage threshold is to limit the weak signal of clients occupying session. The default is -95dBm
Packet Threshold	When the length of a data packet exceeds this value, the router will send an RTS frame to the destination wireless node, and the latter will reply with a CTS frame, and thus they are ready to communicate. The default value is **2346**
RTS Threshold	Enable or Disable RTS/CTS protocol. It can be used in the following scenarios and used by Stations or Wireless AP. 1) When medium is too noisy or lots of interferences are present. If the AP/Station cannot get a chance to send a packet, the RTS/CTS mechanism can be initiated to get the packet sent. 2) In mixed mode, the hidden node problem can be avoided. The default value is **2347**
DFS	Enable or Disable DFS (Dynamic Frequency Selection) function

Preferred 5GHz	Default enable to let client connect with 5GHz first
Terminal Fast Roam	Default enable 802.11k, 802.11v and 802.11r

5.5.5 Network

5.5.5.1. LAN Settings

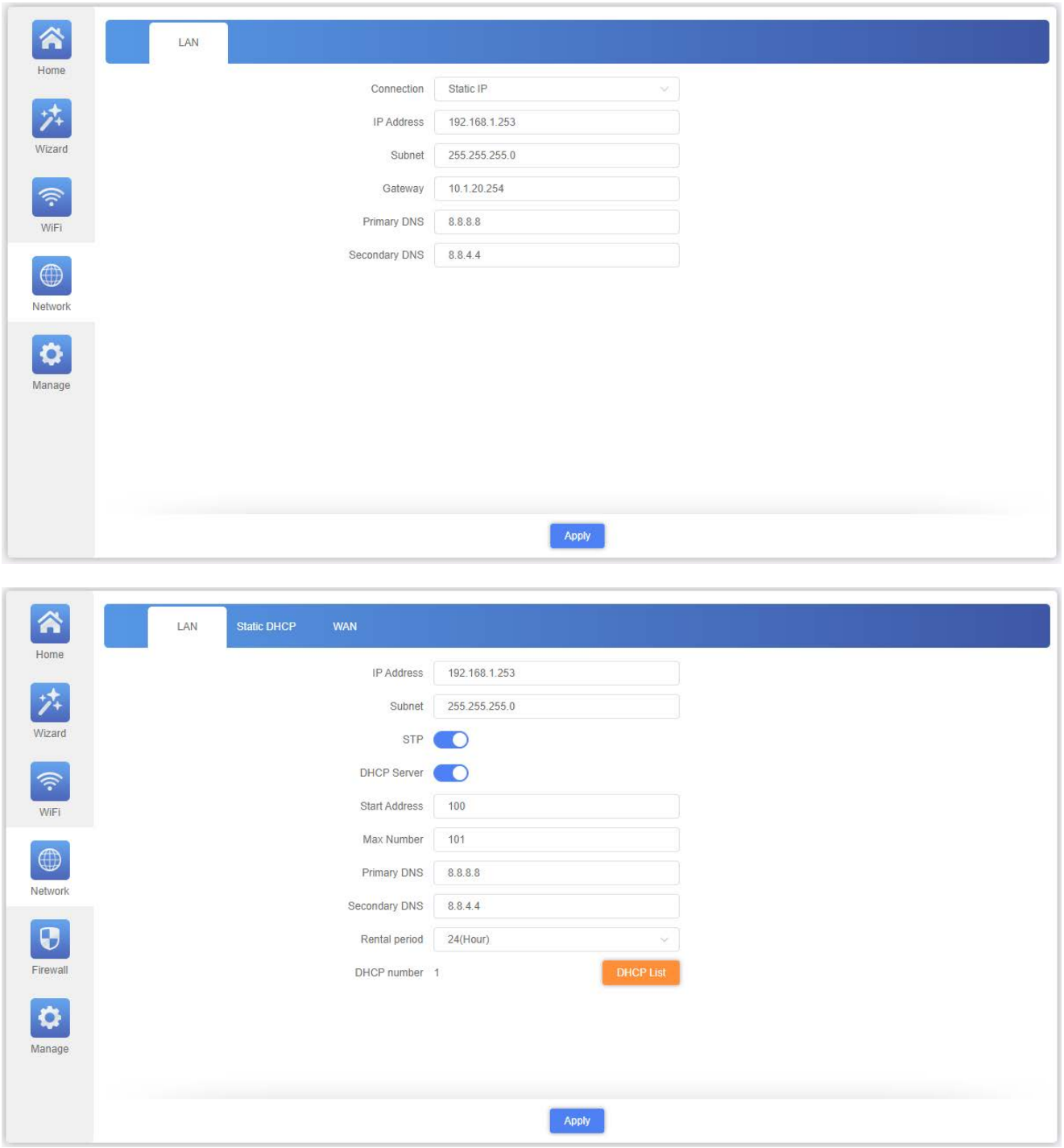


Figure 5-20 LAN Settings **(AP/Gateway Mode)**

The page includes the following fields:

Object	Description
Connection	Select "**Static IP**" or "**DHCP Client**" for setting up device IP
IP Address	Enter the AP static IP address

Subnet	Enter the network mask
Gateway	Enter the network default gateway
STP	Select ON (**Blue**) or OFF (**Gray**) to enable or disable STP function. **(Gateway Mode)**
DHCP Server	Select ON (**Blue**) or OFF (**Gray**) to enable or disable DHCP server function. **(Gateway Mode)**
Start Address	Enter the client devices first IP address **(Gateway Mode)**
Max. Number	Enter the client devices Max. number **(Gateway Mode)**
Primary DNS	Enter the primary DNS IP address, or not
Secondary DNS	Enter the secondary DNS IP address, or not
Rental period	Select the rental period for client devices (1 to 24 hours) **(Gateway Mode)**
DHCP number	Show the client device number **(Gateway Mode)**
DHCP List	Press button to show detailed client list information **(Gateway Mode)**

5.5.5.2. VLAN Settings (AP mode)

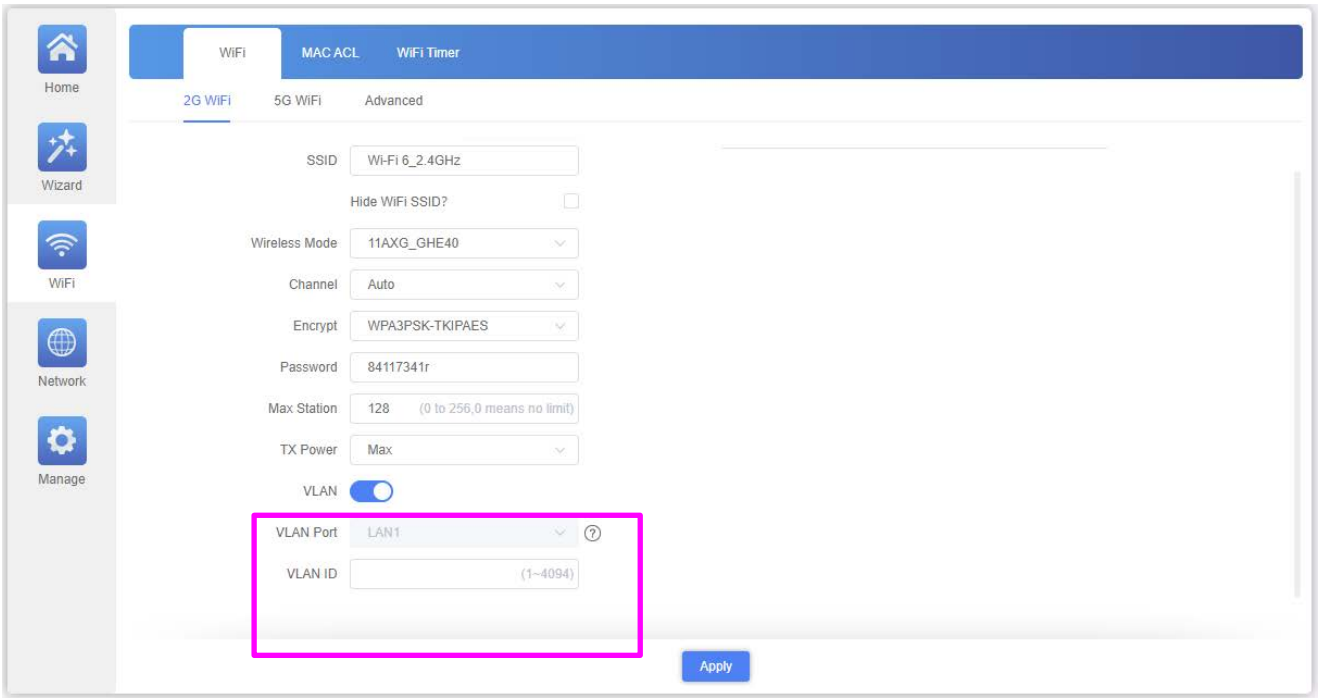


Figure 5-21 VLAN Settings

The page includes the following fields:

Object	Description
VLAN	Select ON (**Blue**) or OFF (**Gray**) to enable or disable wireless VLAN .
VLAN Port	LAN1 and LAN2 (WAN/PoE) ports are in bridge mode
VLAN ID	Enter the VLAN ID from 1 to 4094.

5.5.5.3. WAN Settings

Static IP

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

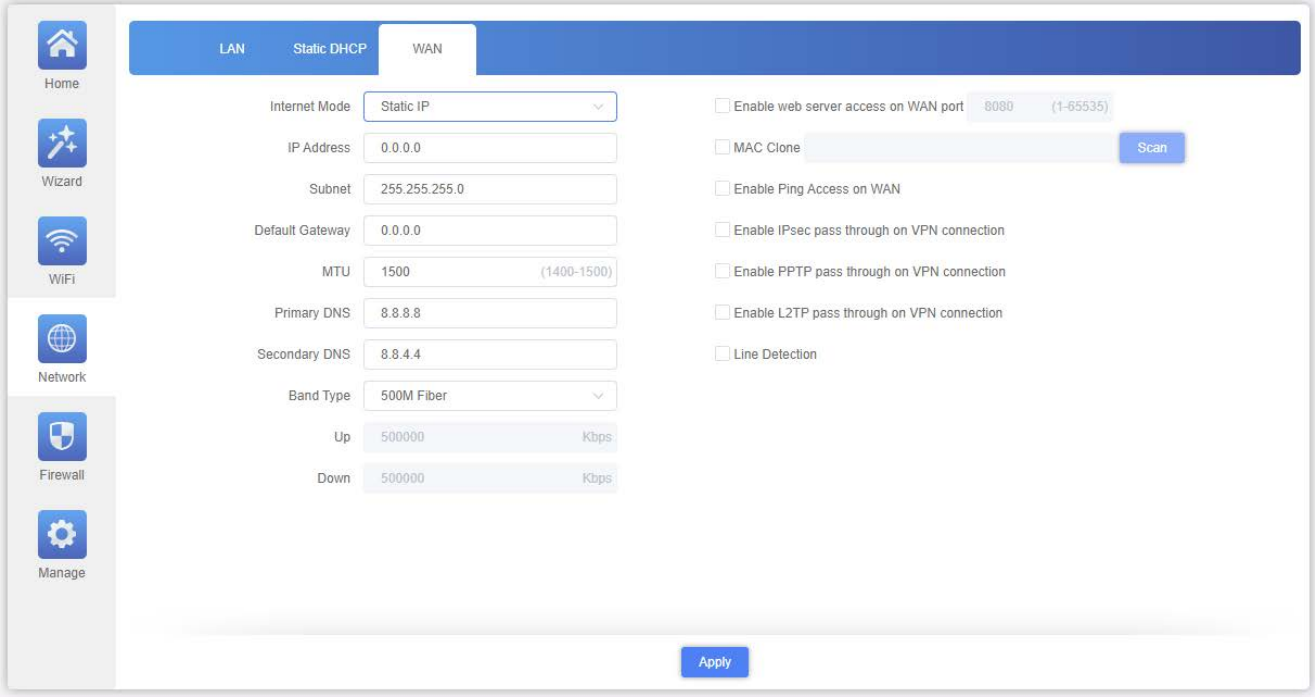


Figure 5-22 Static IP

The page includes the following fields:

Object	Description
IP Address	Enter the WAN IP address provided by your ISP. Enquire your ISP if you are not clear.
Subnet	Enter WAN Subnet Mask provided by your ISP.
Default Gateway	Enter the WAN Gateway address provided by your ISP.
MTU	Maximum Transmission Unit. Default is 1500.
Primary DNS	Enter the necessary DNS address provided by your ISP.
Secondary DNS	Enter the secondary DNS address provided by your ISP.
Band Type	Select the band type provided by your ISP.
Up	Enter limited upstream throughput in custom mode
Down	Enter limited downstream throughput in custom mode

PPPoE (ADSL)

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

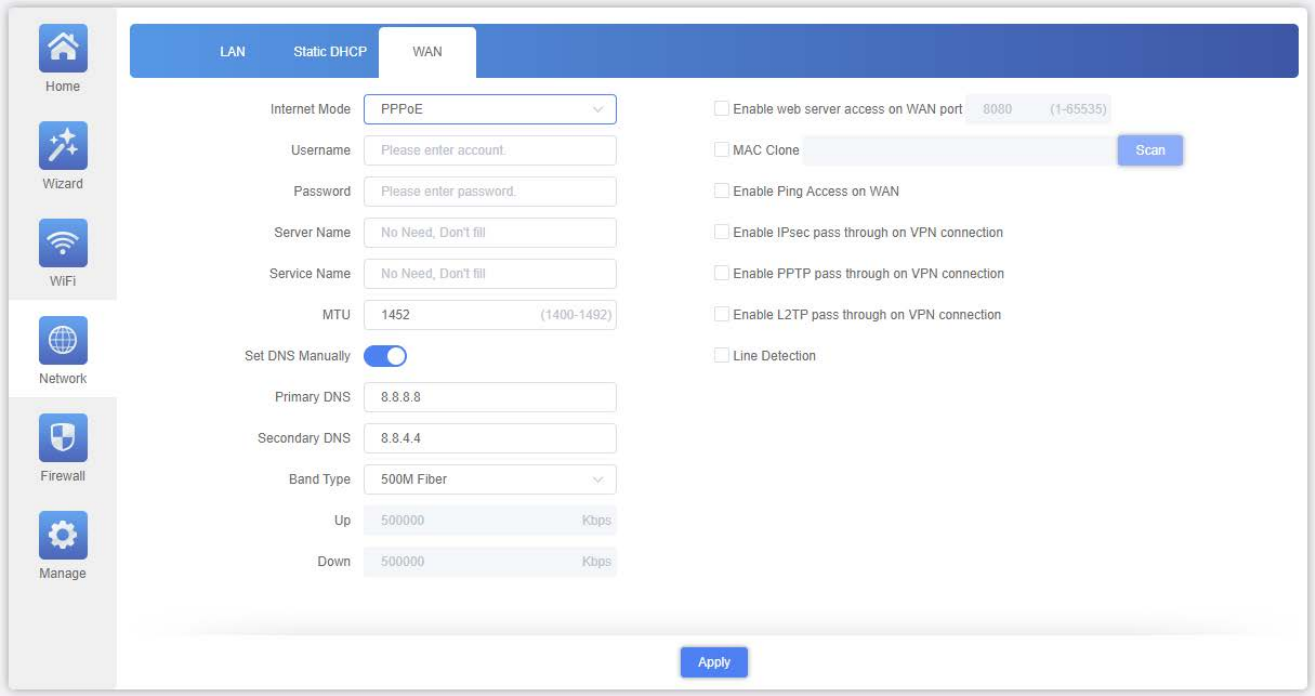


Figure 5-23 PPPoE

The page includes the following fields:

Object	Description
Username	Enter the PPPoE User Name provided by your ISP.
Password	Enter the PPPoE password provided by your ISP.
Server Name	Enter the server description or not.
Service Name	Enter the service description or not.
MTU	Maximum Transmission Unit. Default is 1452.
Set DNS Manually	Enable/Disable DNS Manually.
Primary DNS	Enter the necessary DNS address provided by your ISP.
Secondary DNS	Enter the secondary DNS address provided by your ISP.
Band Type	Select the band type provided by your ISP.
Upstream	Enter limited upstream throughput in custom mode
Downstream	Enter limited downstream throughput in custom mode

DHCP

Choose "**DHCP**" and the router will automatically obtain IP addresses, subnet masks and gateway addresses from your ISP.

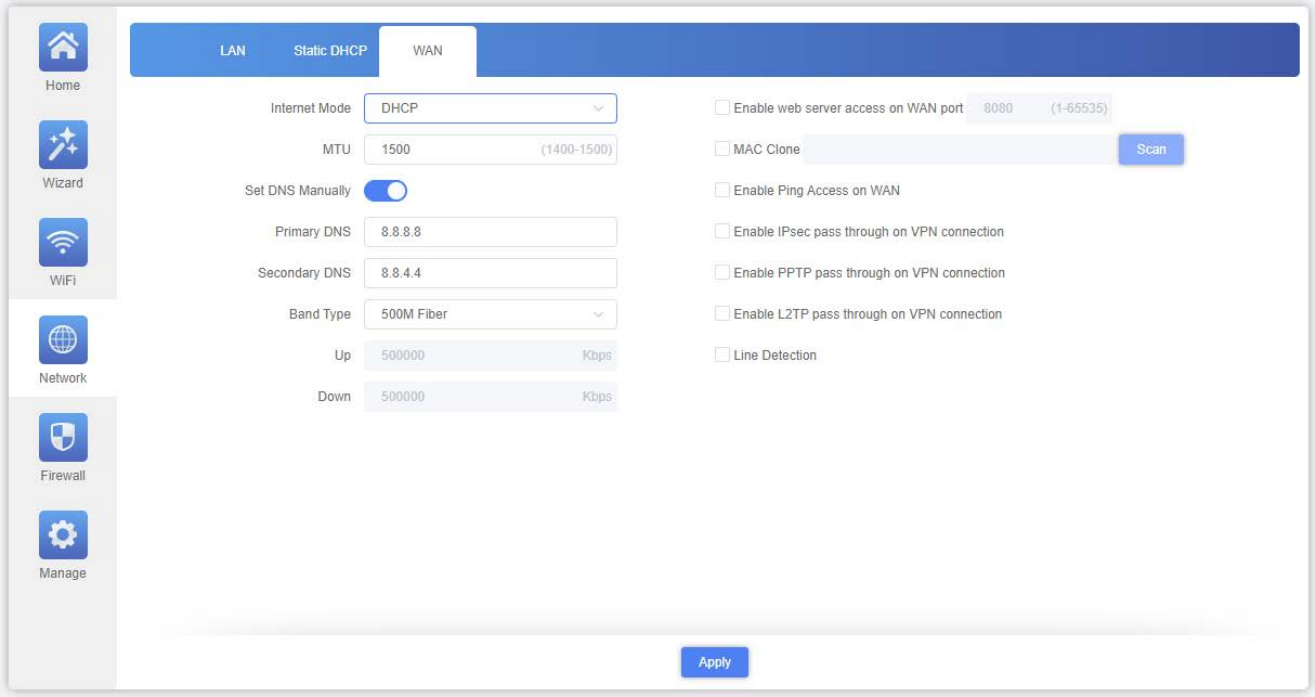


Figure 5-24 DHCP

The page includes the following fields:

Object	Description
MTU	Maximum Transmission Unit. Default is 1500.
Set DNS Manually	Enable/Disable DNS Manually.
Primary DNS	Enter the necessary DNS address provided by your ISP.
Secondary DNS	Enter the secondary DNS address provided by your ISP.
Band Type	Select the band type provided by your ISP.
Upstream	Enter limited upstream throughput in custom mode
Downstream	Enter limited downstream throughput in custom mode

5.5.5.4. WAN advanced settings

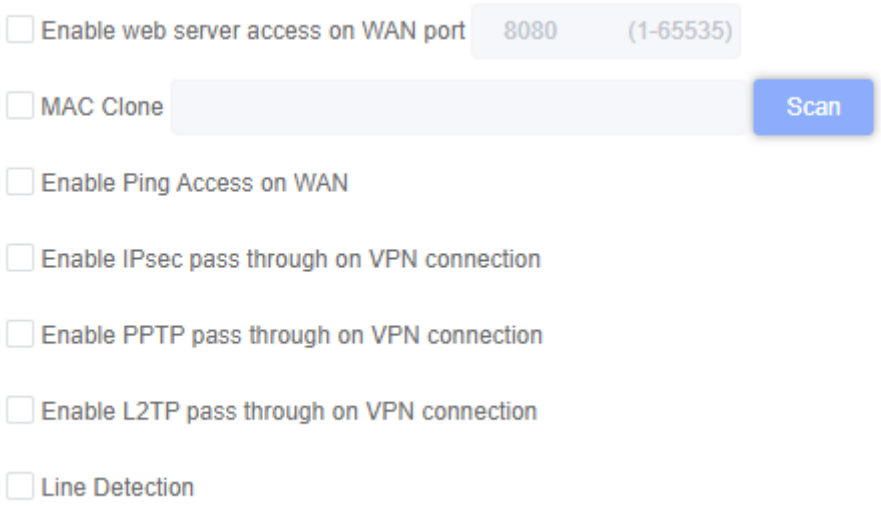


Figure 5-25 WAN advanced settings

The page includes the following fields:

Object	Description
Enable web server access on WAN port	Enable to access from WAN, default port is 8080
MAC clone	Enable and scan to clone the MAC address
Enable Ping Access on WAN	Enable or Disable this function
Enable IPsec pass through on VPN connection	Enable or disable IPSec to pass through IPSec communication data.
Enable PPTP pass through on VPN connection	Enable or disable PPTP to pass through PPTP communication data.
Enable L2TP pass through on VPN connection	Enable or disable L2TP to pass through L2TP communication data.
Line Detection	Enable to ping Host 1 and Host 2 IP. If ping fails, the WAN will be disconnected.

