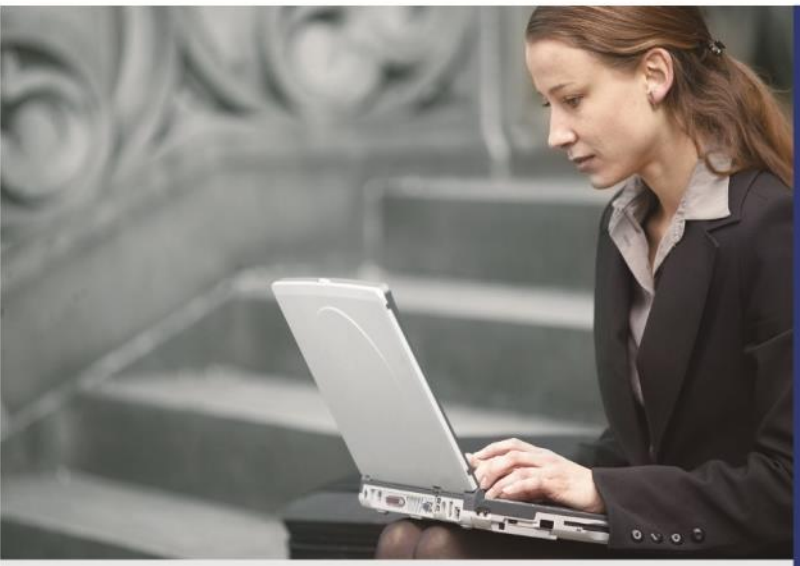
PLANET
Networking & Communication

User's Manual

Dual Band 802.11ax 1800Mbps
Wireless Gigabit Router

WDRT-1800AX



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Federal Communication Commission (FCC) Interference Statement

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

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

FCC Caution:

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

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

(1) This device may not cause harmful interference

(2) This device must accept any interference received, including interference that may cause undesired operation.

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 directive 2014/53/EU of 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 the device used at 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.

National Restrictions

This device is intended for home and office use in all EU countries (and other countries following the EU directive 2014/53/EU) without any limitation except for the countries mentioned below:

Country	Restriction	Reason/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

WEEE regulation

To avoid the potential effects on the environment and human health as a result of the presence of

hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste; WEEE should be collected separately.

Revision

User Manual of PLANET 1200Mbps 802.11ac Dual Band Wireless Gigabit Router

Model: WDRT-1800AX

Rev: 1.0 (April, 2022)

Part No. EM- WDRT-1800AX_v1.0

CONTENTS

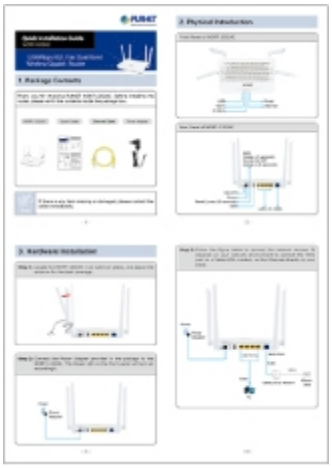
Chapter 1. Product Introduction

Package Contents

Thank you for choosing PLANET WDRT-1800AX. Before installing the router, please verify the contents inside the package box.

WDRT-1800AX Wireless Router

Quick Installation Guide



Power Adapter

12V DC, 1A

Ethernet Cable

RJ45 Cable

Note

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

Product Description

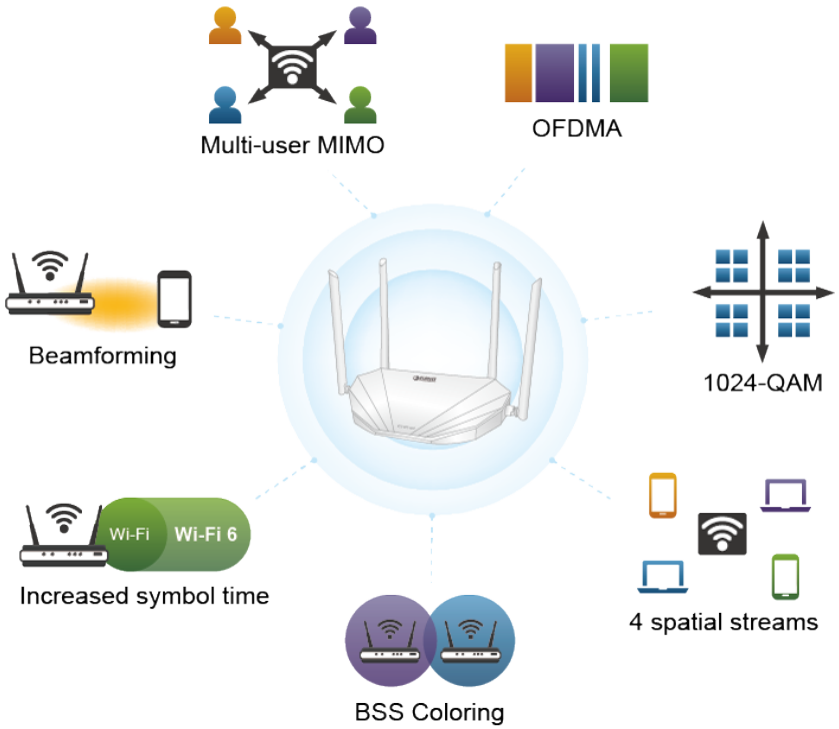
Amazing Next-generation Wireless High-speed Connection

PLANET WDAP-1800AX Dual Band **802.11ax 1800Mbps Wireless Gigabit Router**, supporting MU-MIMO, Wave 2.0, OFDMA and **EasyMesh** technology, provides a maximum wireless speed of **1200Mbps** in the 5GHz band and **600Mbps** in the 2.4GHz band. The maximum number of client users is up to 64, ensuring more secure and robust connectivity with the adoption of **Wi-Fi 6** technology.

The WDRT-1800AX, suitable for home multi-device streaming connection, smart home and other environments, provides better speed and multi-installation connectivity for high-efficiency networking. Equipped with the next-generation **Wi-Fi 6 (802.11ax)** wireless network standard, the total bandwidth reaches **1800Mbps**, and the **4-stream transmission** technology improves the transmission efficiency of multiple devices, making AR/VR/IoT applications smoother.