5.5.6 Firewall

5.5.6.1. URL Filtering

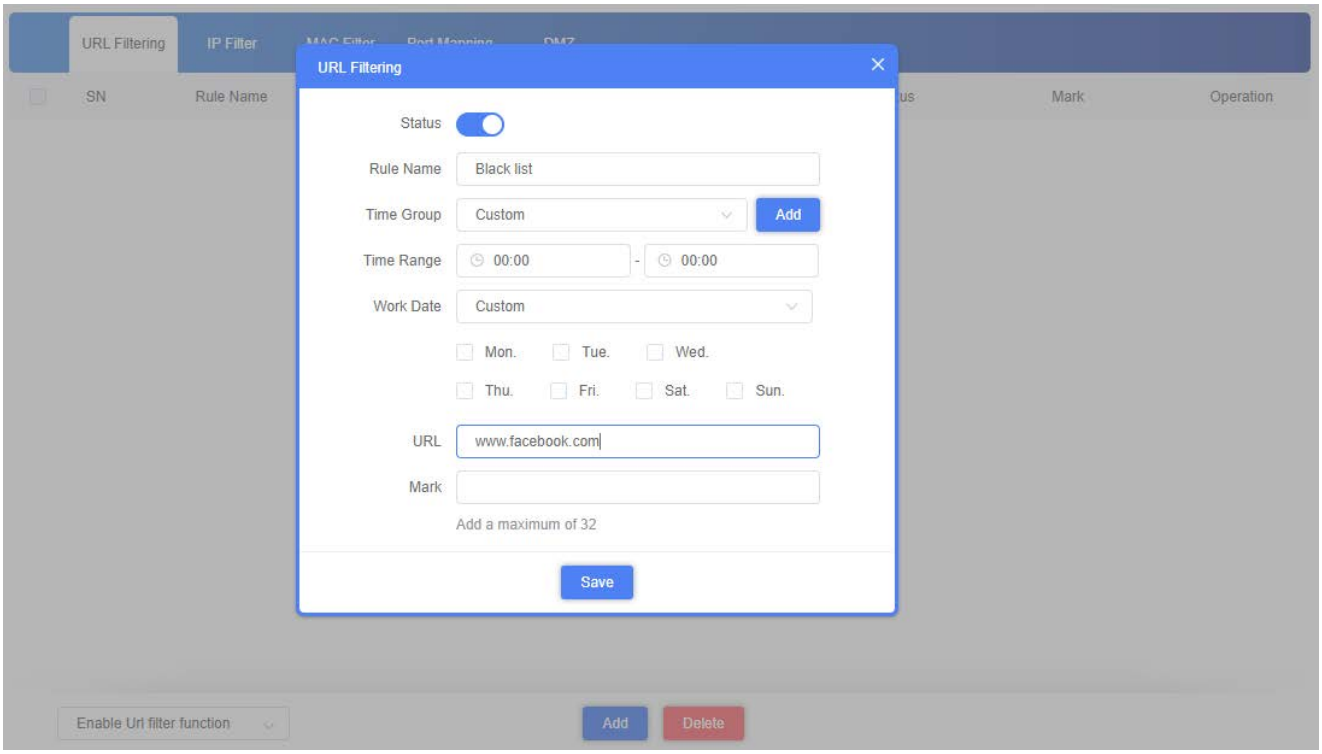


Figure 5-26 URL Filtering

The page includes the following fields:

Object	Description
Add	Press the "**Add**" button to add the rule
Delete	Press the "**Delete**" button to delete the rule
Save	Press the "**Save**" button to enable/disable the rule
Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable
Rule Name	Enter the rule name, e.g. Black list
Time Group	Select **Any** or **Customer** to set up time range and work data.
URL	Enter the URL that you need to put in black list
Time Range	Enter the start and end time for rule
Work Date	Select the work day as ruled
Mark	Enter the mark string, or not

Enable/disable URL filter function

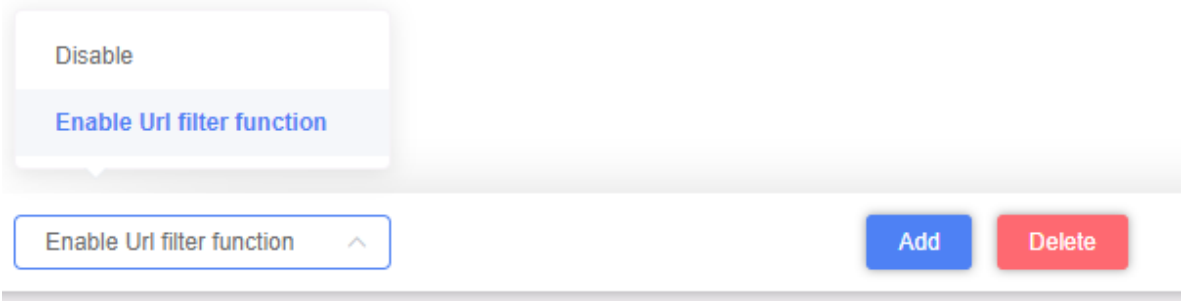


Figure 5-27 URL Filtering

5.5.6.2. IP/Port Filtering

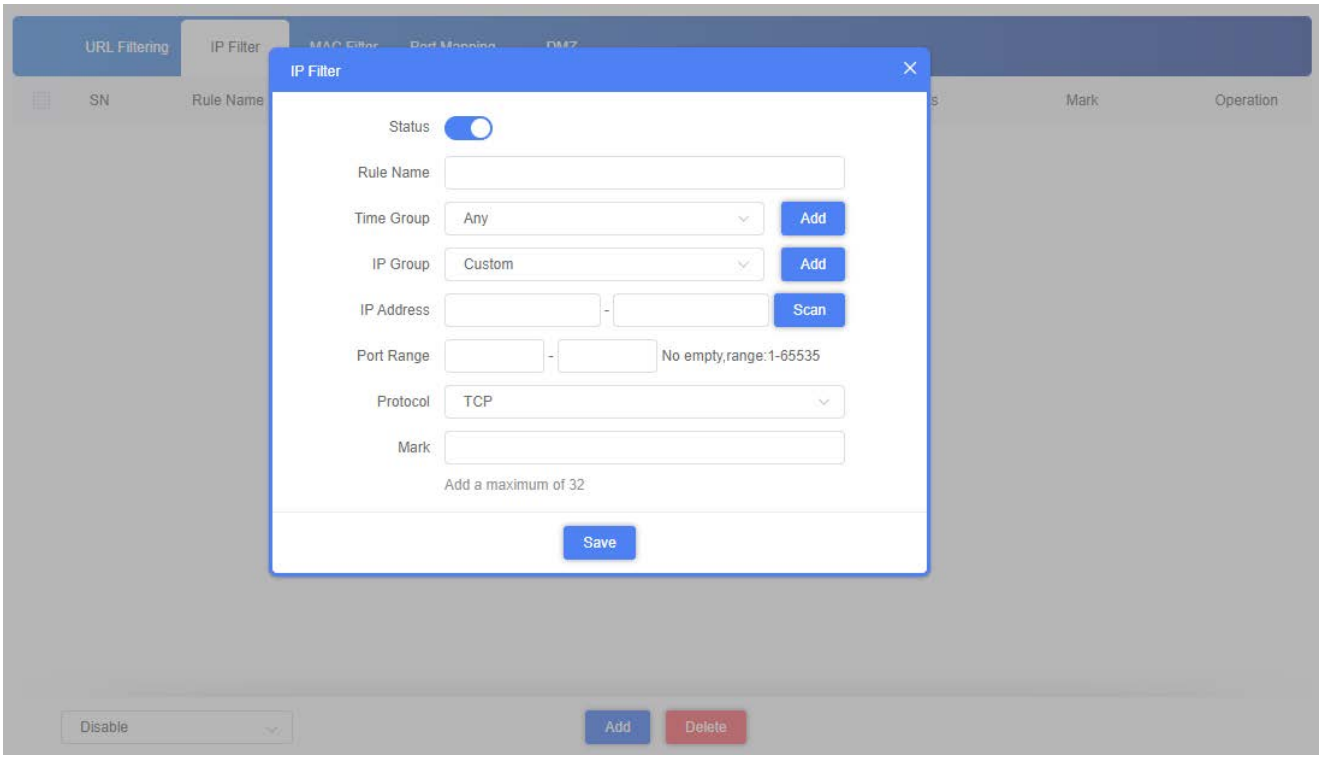


Figure 5-28 IP/Port Filtering

The page includes the following fields:

Object	Description
Add	Press the "**Add**" button to add the rule in the black or white list
Delete	Press the "**Delete**" button to delete the rule
Save	Press the "**Save**" button to enable/disable the rule
Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable
Rule Name	Enter the rule name, e.g. Black list
Time Group	Select **Any** or **Customer** to set up time range and work data.

IP Group	Select IP Group for adding IP by entering IP range or by scanning devices
IP Address	Enter the IP that you need to put in black or white list
Port Range	Enter the web port to access
Protocol	Select **TCP**, **UDP** or **TCP+UDP**
Mark	Enter the mark string, or not
IP/Port Filtering Status	Select the rule of IP/Port Filtering, default is **Disable**. Whitelist: **Allow the devices to pass** Blacklist: **Prohibited rules within the device**

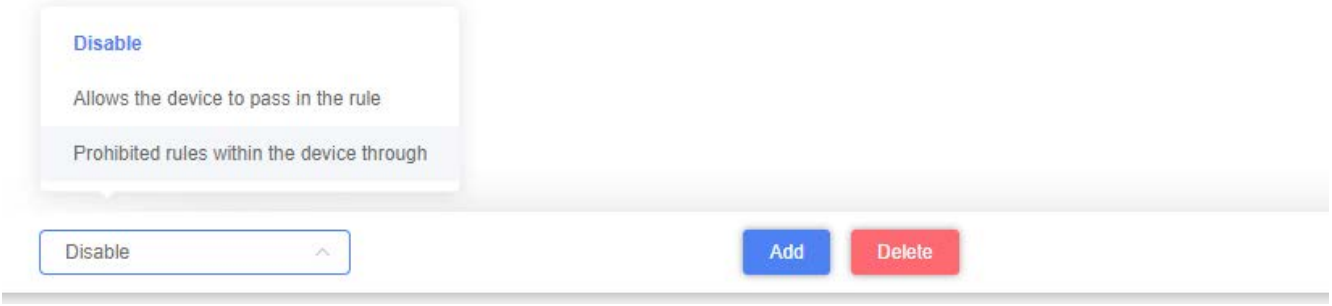
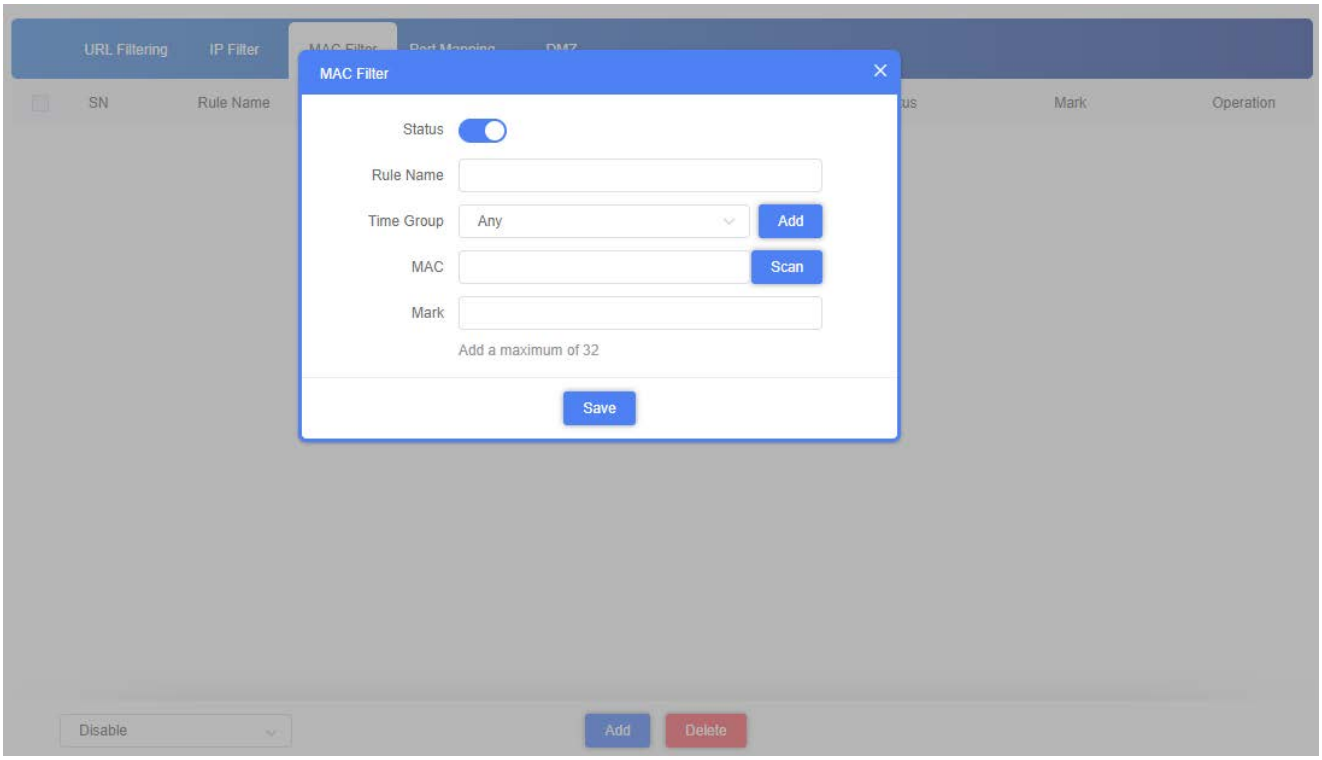


Figure 5-29 IP/Port Filtering

5.5.6.3. MAC Filtering



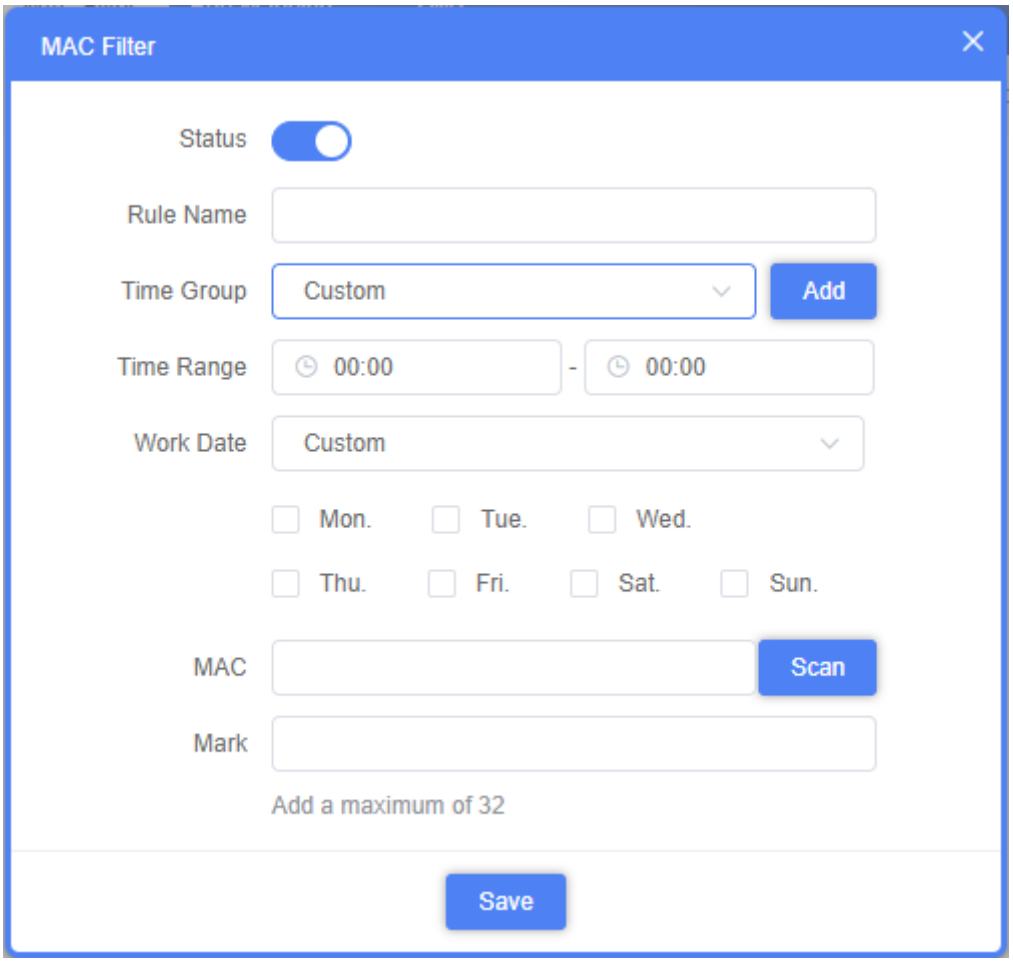


Figure 5-30 MAC Filtering

The page includes the following fields:

Object	Description
Add	Press the "**Add**" button to add the rule in the black or white list
Delete	Press the "**Delete**" button to delete the rule
Save	Press the "**Save**" button to enable/disable the rule
Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable
Rule Name	Enter the rule name, e.g. Black list
Time Group	Select **Any** or **Customer** to set up time range and work data.
MAC Address	Enter the MAC address that you need to put in black or white list
Mark	Enter the mark string, or not
MAC Filtering Status	Select the rule of MAC Filtering, default is **Disable**. Whitelist: **Allow the devices to pass** Blacklist: **Prohibited rules within the device**

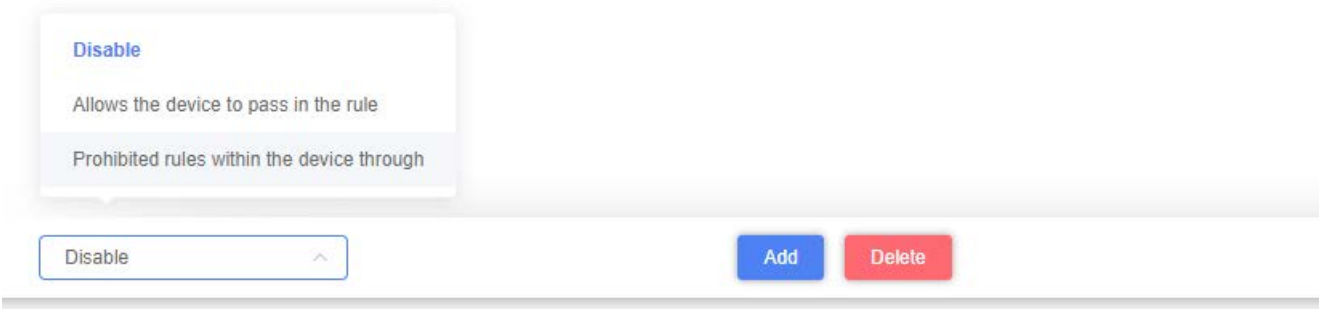


Figure 5-31 MAC Filtering

5.5.6.4. Security (Port Mapping/Port Forwarding)

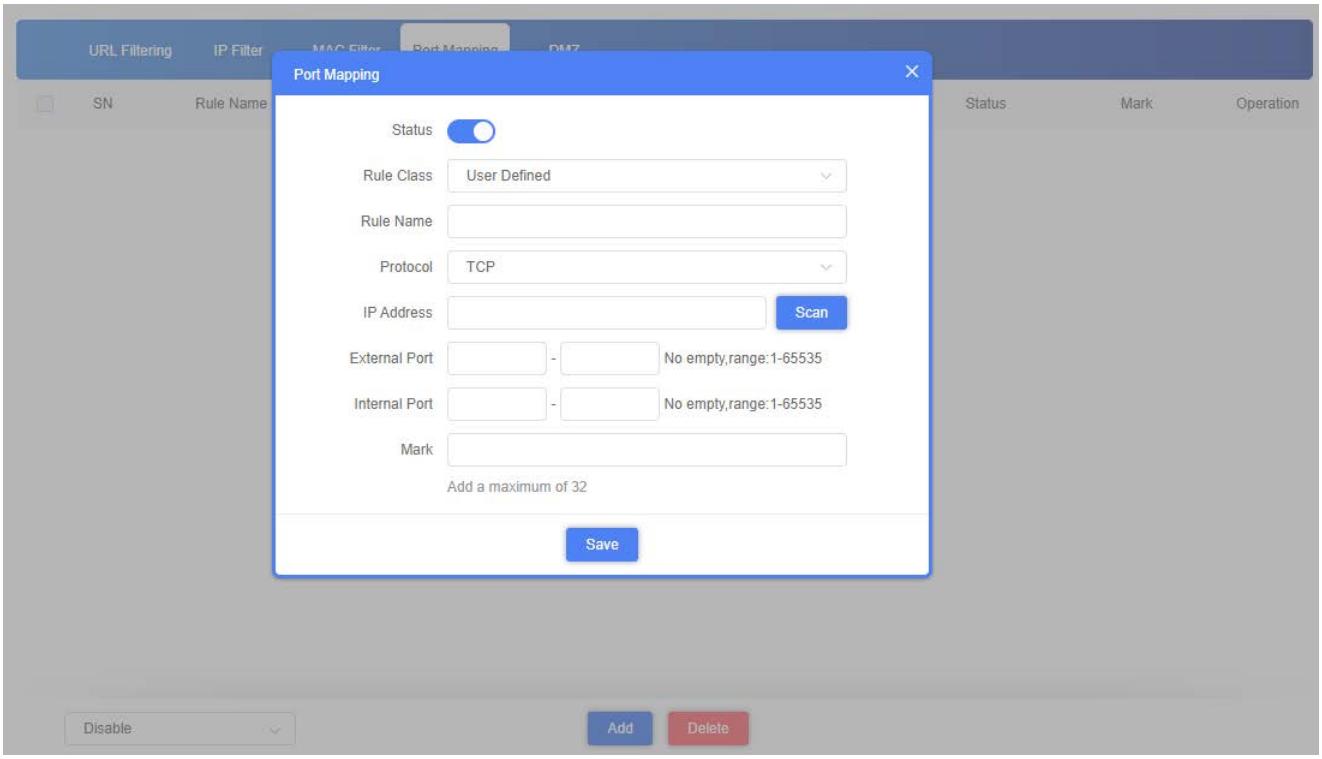


Figure 5-32 Port Mapping

The page includes the following fields:

Object	Description
Add	Press the "**Add**" button to add the rule in the black or white list
Delete	Press the "**Delete**" button to delete the rule
Save	Press the "**Save**" button to enable/disable the rule
Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable
Rule Name	Enter the rule name, e.g. Black list
Protocol	Select **TCP**, **UDP** or **TCP+UDP**

LAN IP	Enter the IP address that you need for port forwarding
External Port	Enter the external port range (No empty,range:1-65535)
Internal Port	Enter the internal port range (No empty,range:1-65535)
Mark	Enter the mark string, or not

Enable/disable Port Mapping function

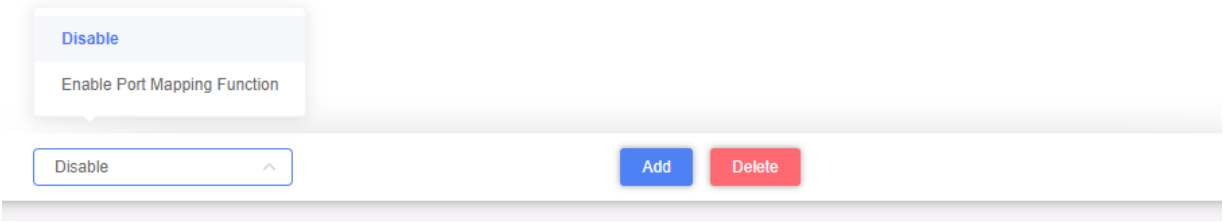


Figure 5-33 Port Mapping

5.5.6.5. DMZ

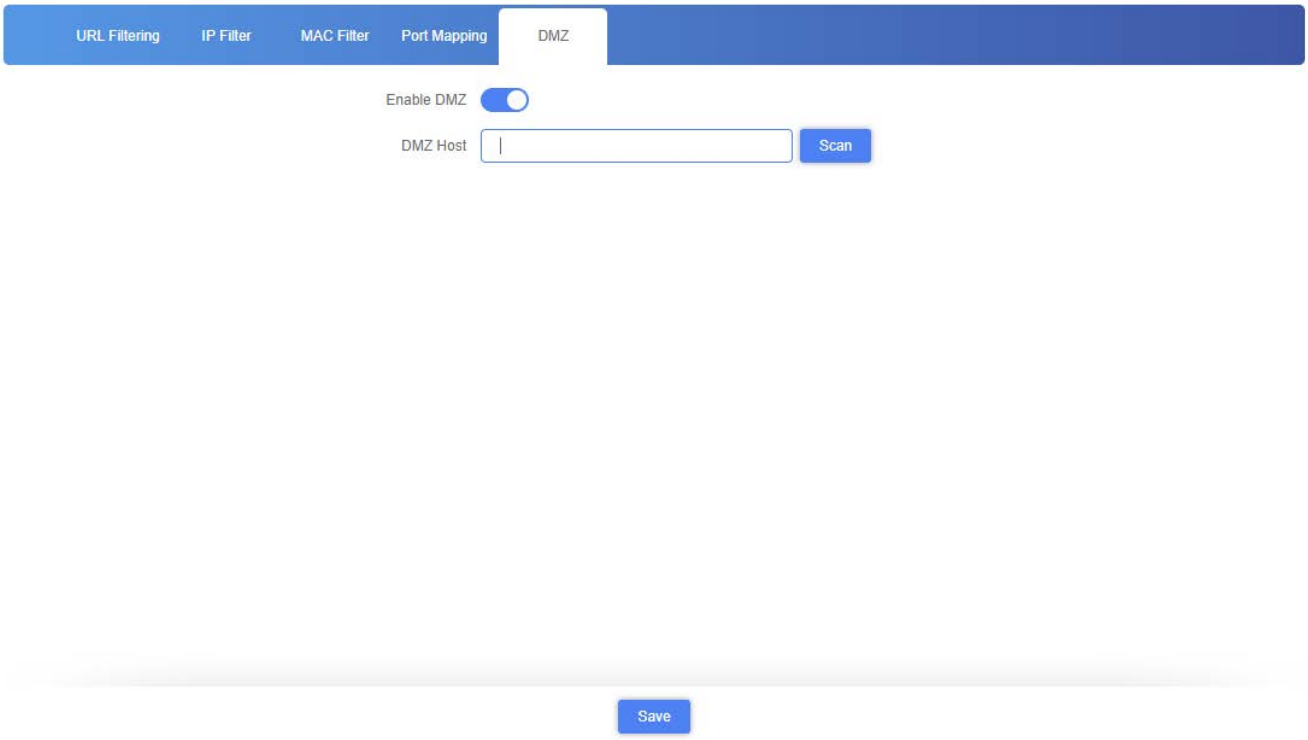


Figure 5-34 DMZ

The page includes the following fields:

Object	Description
Enable DMZ	Select **ON (Blue)** or **OFF (Gray)** to enable or disable **DMZ Host**
DMZ Host IP	Enter the DMZ LAN IP

5.5.7 Manage

5.5.7.1. Configure

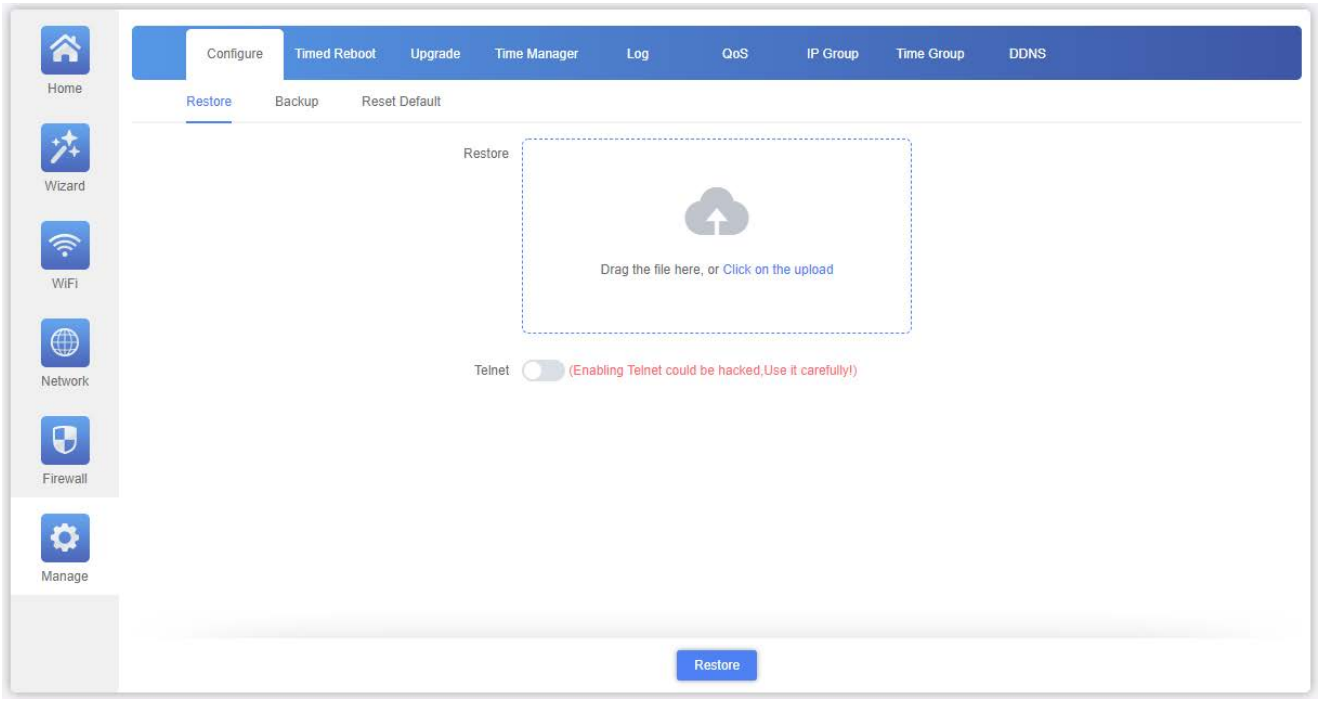


Figure 5-35 Configure

The page includes the following fields:

Object	Description
Restore	Reload the configuration from your computer
Backup	Save the configuration file to your computer
Reset Default	Restore the factory default settings, please press this button
Telnet	Enabling Telnet could be hacked, Use it carefully! (Only for support use; default is disable)

5.5.7.2. Timed Reboot

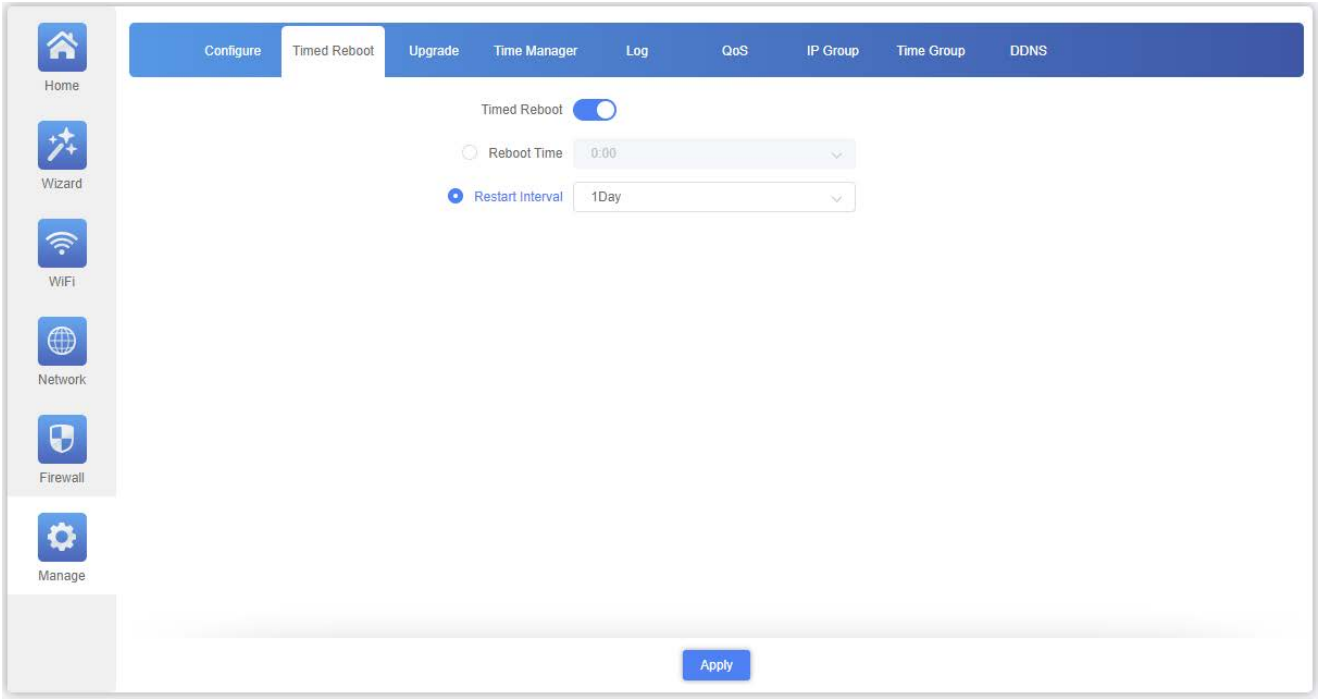


Figure 5-36 Timed Reboot

The page includes the following fields:

Object	Description
Timed Reboot	Select Enable or Disable to start schedule reboot
Reboot Time	Select reboot time for clock
Restart Interval	Select reboot duty by day

5.5.7.3. Upgrade

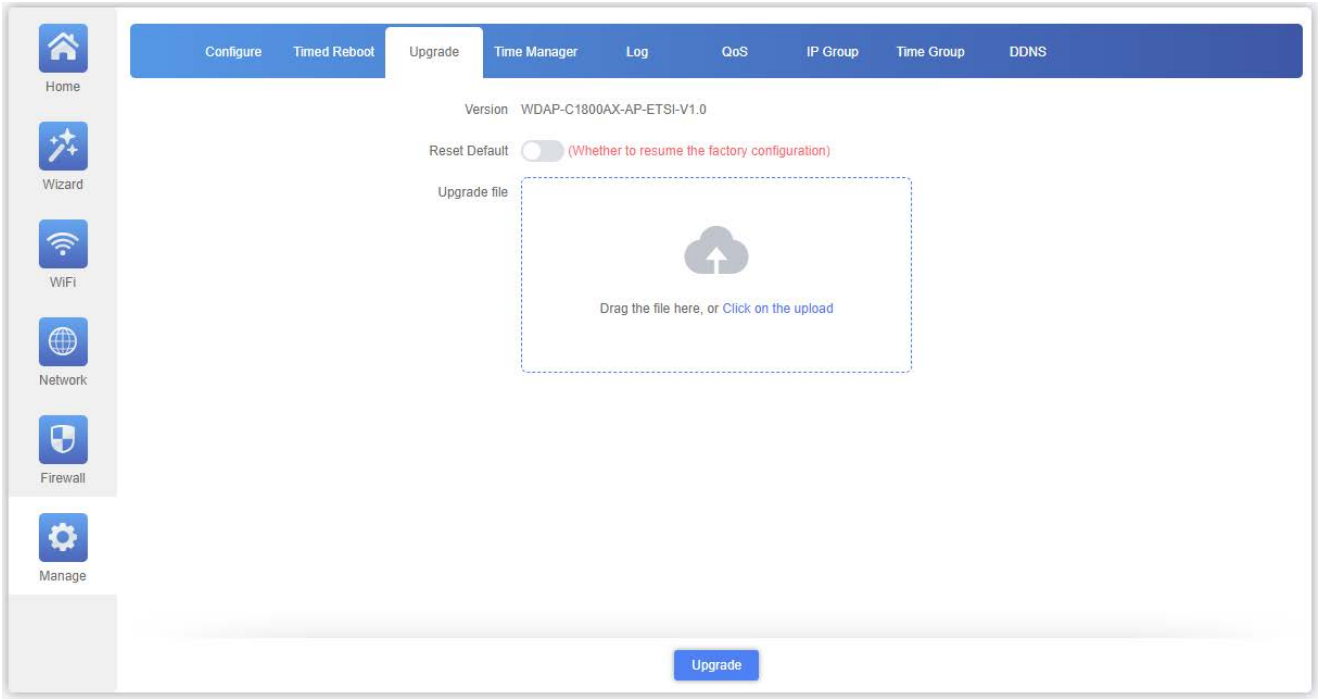


Figure 5-37 Upgrade Firmware

The page includes the following fields:

Object	Description
Version	It shows the firmware version (Double-click to show more detailed info.)
Reset Default	Select **ON (Blue)** or **OFF (Gray)** to enable or disable to reset the device to default when upgrading firmware
Upgrade file	Press to select the firmware file
Upgrade	Press to upgrade the firmware

Note: Do not power off during the process of upgrading the software

5.5.7.4. Time Manager

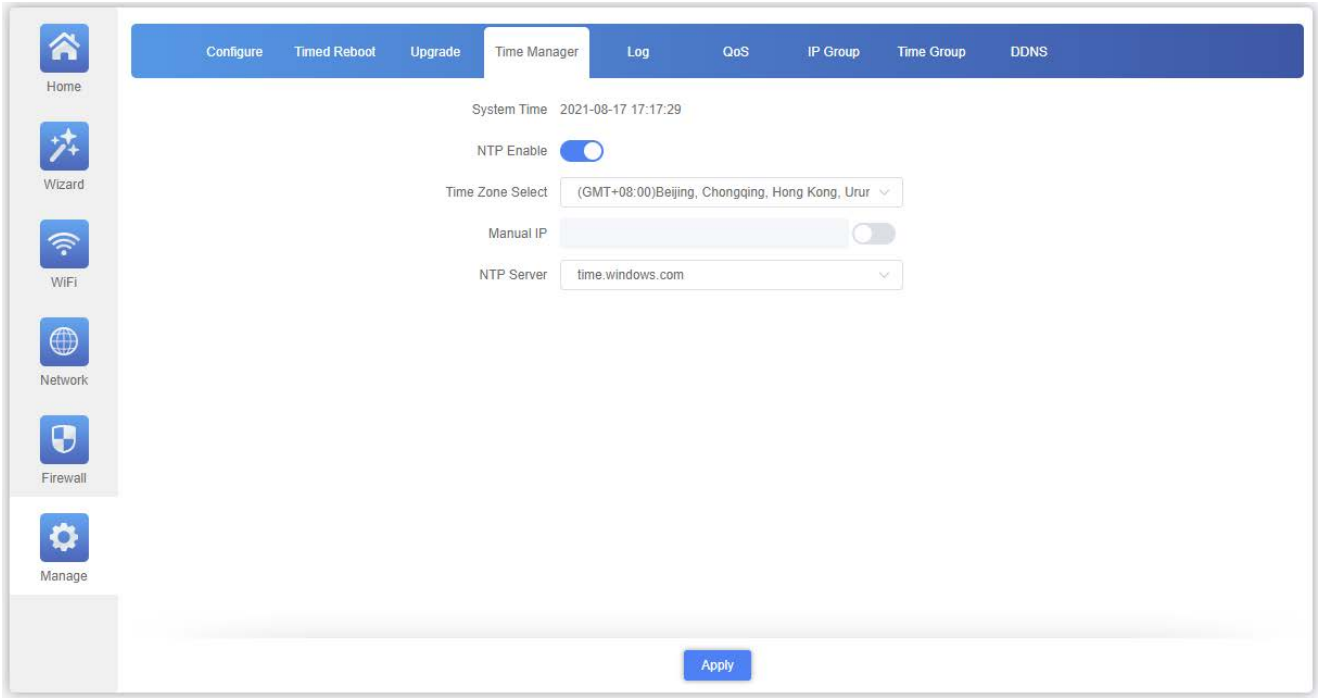


Figure 5-38 Setting System Time

The page includes the following fields:

Object	Description
System Time	Show system time of device
NTP Enable	Select **ON (Blue)** or **OFF (Gray)** to enable or disable NTP function
Time Zone Select	Select time zone
Manual IP Settings	Enable to manual IP setting
NTP Server	Select NTP server

Note: If you want to use any function that needs scheduling, must enable NTP function.