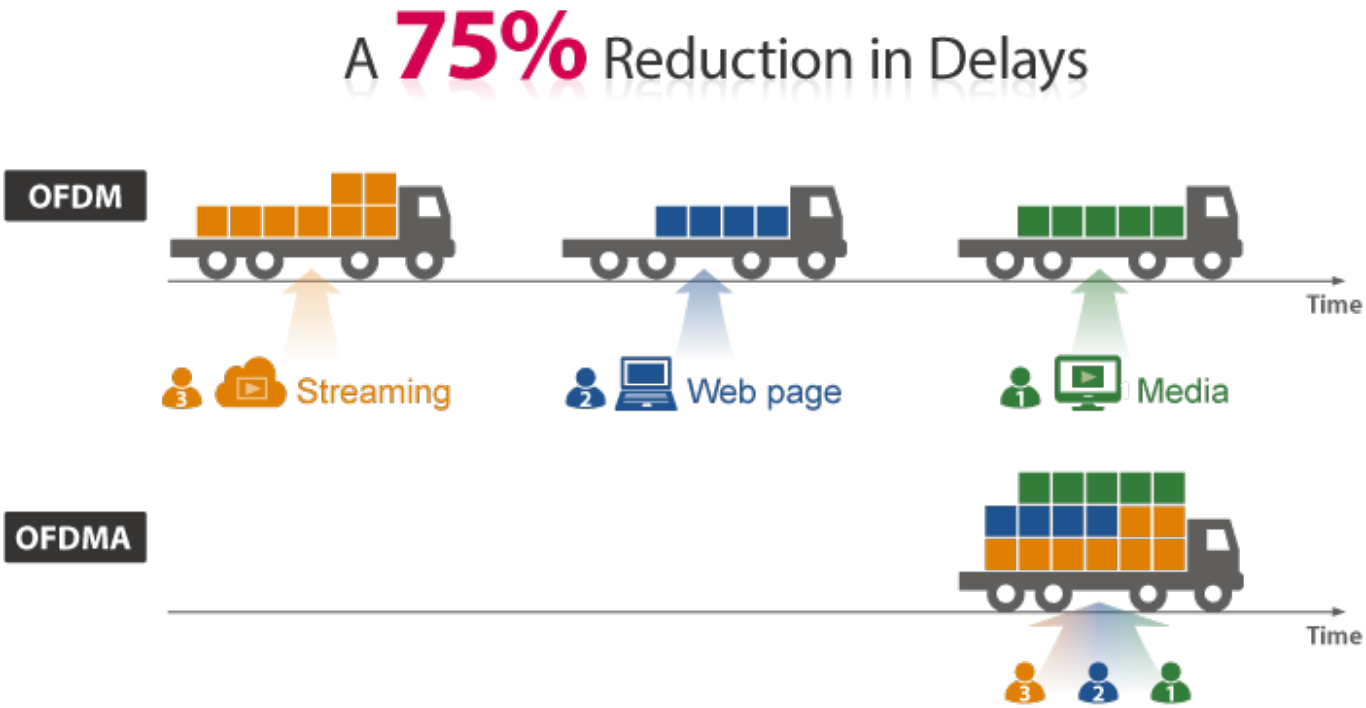
Benefits of Wi-Fi 6 technology

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 EasyMesh 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 workspaces and conference rooms. The WDRT-1800AX can offer more powerful throughput coverage of up to 64 client users.



■ OFDMA (Orthogonal Frequency Division Multiple Access)

OFDMA is a multi-user evolved version based on OFDM digital modulation technology. In the Wi-Fi 6 (802.11ax) standard, the main function of OFDMA is to improve network performance. Orthogonal frequency division multiple access (OFDMA) enables users to simultaneously operate in the same channel and therefore improves efficiency, latency, and throughput.

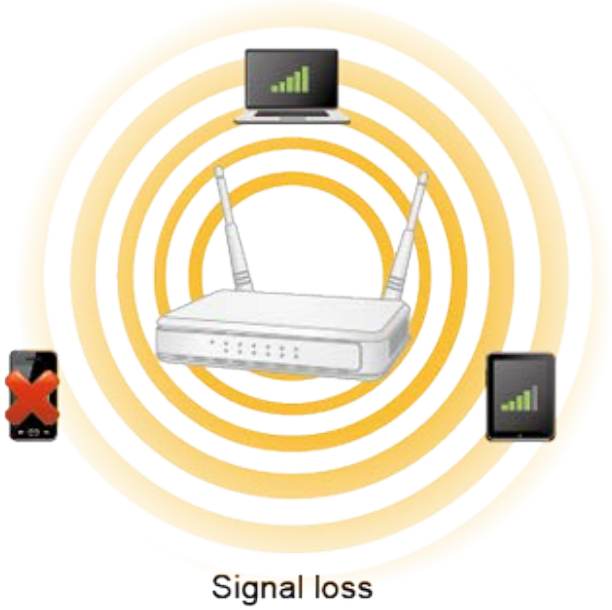


■ Beamforming

Beamforming is to improve your Wi-Fi signal when you are far away from your router. When you use beamforming, Wi-Fi beamforming narrows the focus of that router signal, sending it directly to your devices in a straight line, thus minimizing surrounding signal interference and increasing the strength of the signal that ultimately bring you the following benefits:

- Extend your Wi-Fi coverage
- Deliver a more stable Wi-Fi connection
- Deliver better Wi-Fi throughput
- Reduce router interference