5.5.7.5. Log

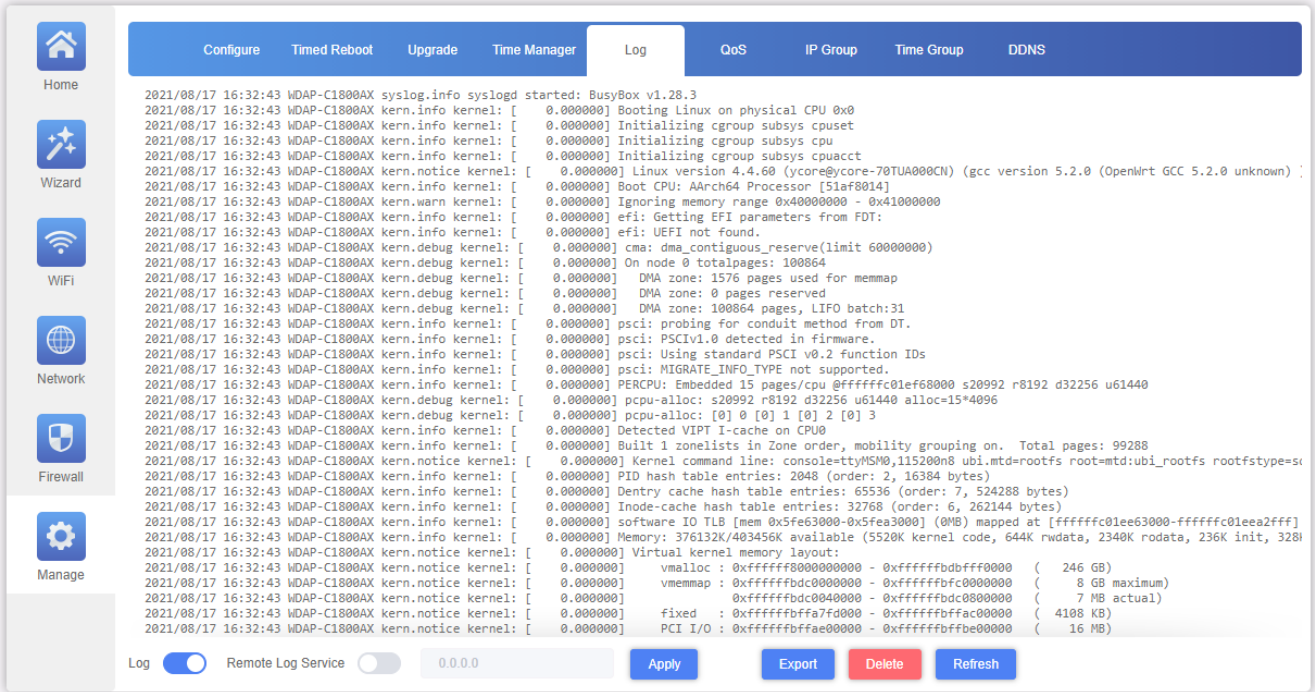


Figure 5-39 Log

The page includes the following fields:

Object	Description
Log	Select ON/OFF to record log or not
Remote Log Service	Enable remote log server and enter the server IP address
Export	Export a log.bin file to you PC
Delete	Press to delete all of the system log
Refresh	Press to refresh the system log
Apply	Press to save configuration

5.5.7.6. QoS

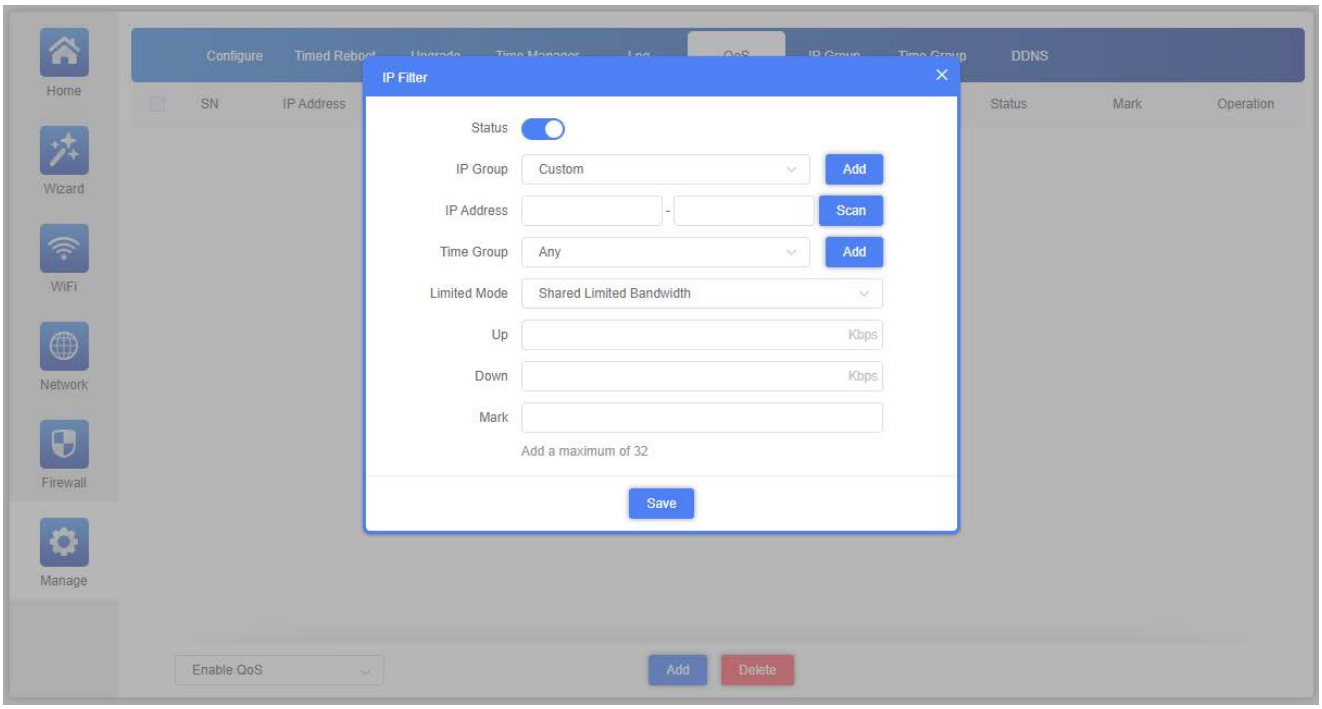


Figure 5-40 QoS

The page includes the following fields:

Object	Description
Add	Press the "**Add**" button to add the rule in the control list
Delete	Press the "**Delete**" button to delete the rule
Save	Press the "**Save**" button to enable/disable the rule

Enable/disable QoS function

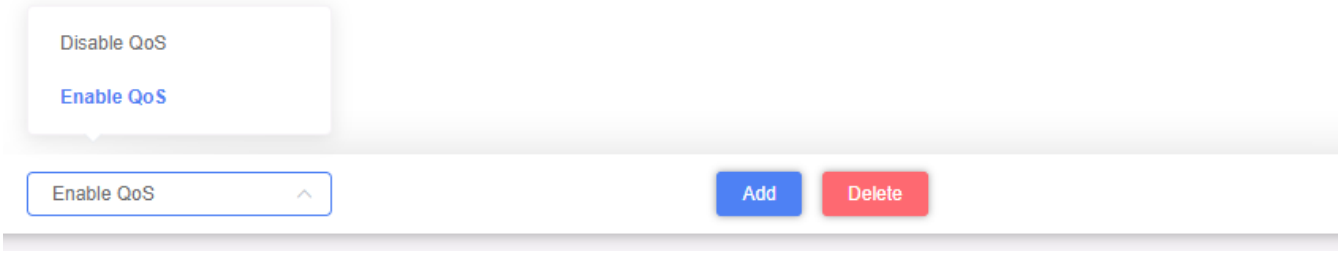


Figure 5-41 Enable or Disable QoS Rule

Figure 5-42 Adding rule of QoS (Speed Limit)

The page includes the following fields:

Object	Description
Status	Select **ON (Blue)** or **OFF (Gray)** to enable or disable QoS rule
IP Group	Select custom or Add an IP group
IP Address	Enter an IP address range or use scan to select
Time Group	Select any or custom or Add a Time group
Limited Mode	Select limited mode for shared limited bandwidth or exclusive limited bandwidth
Up	Enter the upstream limited for kbps
Down	Enter the downstream limited for kbps
Mark	Enter the mark string, or not

5.5.7.7. IP Group

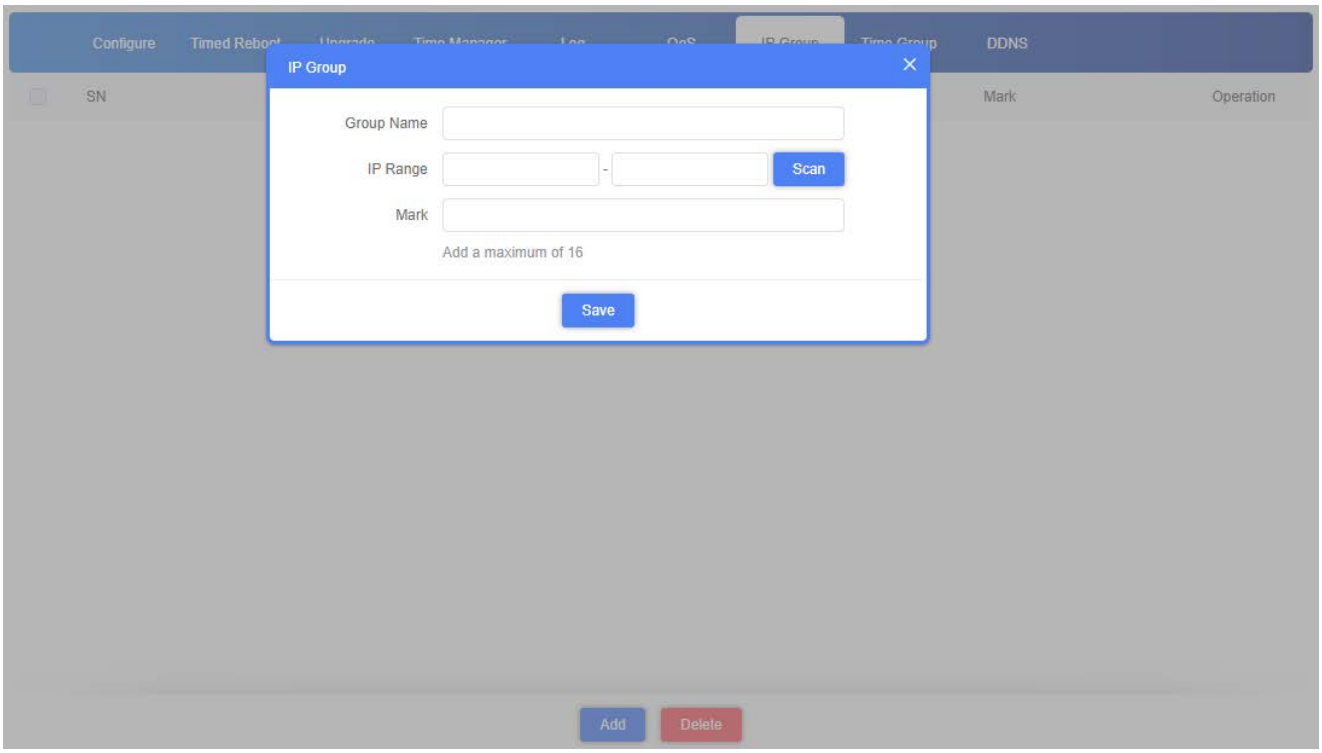


Figure 5-43 IP Group

The page includes the following fields:

Object	Description
Add	Press the "**Add**" button to add IP group in list
Delete	Press the "**Delete**" button to delete the group

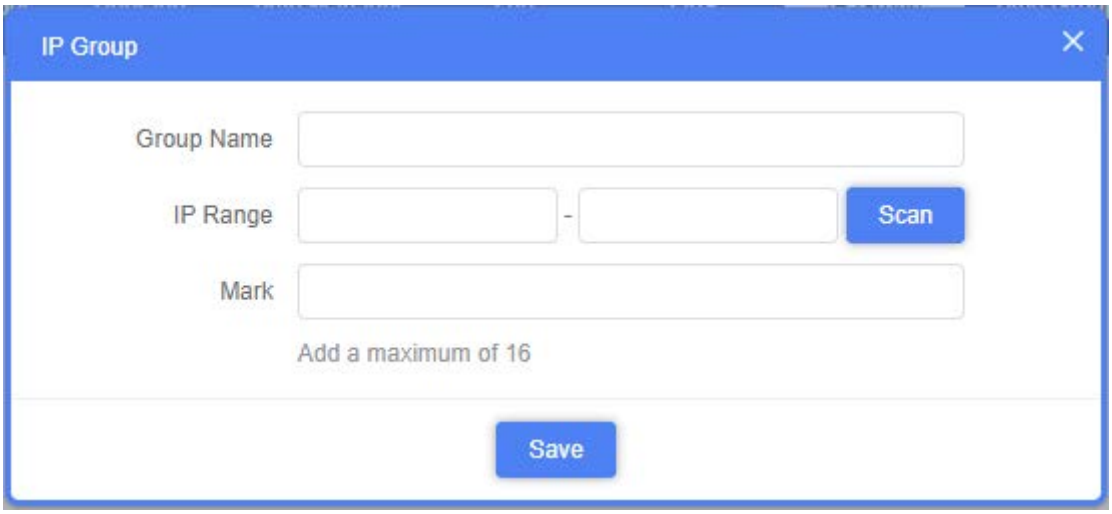


Figure 5-44 Add IP Group

The page includes the following fields:

Object	Description
Group Name	Enter an IP group description
IP Range	Enter an IP address range or use scan to select
Mark	Enter the mark string, or not

5.5.7.8. Time Group

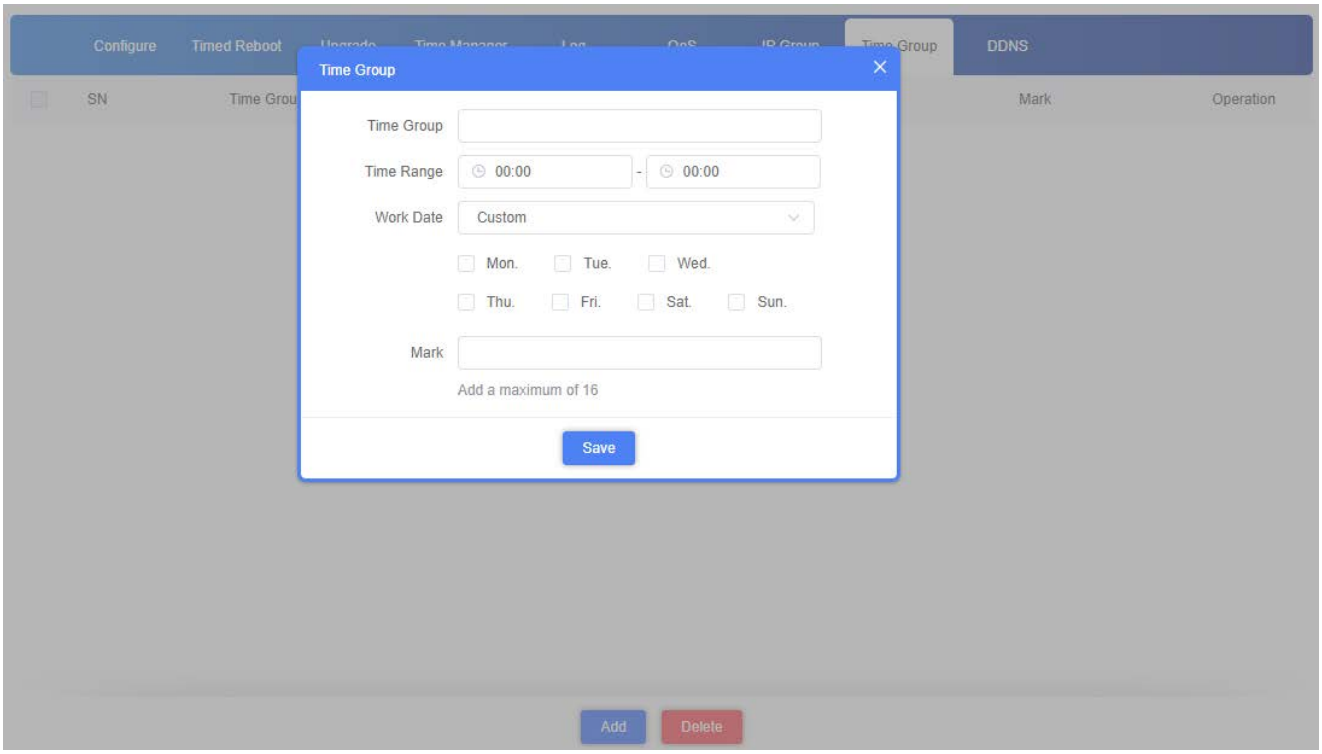


Figure 5-45 Time Group

The page includes the following fields:

Object	Description
Add	Press the "**Add**" button to add time group in list
Delete	Press the "**Delete**" button to delete the group

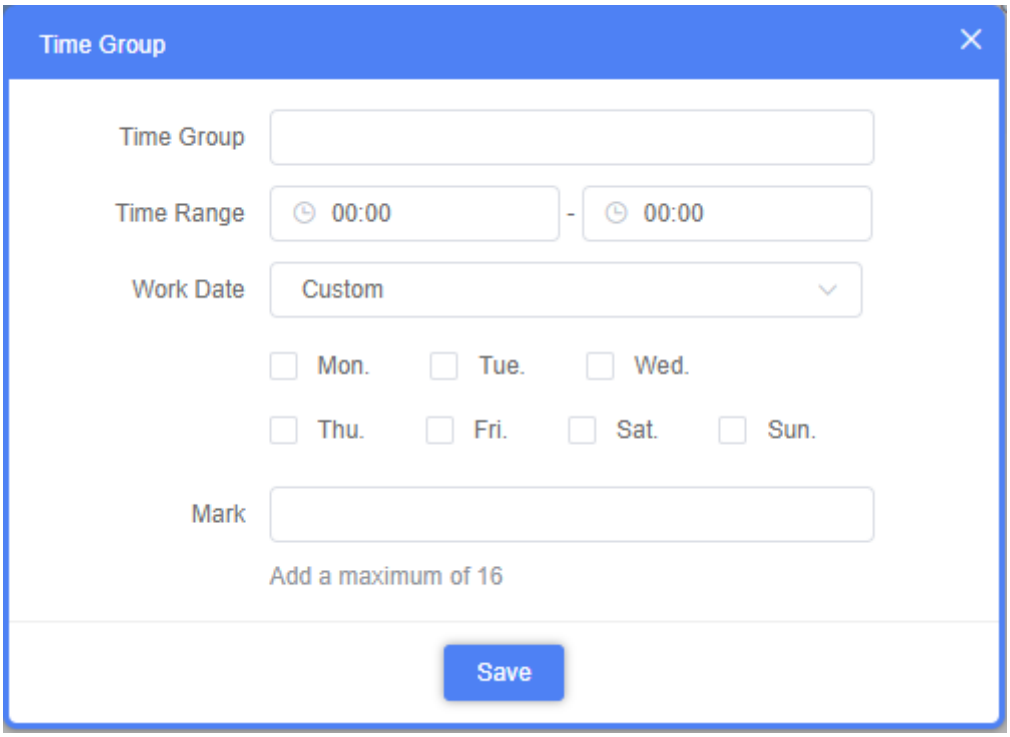


Figure 5-46 Add Time Group

The page includes the following fields:

Object	Description
Time Group	Enter a time group description
Time Range	Select start time and end time for time range
Work Date	Select work day by option table
Mark	Enter the mark string, or not

5.5.7.9. DDNS Setting

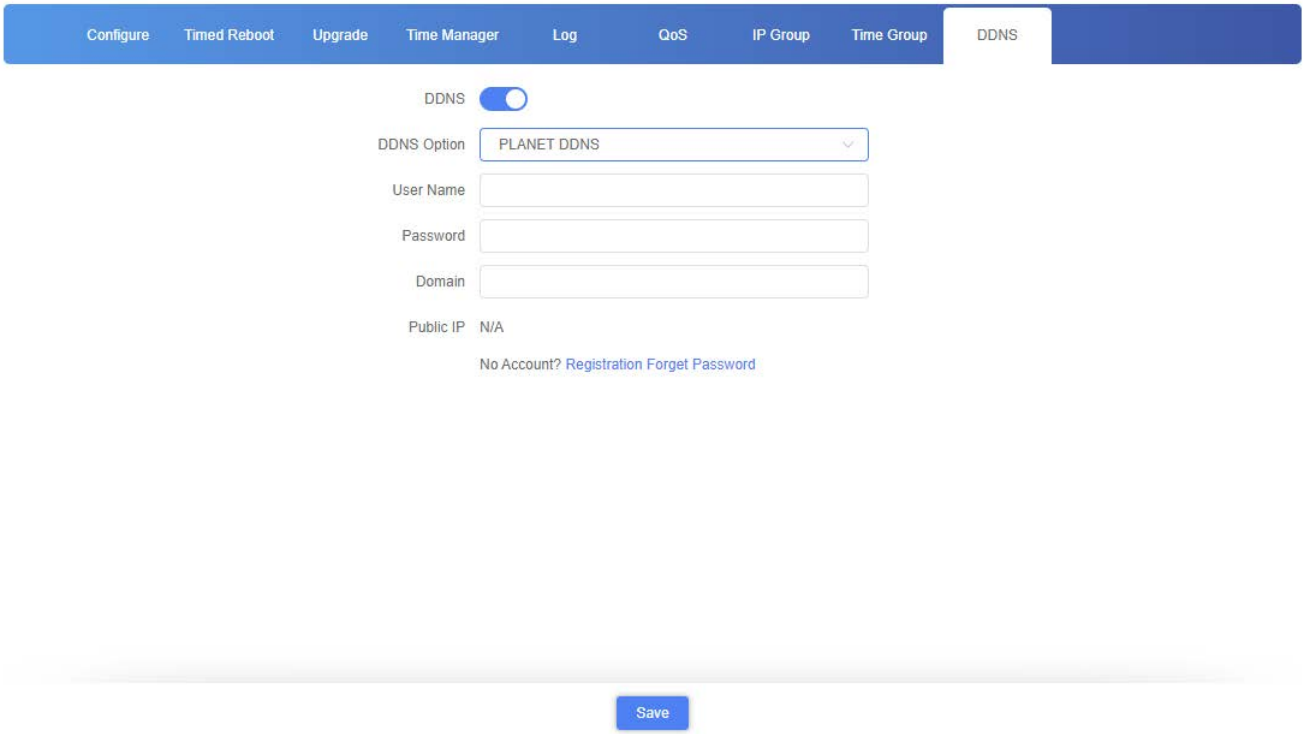


Figure 5-47 DDNS Setting

The page includes the following fields:

Object	Description
DDNS	Select **ON (Green)** or **OFF (Gray)** to enable or disable PLANET DDNS
DDNS Option	Select PLANET DDNS or Easy DDNS function
User Name	Enter user account for PLANET DDNS. If you use Easy DDNS, it is not necessary.
Password	Enter password for PLANET DDNS. If you use Easy DDNS, it is not necessary.
Domain	Enter unique domain name for device. If you use Easy DDNS, it will be automatically generated
Public IP	Public IP address is necessary for WAN IP
No Account Registration Forget Password	Hyperlink to http://www.planetddns.com/?view=registration

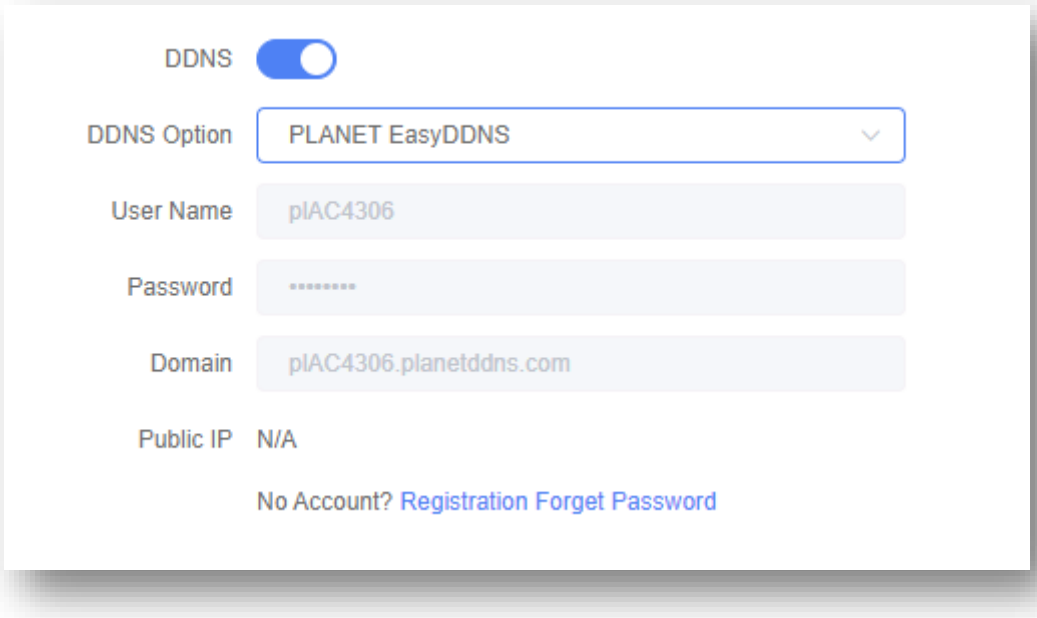


Figure 5-48 PLANET EasyDDNS

5.5.7.11. Modify Password

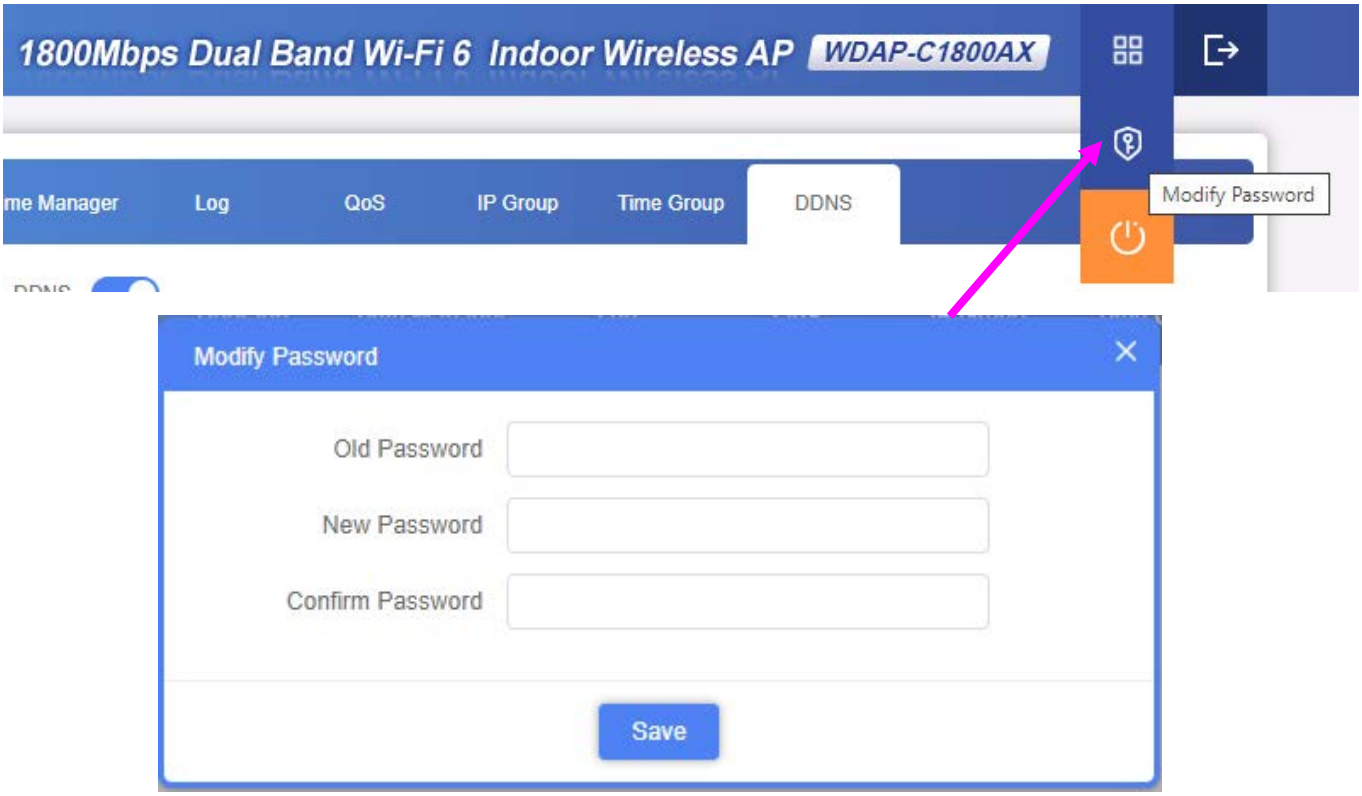


Figure 5-49 Modify Password

The page includes the following fields:

Object	Description
Old Password	Enter old password to change the password
New Password	Enter new password
Confirm Password	Enter new password again

5.5.7.13. Device Reboot

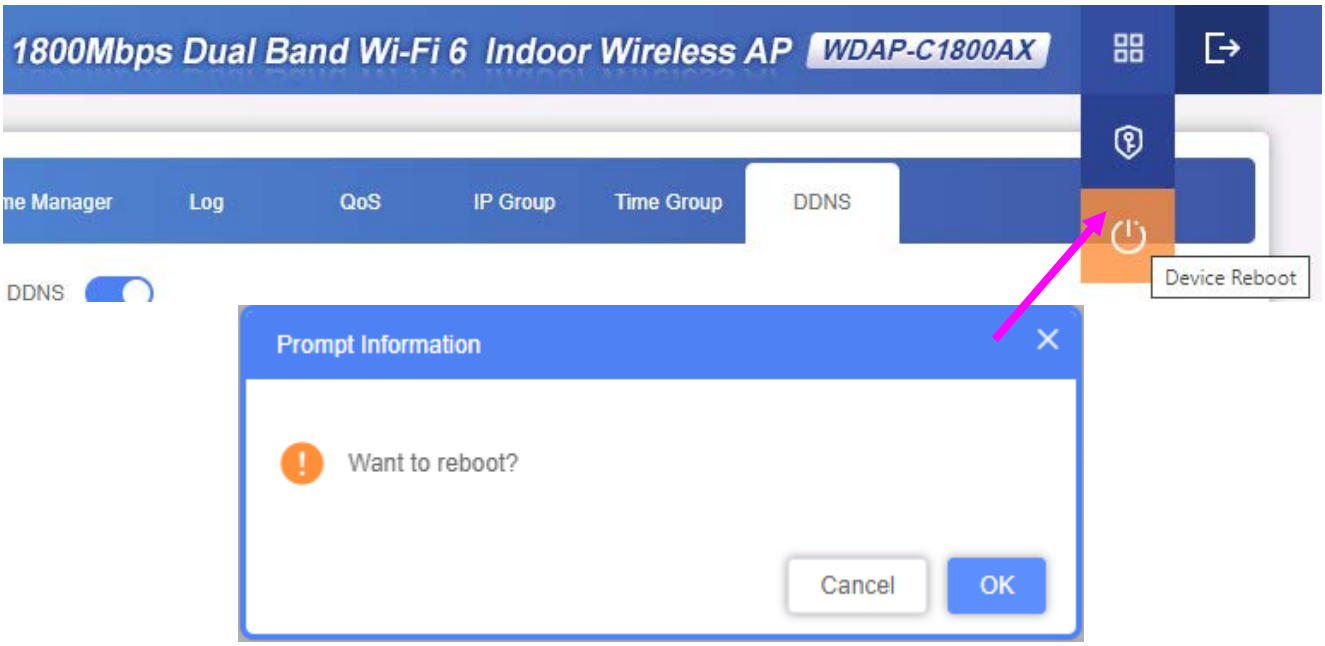


Figure 5-50 Device Reboot

The page includes the following fields:

Object	Description
OK	Enter to reboot device
Cancel	Enter to cancel

5.5.7.14. Logout

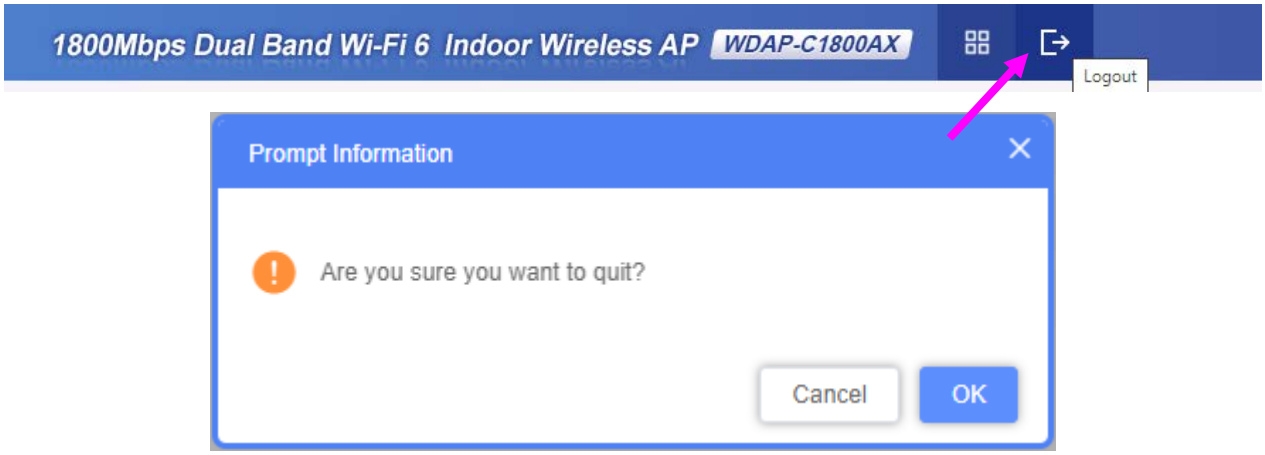


Figure 5-51 Logout

The page includes the following fields:

Object	Description
OK	Enter to log out manage web
Cancel	Enter to cancel

Chapter 6. Quick Connection to a Wireless Network

In the following sections, the **default SSID** of the WDAP-C1800AX 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

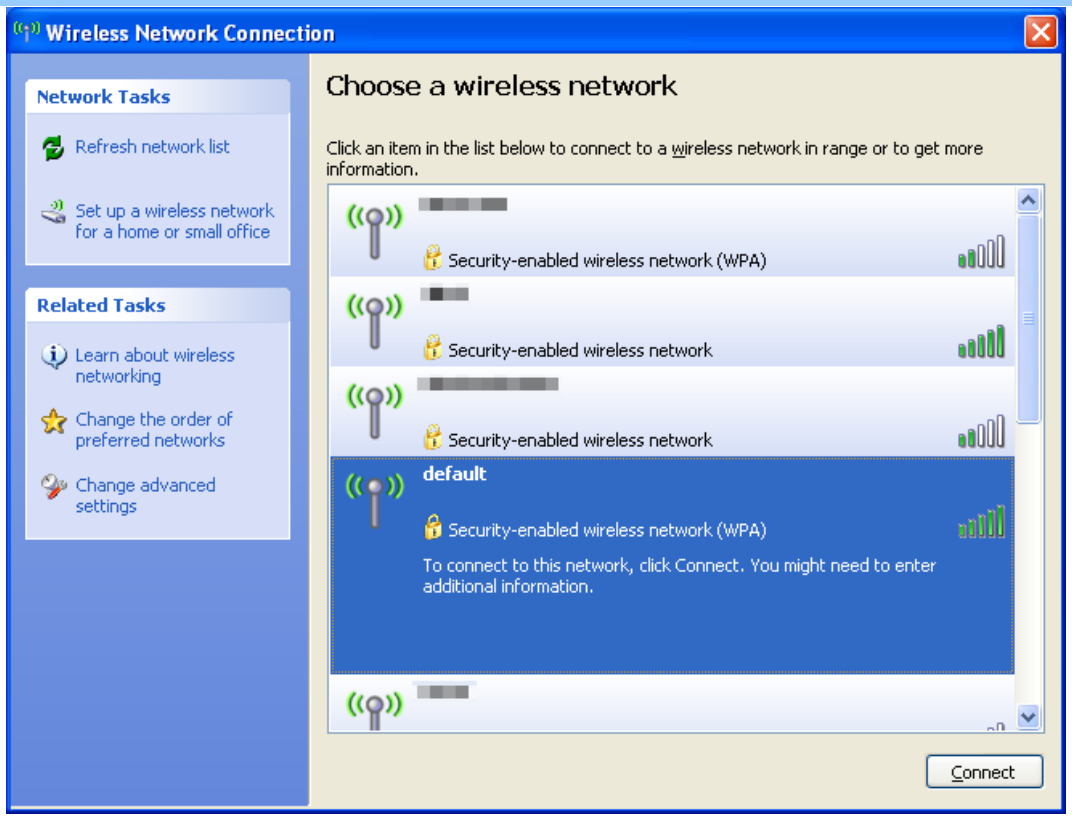


Figure 6-2 Choosing a Wireless Network

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

(1) The Wireless Network Connection box will appear

(2) Enter the encryption key that is configured in section 5.7.2.1

(3) Click the [Connect] button

Figure 6-3 Entering the Network Key

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

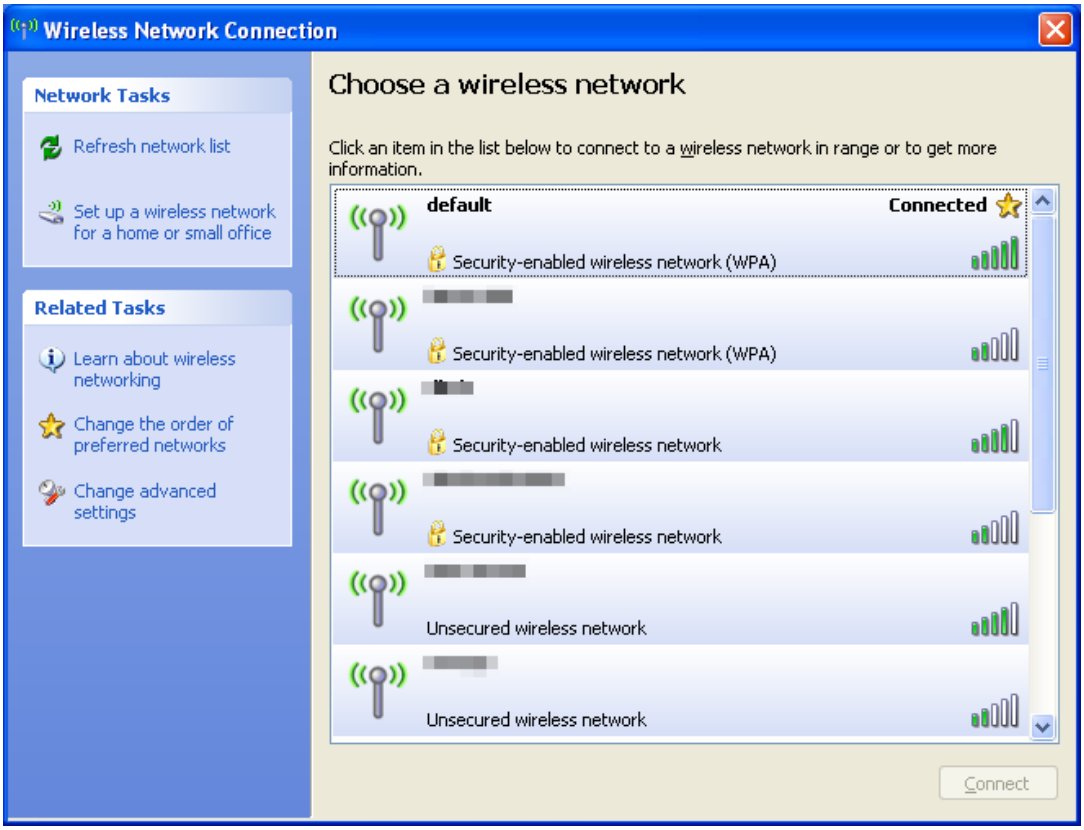


Figure 6-4 Choosing a Wireless Network -- Connected

Note

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

6.2 Windows 7/8/10 (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

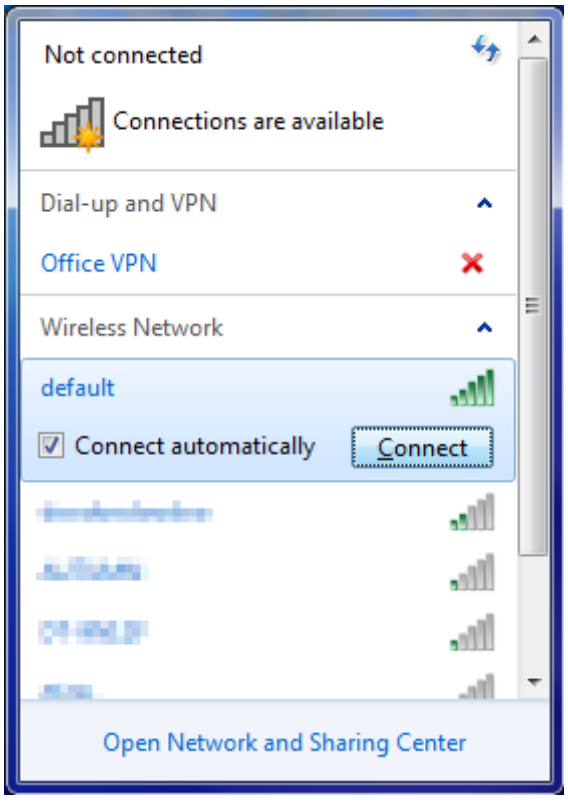


Figure 6-6 WLAN AutoConfig

Note

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

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

(1) The Connect to a Network box will appear.

(2) Enter the encryption key that is configured in section 5.7.2.1

(3) Click the [OK] button.