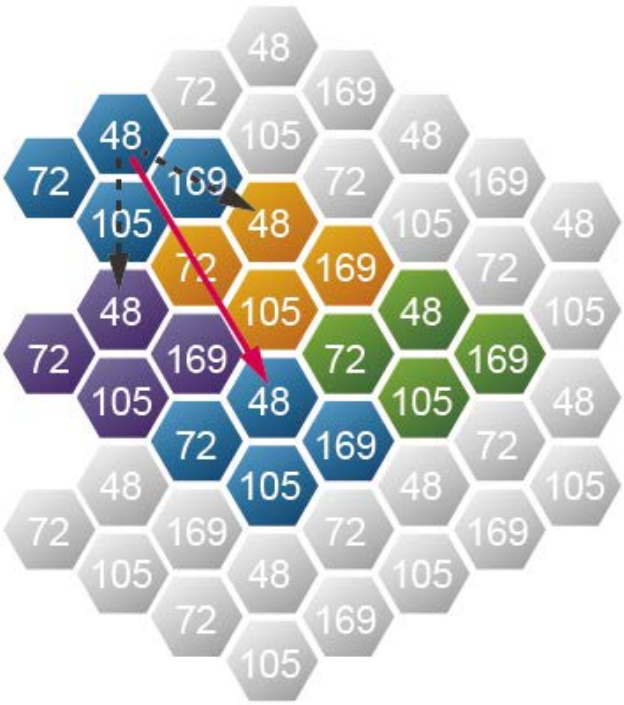
Dedicated and stable signals



Signal loss

■ BSS (Basic Service Set) Coloring

The BSS color is a numerical identifier of the BSS. 802.11ax radios are able to differentiate between BSSs using BSS color identifier when other radios transmit on the same channel. If the color is the same, this is considered to be an *intra-BSS* frame transmission. In other words, the transmitting radio belongs to the same BSS as the receiver. If the detected frame has a different BSS color from its own, then the STA considers that frame as an *inter-BSS* frame from an overlapping BSS.



Easy Installation with EasyMesh Function

Wi-Fi EasyMesh provides a standards-based method for implementing multi-access point (AP) Wi-Fi networks. It not only has the advantages of easy-to-use and self-adjusting Wi-Fi, but also has interactive Wi-Fi certified equipment that leads to the advantage of improved equipment selection flexibility. The Wi-Fi EasyMesh network uses multiple access points that operate together to form a unified network, providing a smart and efficient Wi-Fi that fully covers indoor and outdoor spaces.

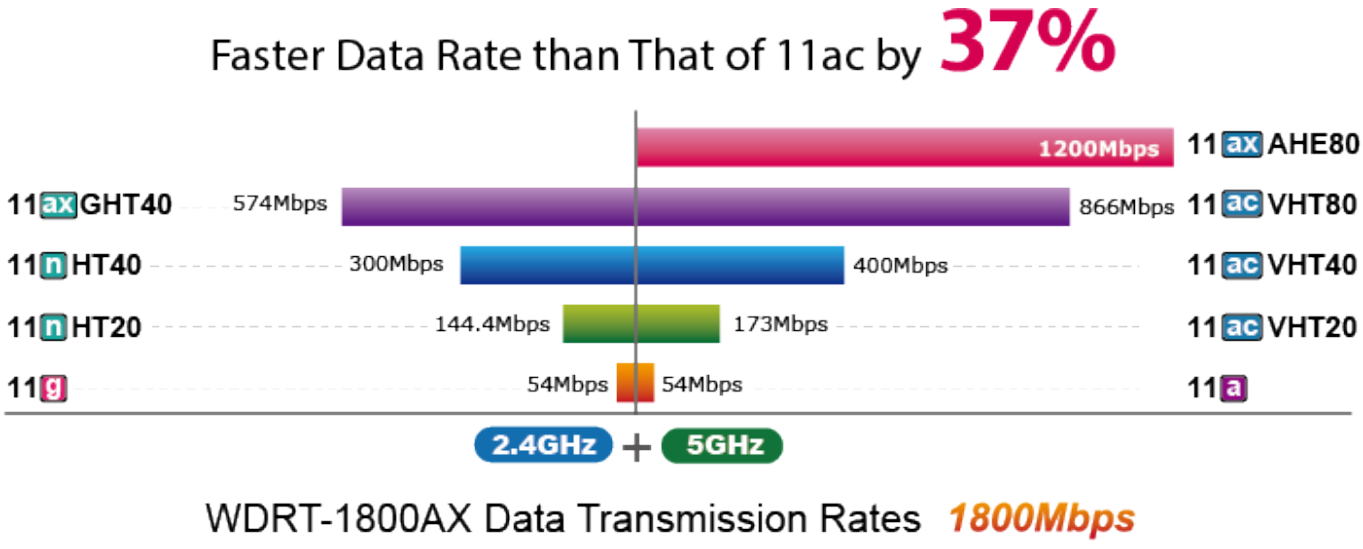
WPA3 Next Generation Security for Your WLAN Solution

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.

* WDRT-1800AX only supports WPA3-Personal.

Super Power Dual band WLAN Solution

PLANET WDRT-1800AX, adopting the IEEE 802.11ax Wi-Fi 6 standard, provides a high-speed transmission. The maximum wireless speed in 2.4GHz band is up to 11AXG_GHE40 of 574Mbps, and in the 5GHz band is up to 11AXA_AHE80 of 1201Mbps. Both the **2.4GHz and 5GHz** wireless connections can also be used simultaneously. Furthermore, the WDRT-1800AX adopts the high-class MediaTek SoC (System-on-a-Chip), which provides higher stability to meet the stringent requirements of the solution.



Product Features

- **IEEE Compliant Wireless LAN and Wired LAN**
  - Compliant with the IEEE 802.11a/b/g/n/ac/ax wireless technology
  - Equipped with 1 WAN and 4 LANs 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 2.4GHz and 1200Mbps in 5GHz)
  - High output power with multiply-adjustable transmit power control

- **Fixed-network Broadband Router**
  - Supports WAN connection types: Dynamic, static IP, PPPoE
  - Supports Operation Modes: Route, Bridge and Relay mode
  - Supports DDNS and DHCP Servers

- **Multiple Operation Modes and Wireless Features**
  - Max. Wireless Clients up to 64 (2.4GHz+5GHz)
  - Supports MU-MIMO, Wave 2.0, OFDMA, Beamforming and BSS coloring.
  - Support Terminal Seamless Roaming with 802.11k, 802.11v, and 802.11r

- **Comprehensive Wireless Advanced Features**
  - Easy Installation with EasyMesh Function (Expected to be launched in 2021/Q4)
  - Supports guest network to allow users to access different SSIDs
  - Supports Wireless QoS to enhance the efficiency of multimedia application
  - Supports 3-level Transmitting Power Control to adapt various environments
  - Self-healing (Schedule Reboot) mechanism for reliable connection

- **Secure Network Connection**
  - Supports Wi-Fi Protected Setup (WPS)
  - Support WPA/WPA2/WAP3 wireless security encryption
  - Supports NAT firewall, IP / URL-based access control and MAC address filtering

- **Advanced Networking Function for Specific Application**
  - Supports Bandwidth Control (QoS) based on different local IP addresses
  - Supports NTP, Port Forwarding, ALG and DMZ for various networking applications

- **Easy Installation and Management**
  - Web-based UI and quick setup wizard for easy configuration
  - Support for centralized management (**TR069**)
  - Remote Management allows configuration from a remote site
  - System status monitoring includes DHCP Client List and System Log