Figure 6-7 Typing the Network Key

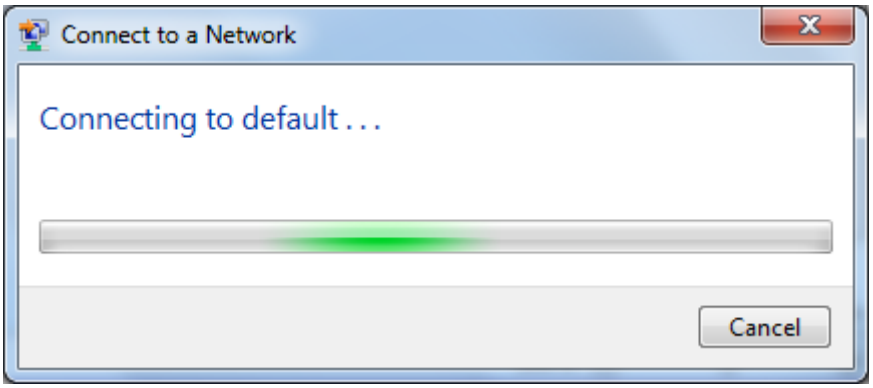


Figure 6-8 Connecting to a Network

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

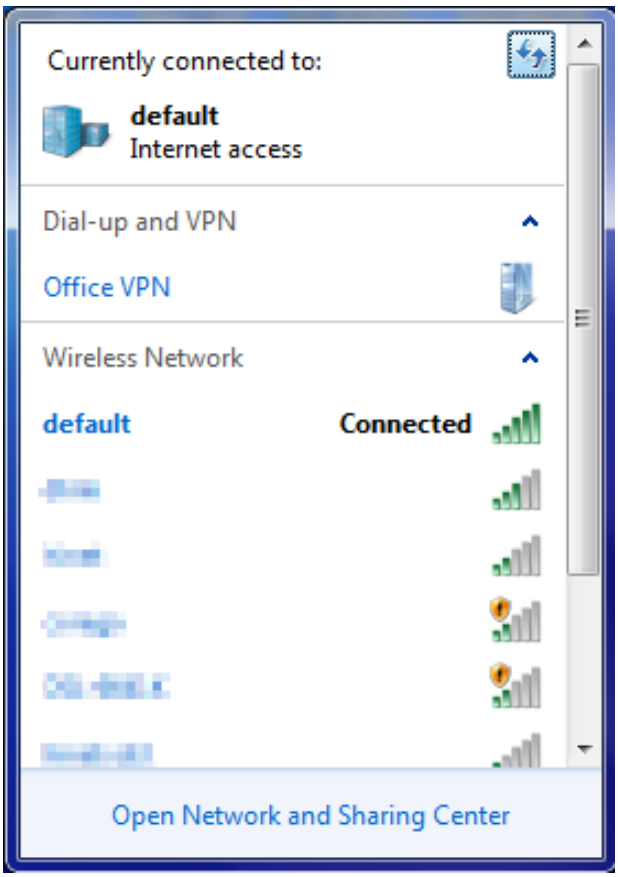


Figure 6-9 Connected to a Network

6.3 Mac OS X 10.x

In the following sections, the default SSID of the WDAP-C1800AX 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 Highlighting and Selecting the Wireless Network

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

(1) Enter the encryption key that is configured in section 5.7.2.1

(2) Click the [OK] button.

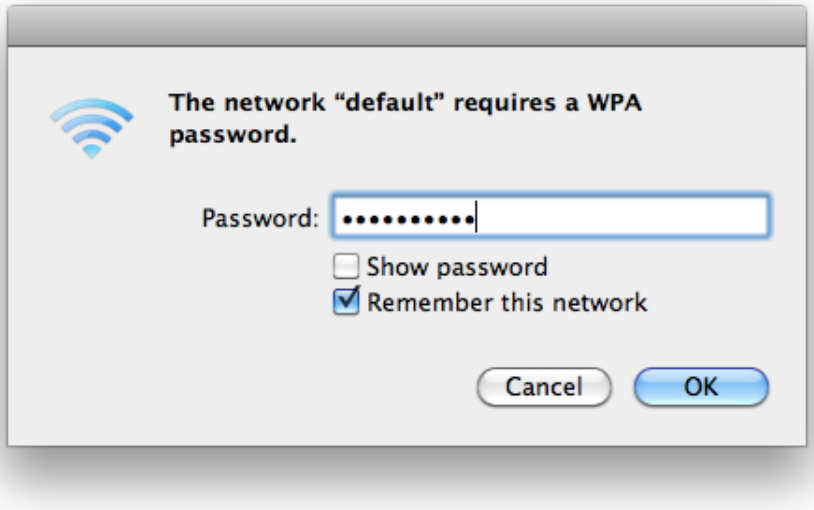


Figure 6-12 Enter the Password

Note

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 front of the SSID.

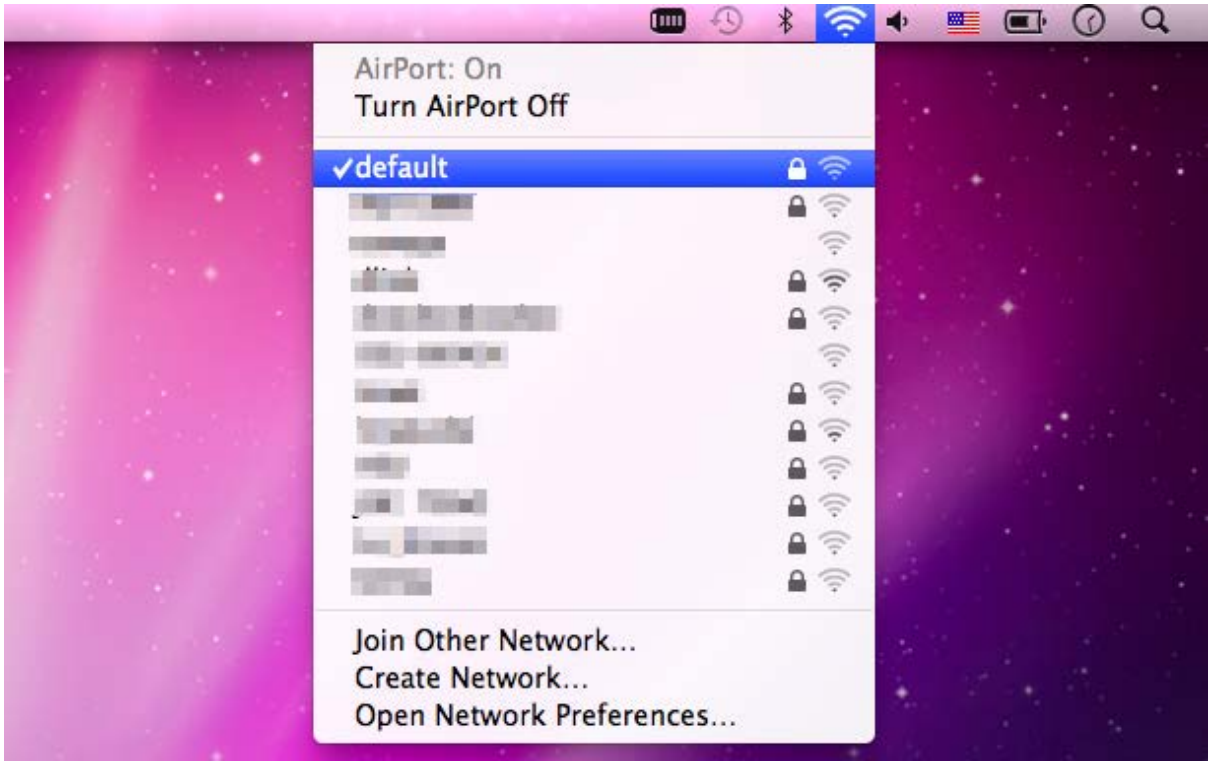


Figure 6-13 Connected to the Network

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**

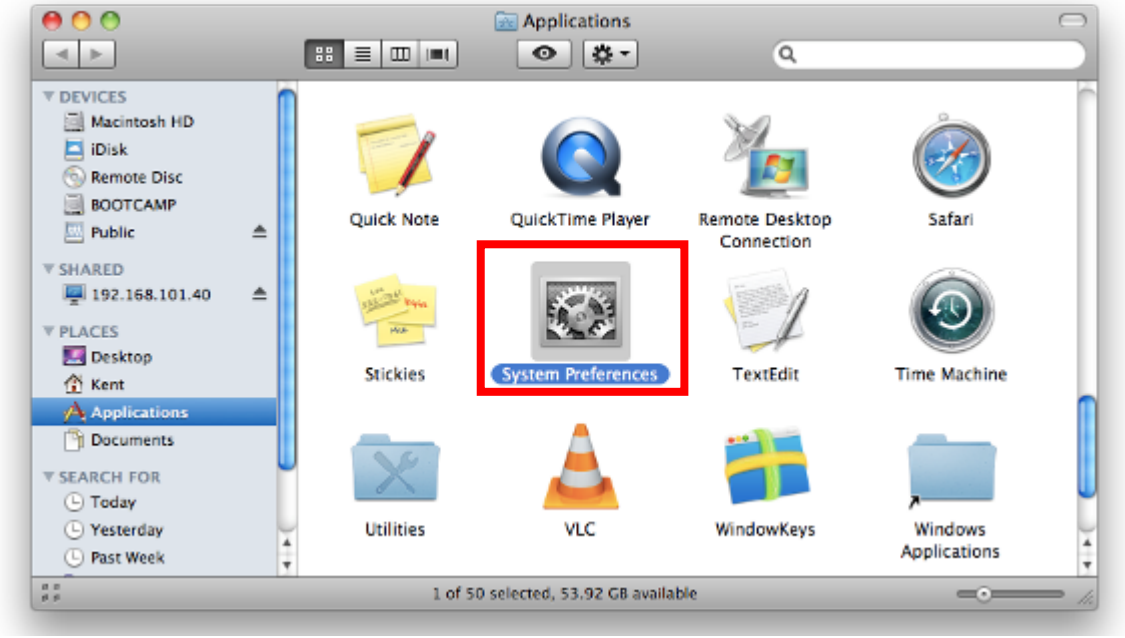


Figure 6-14 System Preferences

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

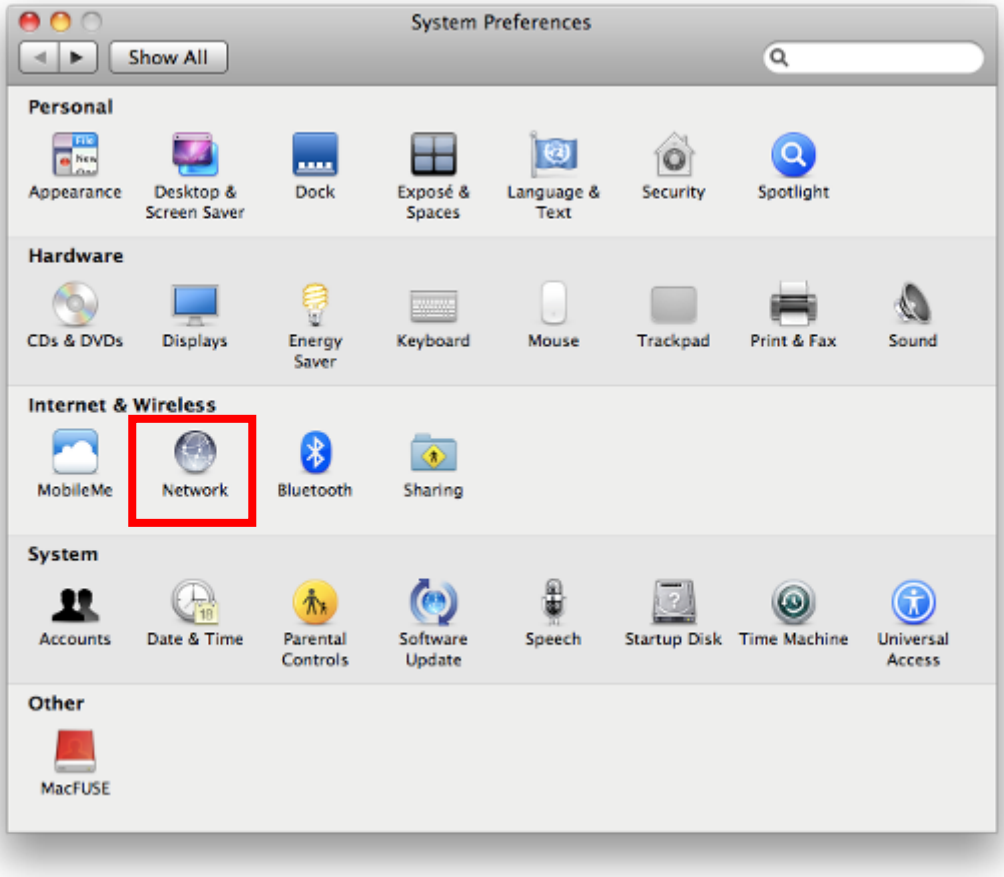


Figure 6-15 System Preferences -- Network

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 “No network selected”.

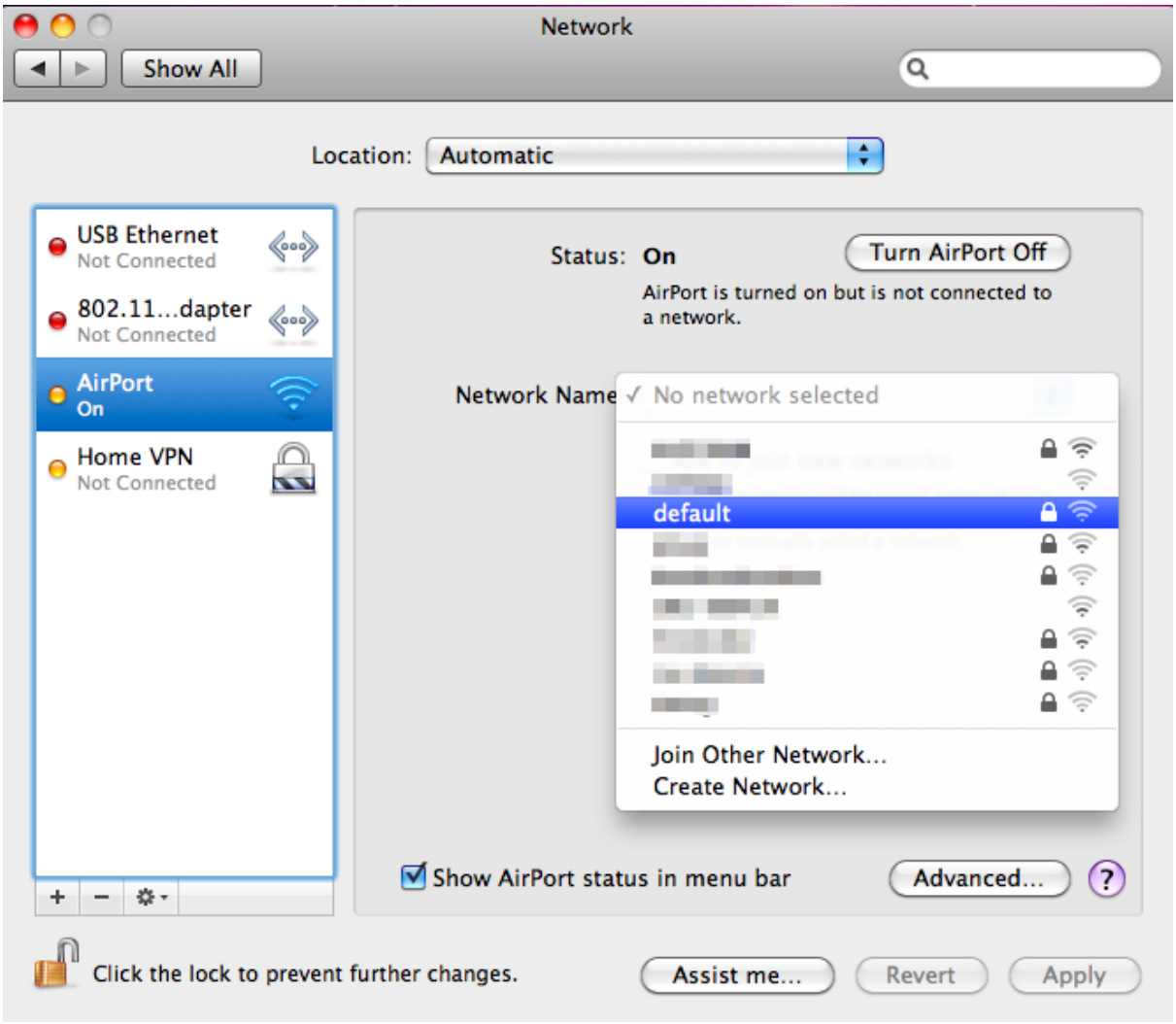


Figure 6-16 Selecting the Wireless Network

6.4 iPhone/iPod Touch/iPad

In the following sections, the **default SSID** of the WDAP-C1800AX is configured to "**default**".

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

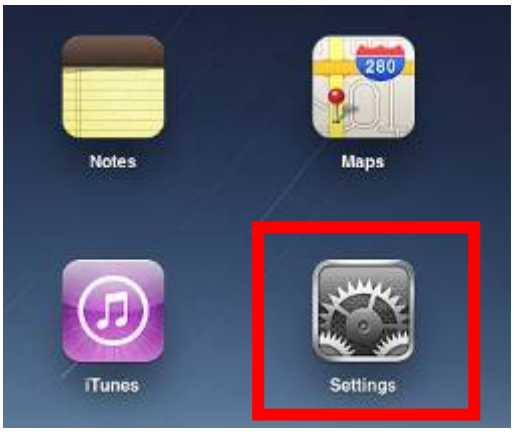


Figure 6-17 iPhone – Settings icon

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

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

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

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

Figure 6-18 Wi-Fi Setting

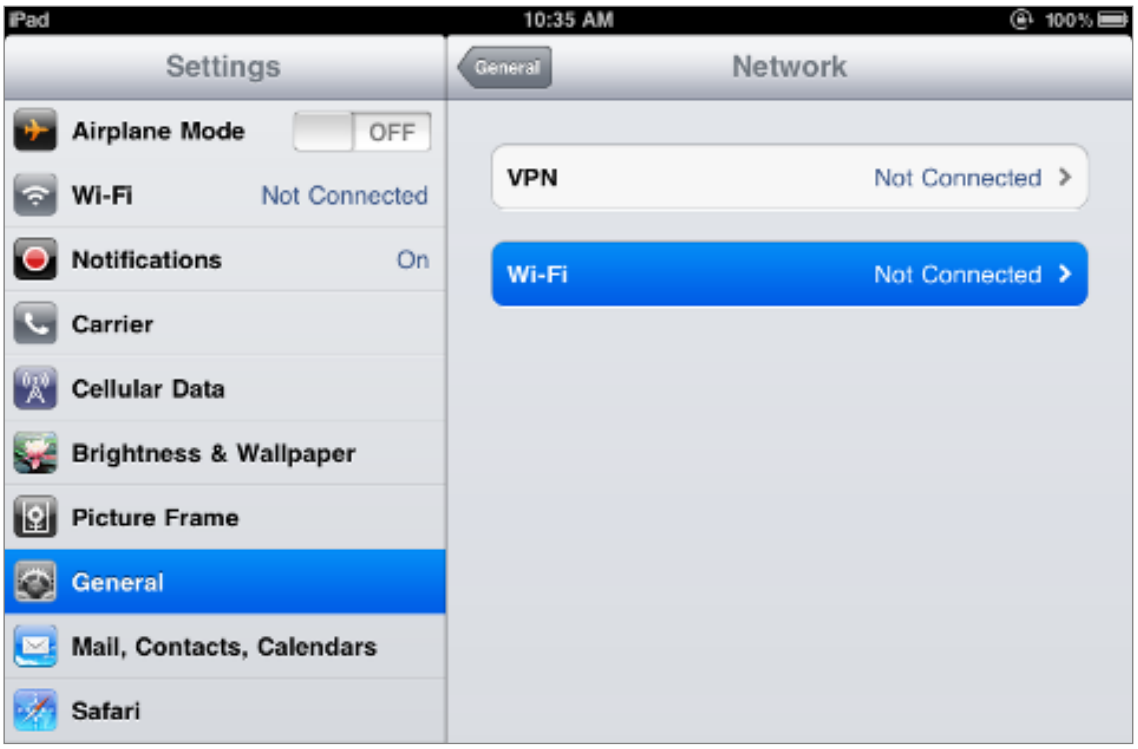


Figure 6-19 Wi-Fi Setting – Not Connected

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 Turning 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 5.7.2.1

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

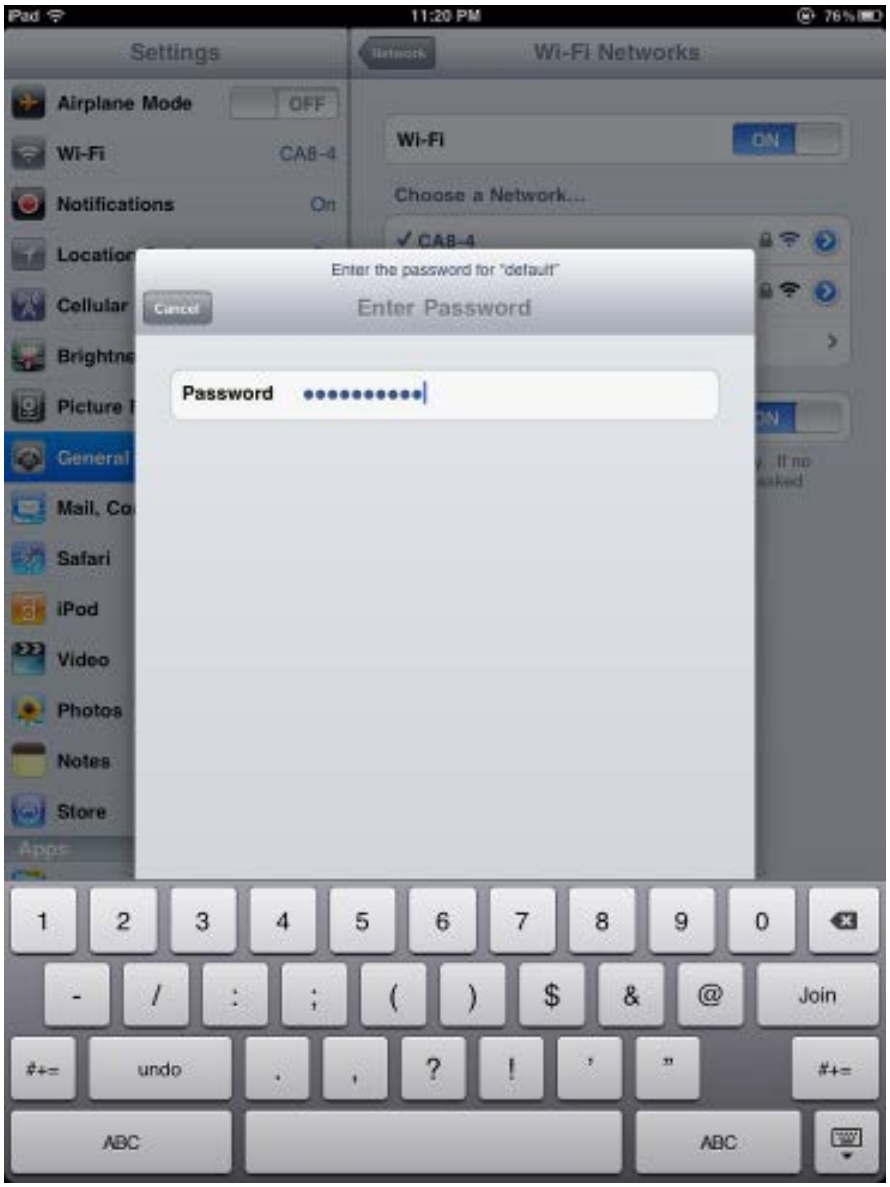


Figure 6-21 iPhone -- Entering the Password

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

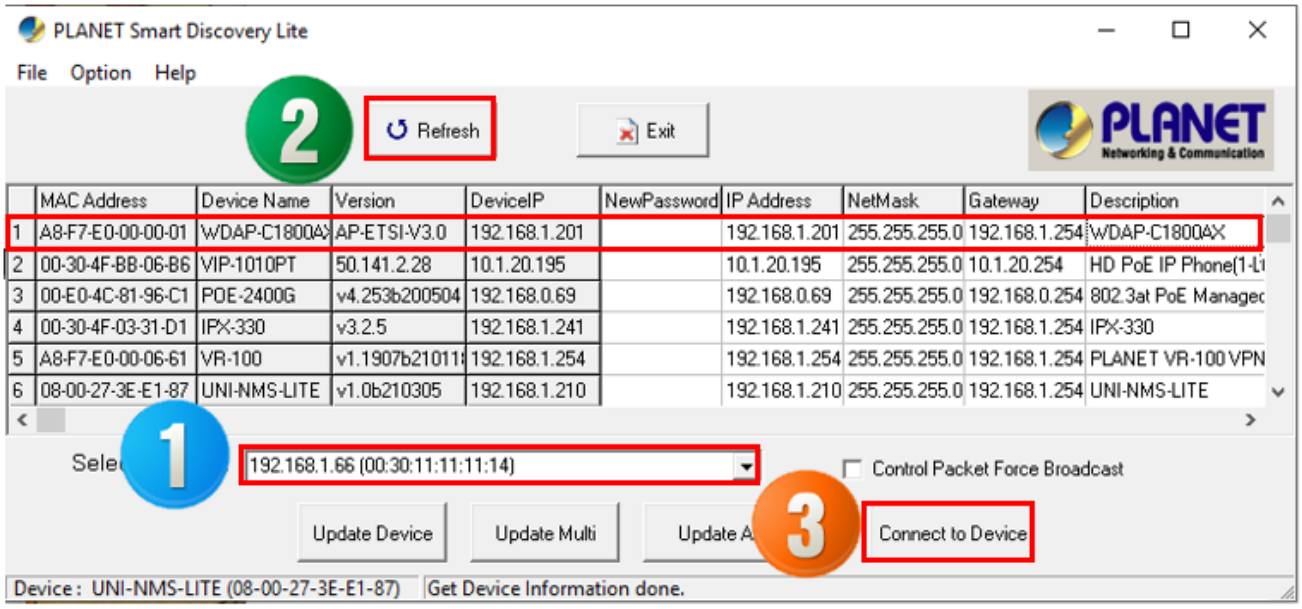
To easily list the WDAP-C1800AX in your Ethernet environment, the Planet Smart Discovery Utility is an ideal solution.

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

Step 1: Download the **Planet Smart Discovery Utility** to administrator PC.

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

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



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

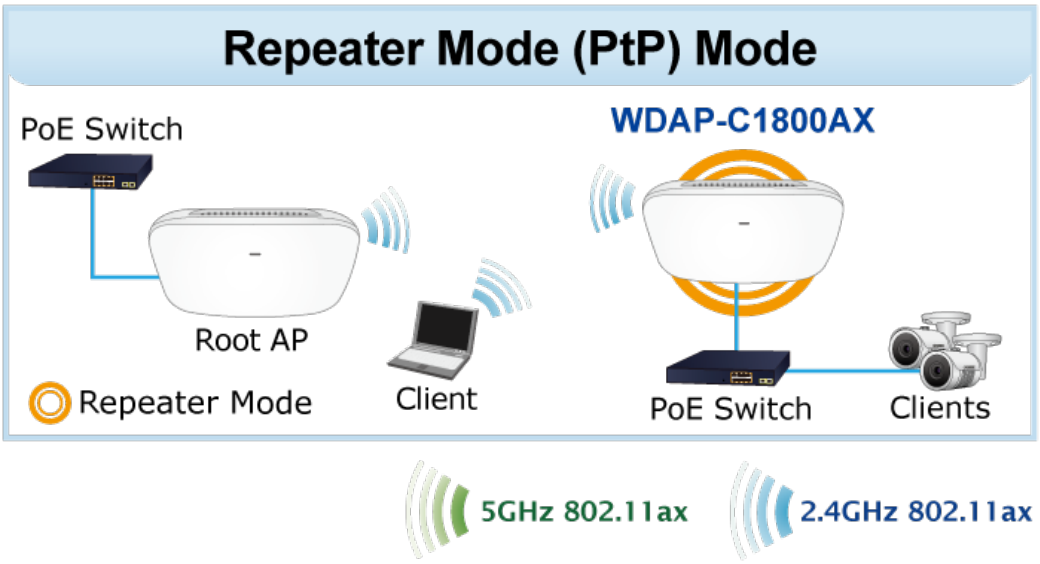
Note

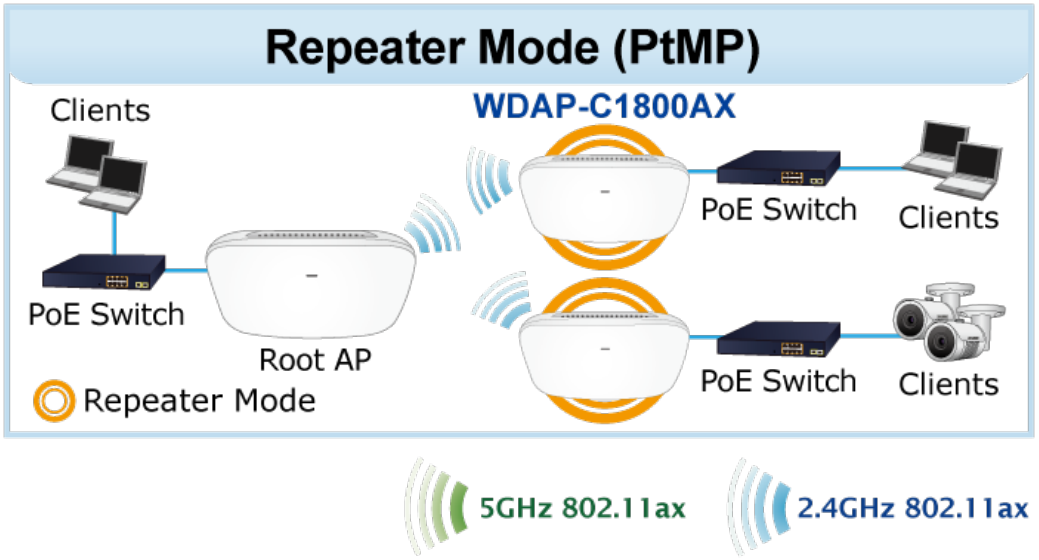
The fields in white background can be modified directly and then you can apply the new setting by clicking "**Update Device**".

Appendix B: FAQs

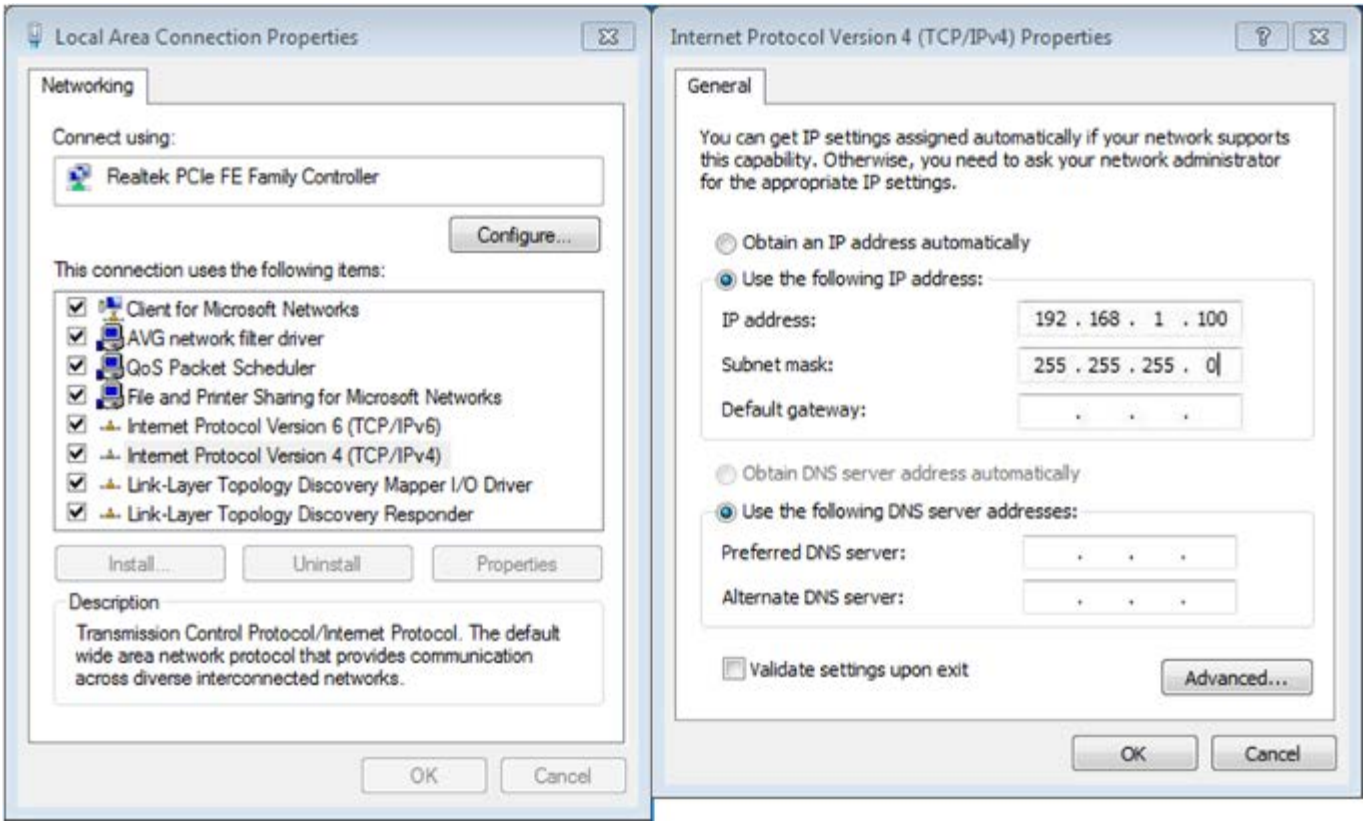
Q1: How to Set Up the AP Client Connection

Topology:

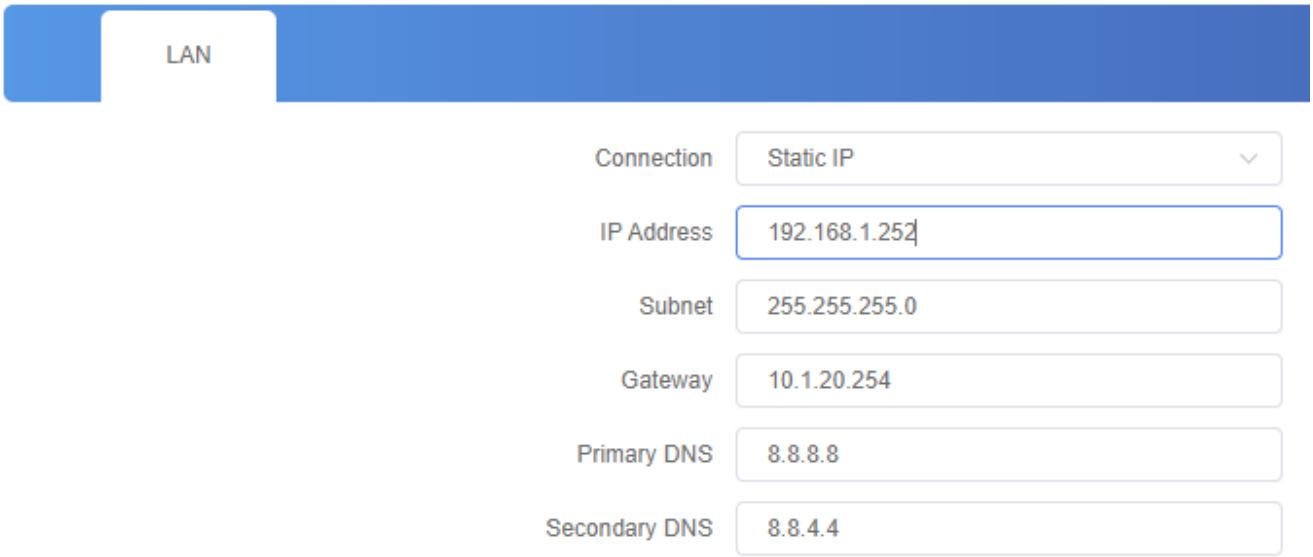




Step 1. Use static IP in the PCs that are connected with AP-1(Site-1) and AP-2(Site-2). In this case, Site-1 is "**192.168.1.100**", and Site-2 is "**192.168.1.200**".



Step 2. In AP-2, change the default IP to the same IP range but different from AP-1. In this case, the IP is changed to **192.168.1.252**.

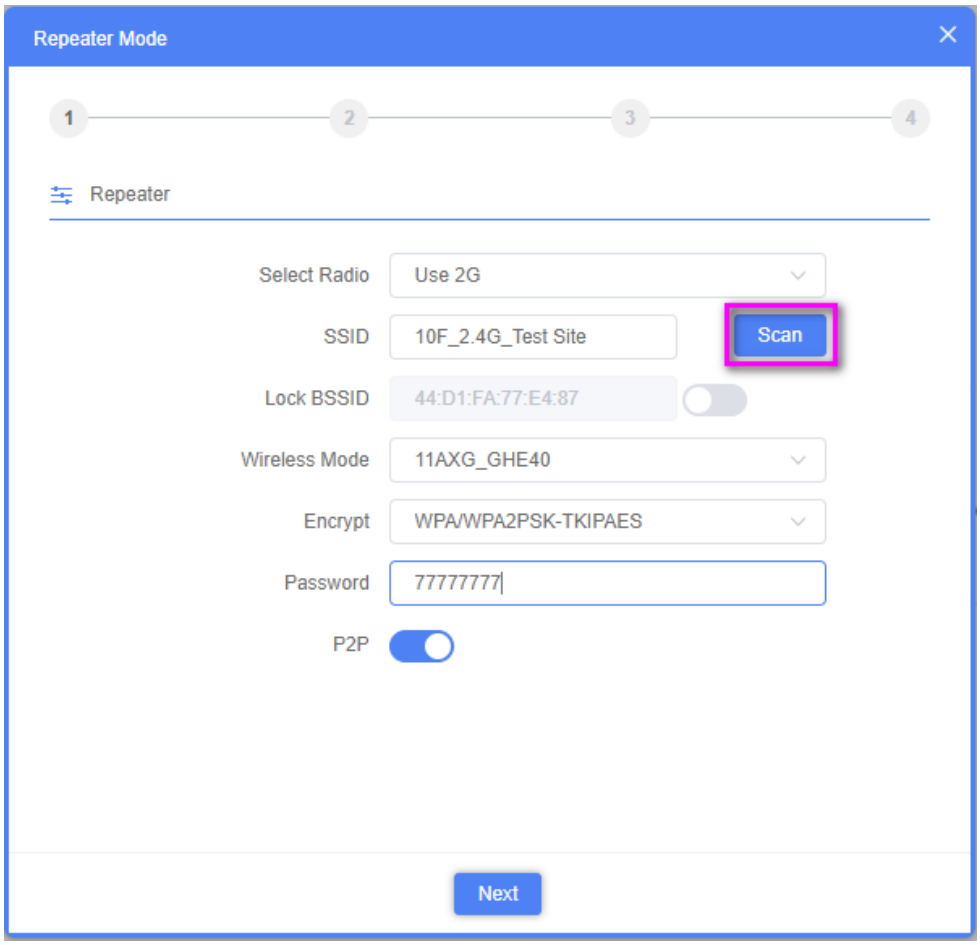


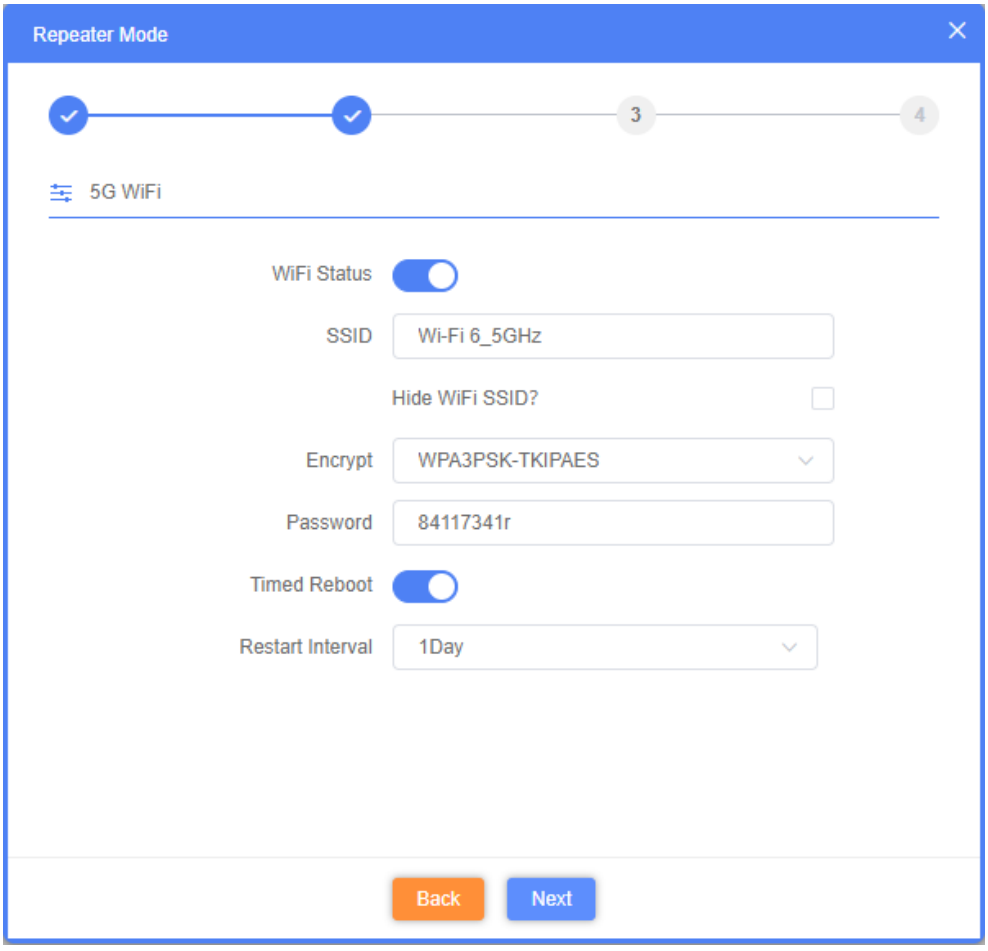
Step 3. In AP-1, go to "**Wizard**" to configure it to **AP Mode**. In AP-2, configure it to **Repeater Mode**.

AP-1

AP-2

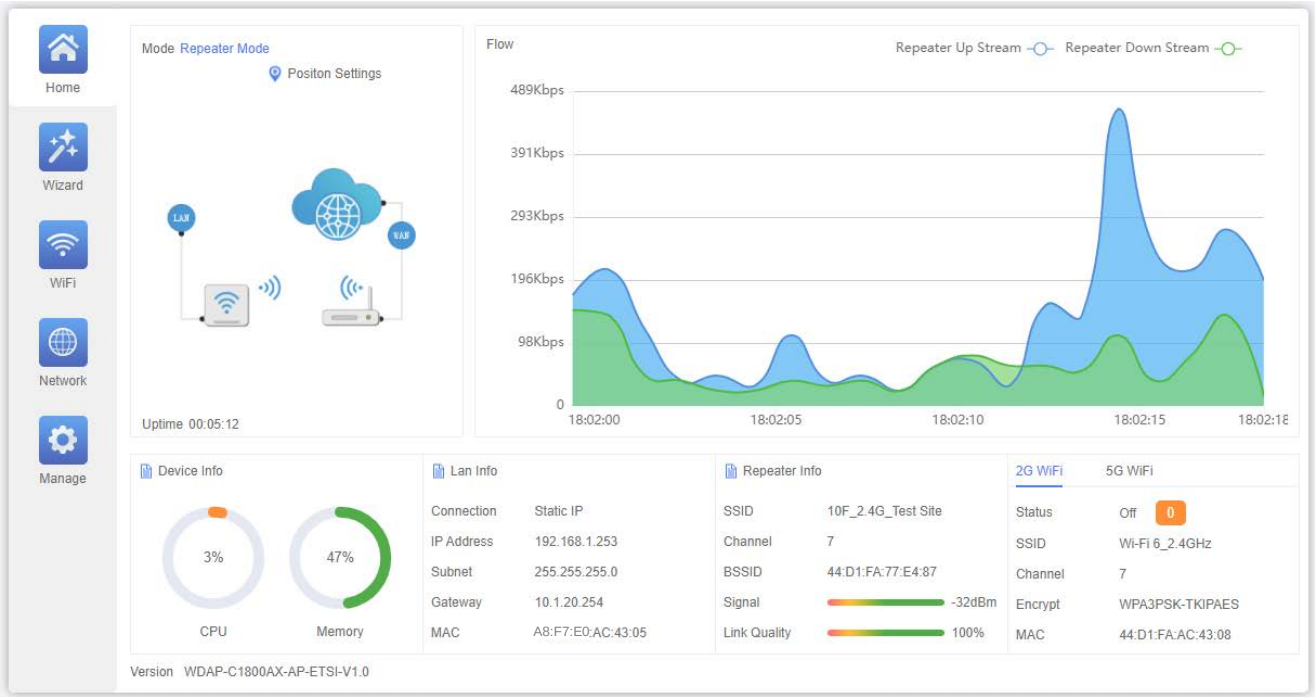
Step 4. In AP-2, press **Scan AP** to search the AP-1. You can also enter the MAC address, SSID, encryption and bandwidth if you know what they are.


Repeater Mode
1
2
3
4
Repeater
Select Radio
Use 2G
SSID
10F_2.4G_Test Site
Scan
Lock BSSID
44:D1:FA:77:E4:87
Wireless Mode
11AXG_GHE40
Encrypt
WPA/WPA2PSK-TKIPAES
Password
77777777
P2P
Next


Repeater Mode
3
4
5G WiFi
WiFi Status
SSID
Wi-Fi 6_5GHz
Hide WiFi SSID?
Encrypt
WPA3PSK-TKIPAES
Password
84117341r
Timed Reboot
Restart Interval
1Day
Back
Next

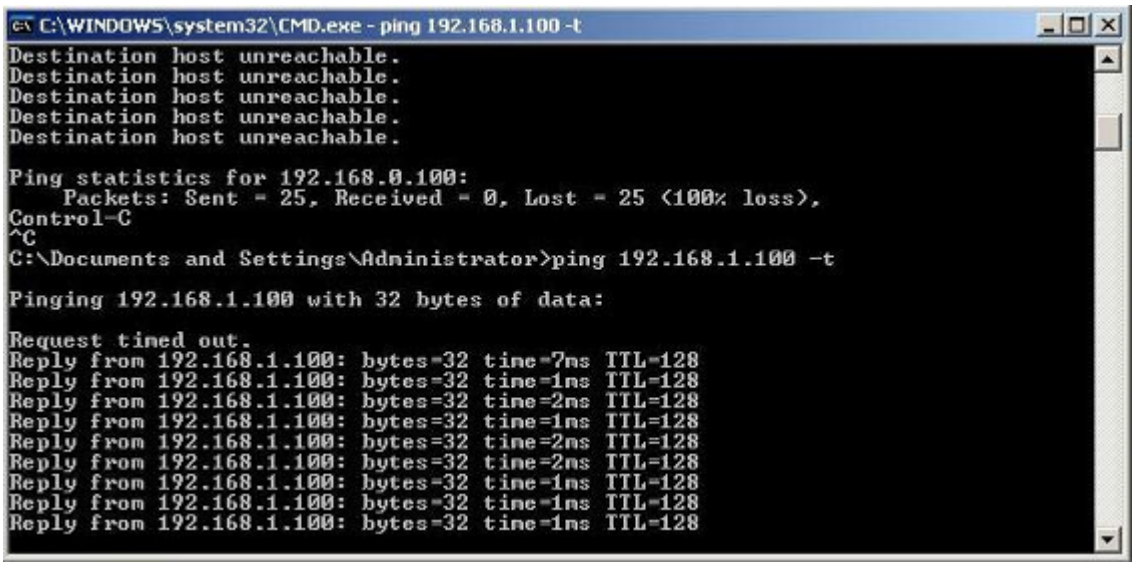
Step 5. Click “**Next**” to finish the setting.

Step 6. Click “**Repeater Information**” to check connection status.

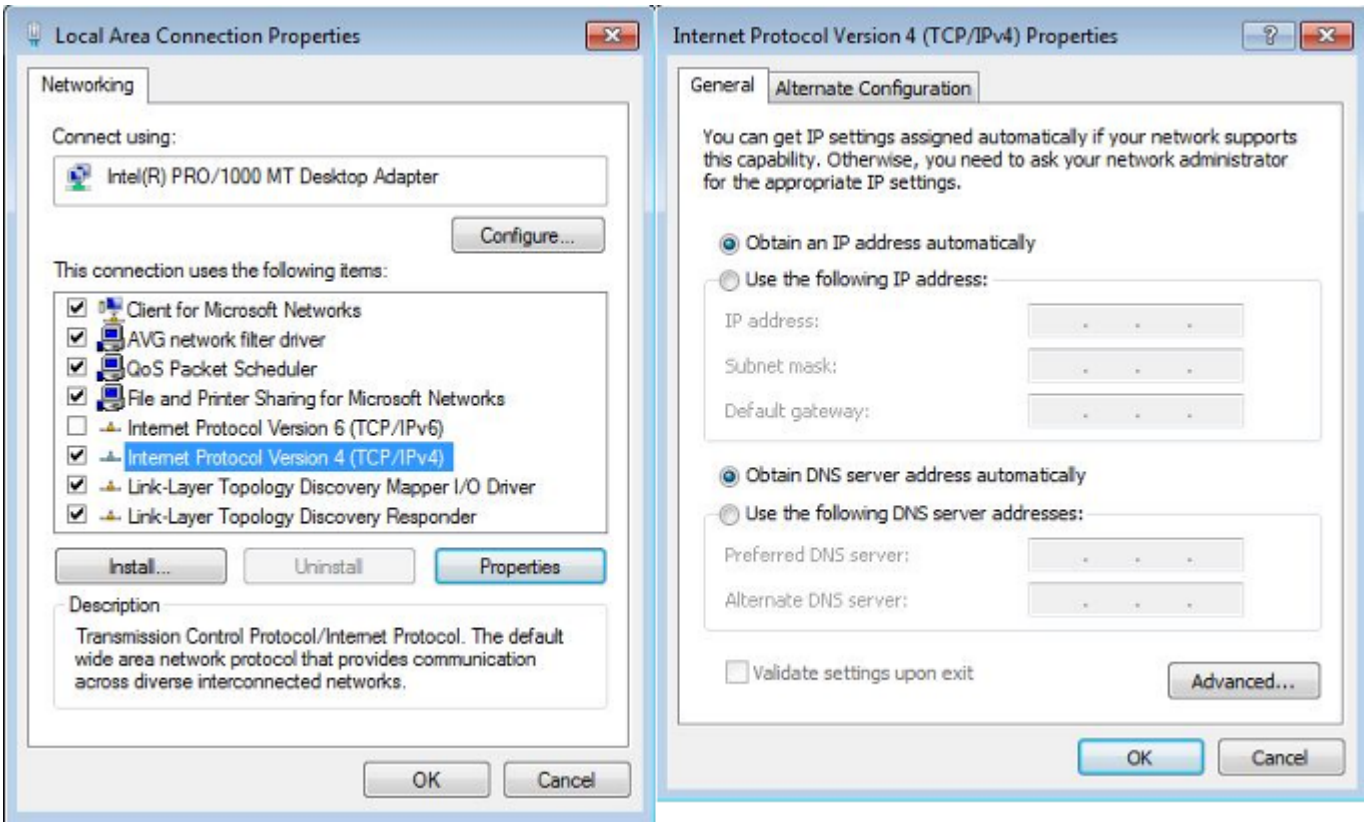


Step 7. Use command line tool to ping each other to ensure the link is successfully established.

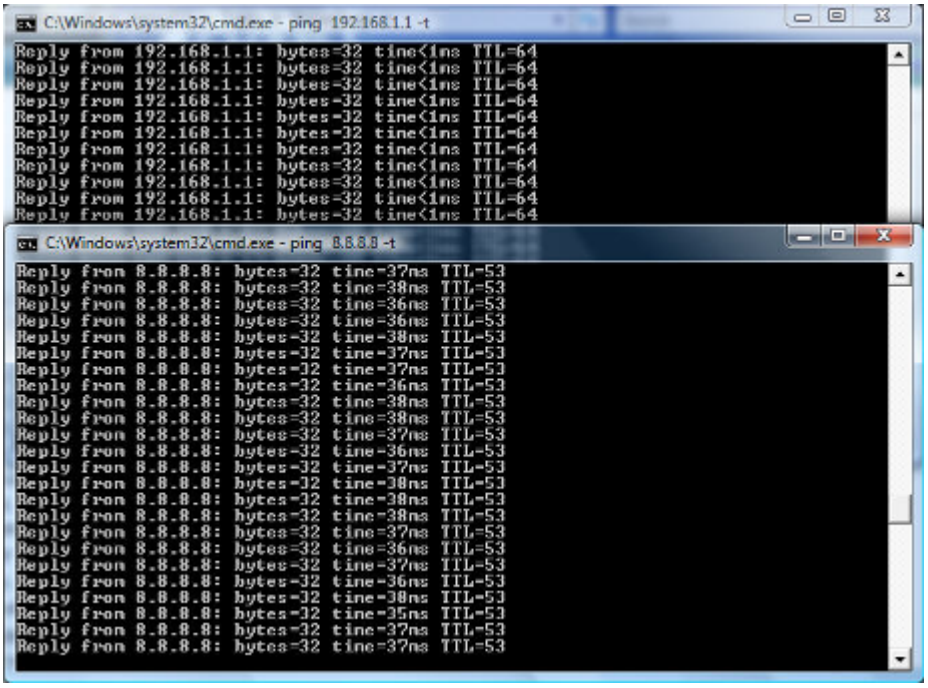
From Site-1, ping 192.168.1.200; and in Site-2, ping 192.168.1.100.



Step 8. Configure the TCP/IP settings of Site-2 to "**Obtain an IP address automatically**".



Step 9. Use command line tool to ping the DNS (e.g., Google) to ensure Site-2 can access internet through the wireless connection.



Note

The following hints should be noted:

1) The encryption method must be the same as that of both sites if configured.
2) Both sites should be Line-of-Sight.
3) For the short distance connection less than 1km, please reduce the "RF Output Power" of both sites.
4) For the long distance connection over 1km, please adjust the "Distance" to the actual distance or double the actual distance.

Appendix C: Troubleshooting

If you find 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 into 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 by pressing the 'reset' button for over 7 seconds. e. Use the Smart Discovery Tool to see if you can find the AP or not. 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 on the router connected to the AP, and check Internet connection status. b. Please be patient. Sometimes Internet is just that slow. c. If you've connected 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 entered in the router's settings again. e. Call your Internet service provider and check if there's something wrong with their service. f. If you just can't connect to one or more website, but you can still use other internet services, please check URL/Keyword filter. g. Try to reset the AP and try again later. h. Reset the device provided by your Internet service provider too.

Scenario	Solution
	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. Both 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. Internet is slow sometimes. Please be patient. b. Try to reset the AP and see if it's better after that. c. Try to know what computers do on your local network. If someone's transferring big files, other people will think Internet is really slow. d. 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 power source from utility power (make sure it's safe before you're doing this!), and call your dealer of purchase for help.

Appendix D: Glossary

- **802.11ax** - 802.11ax is a wireless networking standard in the 802.11 family by adding OFDMA, MU-MIMO (which is marketed under the brand name Wi-Fi 6), developed in the IEEE Standards Association process, providing high-throughput wireless local area networks (WLANs) on the 5GHz band 20、40、80、160MHz.
- **802.11ac** - 802.11ac is a wireless networking standard in the 802.11 family by adding MU-MIMO (which is marketed under the brand name Wi-Fi 5), developed in the IEEE Standards Association process, providing high-throughput wireless local area networks (WLANs) on the 5GHz band.
- **802.11n -** 802.11n builds upon previous 802.11 standards by adding MIMO (multiple-input multiple-output). MIMO uses multiple transmitter and receiver antennas to allow for increased data throughput via spatial multiplexing and increased range by exploiting the spatial diversity, perhaps through coding schemes like Alamouti coding. The Enhanced Wireless Consortium (EWC) [3] was formed to help accelerate the IEEE 802.11n development process and promote a technology specification for interoperability of next-generation wireless local area networking (WLAN) products.
- **802.11a** - 802.11a was an amendment to the IEEE 802.11 wireless local network specifications that defined requirements for an orthogonal frequency division multiplexing (OFDM) communication system. It was originally designed to support wireless communication in the unlicensed national information infrastructure (U-NII) bands (in the 5–6 GHz frequency range) as regulated in the United States by the Code of Federal Regulations, Title 47, Section 15.407.
- **802.11b -** The 802.11b standard specifies a wireless networking at 11 Mbps using direct-sequence spread-spectrum (DSSS) technology and operating in the unlicensed radio spectrum at 2.4GHzHz, 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 2.4GHzHz, 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.
- **MTU** (**Maximum Transmission Unit**) **-** The size in bytes of the largest packet that can be transmitted.
- **NAT** (**N**etwork **A**ddress **T**ranslation) **-** NAT technology translates IP addresses of a local area network to a different IP address for the Internet.
- **PPPoE** (**P**oint to **P**oint **P**rotocol **o**ver **E**thernet) **-** PPPoE is a protocol for connecting remote hosts to the Internet over an always-on connection by simulating a dial-up connection.
- **SSID -** A **S**ervice **S**et **Id**entification is a thirty-two character (maximum) alphanumeric key identifying a wireless local area network. For the wireless devices in a network to communicate with each other, all devices must be configured with the same SSID. This is typically the configuration parameter for a wireless PC card. It corresponds to the ESSID in the wireless Access Point and to the wireless network name.
- **WEP** (**W**ired **E**quivalent **P**rivacy) **-** A data privacy mechanism based on a 64-bit or 128-bit or 152-bit shared key algorithm, as described in the IEEE 802.11 standard.
- **Wi-Fi -** A trade name for the 802.11b wireless networking standard, given by the Wireless Ethernet Compatibility Alliance (WECA, see http://www.wi-fi.net), an industry standards group promoting interoperability among 802.11b devices.
- **WLAN** (**W**ireless **L**ocal **A**rea **N**etwork) **-** A group of computers and associated devices communicate with each other wirelessly, which network serving users are limited in a local area.

EC Declaration of Conformity

English	Hereby, **PLANET Technology Corporation,** declares that this **11ac Wireless AP** is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.	**Lietuviškai**	Šiuo **PLANET Technology Corporation,**, skelbia, kad **11ac Wireless AP** tenkina visus svarbiausius 2014/53/EU direktyvos reikalavimus ir kitas svarbias nuostatas.
Česky	Společnost **PLANET Technology Corporation,** tímto prohlašuje, že tato **11ac Wireless AP** splňuje základní požadavky a další příslušná ustanovení směrnice 2014/53/EU.	**Magyar**	A gyártó **PLANET Technology Corporation**, kijelenti, hogy ez a **11ac Wireless AP** megfelel az 2014/53/EU irányelv alapkövetelményeinek és a kapcsolódó rendelkezéseknek.
Dansk	**PLANET Technology Corporation,** erklærer herved, at følgende udstyr **11ac Wireless AP** overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EU	**Malti**	Hawnhekk, **PLANET Technology Corporation,** jiddikjara li dan **11ac Wireless AP** jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 2014/53/EU
Deutsch	Hiermit erklärt **PLANET Technology Corporation,** dass sich dieses Gerät **11ac Wireless AP** in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 2014/53/EU befindet". (BMWi)	**Nederlands**	Hierbij verklaart , **PLANET Technology orporation,** dat **11ac Wireless AP** in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn **2014/53/EU**
Eestikeeles	Käesolevaga kinnitab **PLANET Technology Corporation,** et see **11ac Wireless AP** vastab Euroopa Nõukogu direktiivi 2014/53/EU põhinõuetele ja muudele olulistele tingimustele.	**Polski**	Niniejszym firma **PLANET Technology Corporation,** oświadcza, że **11ac Wireless AP** spełnia wszystkie istotne wymogi i klauzule zawarte w dokumencie „Directive **2014/53/EU**.
Ελληνικά	*ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ* , **PLANET Technology Corporation,** *ΔΗΛΩΝΕΙ ΟΤΙ ΑΥΤΟ* **11ac Wireless AP***ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ* 2014/53/EU	**Português**	**PLANET Technology Corporation**, declara que este **11ac Wireless AP** está conforme com os requisitos essenciais e outras disposições da Directiva **2014/53/EU**.
Español	Por medio de la presente, **PLANET Technology Corporation,** declara que **11ac Wireless AP** cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/EU	**Slovensky**	Výrobca **PLANET Technology Corporation,** týmto deklaruje, že táto **11ac Wireless AP** je v súlade so základnými požiadavkami a ďalšími relevantnými predpismi smernice 2014/53/EU.
Français	Par la présente, **PLANET Technology Corporation,** déclare que les appareils du **11ac Wireless AP** sont conformes aux exigences essentielles et aux autres dispositions pertinentes de la directive 2014/53/EU	**Slovensko**	**PLANET Technology Corporation**, **s tem potrjuje,** da je ta **11ac Wireless AP** skladen/a z osnovnimi zahtevami in ustreznimi določili Direktive **2014/53/EU**
Italiano	Con la presente , **PLANET Technology Corporation,** dichiara che questo **11ac Wireless AP** è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/EU.	**Suomi**	**PLANET Technology Corporation,** vakuuttaa täten että **11ac Wireless AP** tyyppinen laite on direktiivin 2014/53/EU oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Latviski	Ar šo **PLANET Technology Corporation,** apliecina, ka šī **11ac Wireless AP** atbilst Direktīvas 2014/53/EU pamatprasībām un citiem atbilstošiem noteikumiem.	**Svenska**	Härmed intygar, **PLANET Technology Corporation,** att denna **11ac Wireless AP** står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv **2014/53/EU**.