Product Specifications

Product	WDRT-1800AX
Hardware Specifications	
Interface	WAN Port: 1 x 10/100/1000 Mbps auto MDI/MDI-X RJ45 port LAN Port: 4 x 10/100/1000 Mbps auto MDI/MDI-X RJ45 port (LAN 1~4)
Antenna	Four external 7dBi high gain omnidirectional antennas (2.4GHz x 2, 5GHz x 2)
Button	1 x WPS/reset button Press for about 1 second to enable WPS function. Press for over 5 seconds to reset the device to factory default.
LED Indicators	PWR x 1 LAN x 4 WAN x 1 WLAN (2.4GHz & 5GHz) x 2
Dimensions (W x D x H)	234 x 148 x 31mm
Weight	343g
Power Requirement	12V DC, 1A
Wireless Interface Specifications	
Standard	IEEE 802.11a/n/ac/ax 5GHz IEEE 802.11g/b/n/ax 2.4GHz
Frequency Band	Simultaneous 2.4GHz and 5GHz
Data Rates	2.4GHz up to 600Mbps 5GHz up to 1200Mbps
Channel	2.4GHz FCC (America): 2.412~2.462GHz (11 Channels) ETSI (Europe): 2.412~2.472GHz (13 Channels) 5GHz FCC: 5.180~5.240GHz, 5.745~5.825GHz ETSI: 5.180~5.700GHz ***The actual channels in application may vary depending on the regulations in different regions and countries.**
Channel Width	20MHz, 40MHz, 80MHz
Max. RF Power / EIRP	EIRP < 22dBm

Receive Sensitivity	2.4GHz 11b 11Mbps: 22dBm 11g 6Mbps: 21dBm 11g 54Mbps: 20dBm 11n MCS0-HT20: 21dBm 11n MCS7-HT20: 19dBm 11ax MCS11-HE20: 16dBm 11n MCS7-HT40: 19dBm 11ax MCS9-VHT40: 17dBm 11ax MCS11-HESU40: 16dBm 5GHz 11a 6Mbps: 21dBm 11a 54Mbps: 19dBm 11ac MCS8-VHT20: 17dBm 11ax MCS11-HE-SU20: 16dBm 11ac MCS9-VHT40: 17dBm 11ax MCS11-HE-SU40: 16dBm 11ac MCS9-VHT80:17dBm 11ax MCS11-HE-SU80: 16dBm
Wireless Output Power	2.4GHz 11b 1Mbps: -96 dBm 11b 11Mbps: -90 dBm 11g 6Mbps: -91 dBm 11g 54Mbps: -75 dBm 11n MCS0-HT20: -91 dBm 11n MCS7-HT20: -71 dBm 11ax MCS0-HE-HESU20: 91dBm 11ax MCS11-HE-HESU20: 62dBm 11n MCS7-HT40: -70 dBm 11ac MCS9-VHT40: -63 dBm 11ax MCS11-HE-HESU40: 58dBm 5GHz 11a 6Mbps: -91 dBm 11a 54Mbps: -75 dBm 11n MCS0-HT20: -91 dBm 11n MCS7-HT20: -71 dBm 11ax MCS0-HE-HESU20: 91dBm 11ax MCS11-HE-HESU20: 62dBm 11n MCS7-HT40: -70 dBm

	11ac MCS9-VHT40: -63 dBm 11ax MCS11-HE-HESU40: 58dBm 11ac MCS9-VHT80: -58 dBm 11ax MCS11-HE-HESU80: 54dBm
Transmit Power Control	Low, Medium, High
Wireless Management Features	
Encryption Security	WPA/WPA2/WPA3
Wireless Security	Wireless MAC address filtering Supports WPS (Wi-Fi Protected Setup)
Wireless Advanced	Supports dual-SSID (2.4GHz and 5GHz) Supports guest network
Max. Supported Clients	2.4GHz wireless: 32 5GHz wireless: 32
Router Features	
WAN	Shares data and Internet access with users, supporting the following Internet accesses: ■ Dynamic IP ■ Static IP ■ PPPoE
LAN	Built-in DHCP server supporting static IP address distribution Supports IP MAC binding
Firewall	NAT firewall, SPI firewall Built-in NAT server which supports port forwarding and DMZ Built-in firewall with URL filtering, and MAC address filtering
System Management	Web-based (HTTP) management interface Telnet server Supports UPnP, PLANET DDNS SNTP synchronization System log TR069
Standards Conformance	
IEEE Standards	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
Modulation Type	802.3ax: OFDMA (BPSK / QPSK / 16QAM / 64QAM / 256QAM/1024QAM) 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11b: DSSS (DBPSK / DQPSK / CCK)
Other Protocols and Standards	TCP/IP, DHCP, NAT, PPPoE, NTP
Regulatory	CE, RoHS
Environment	
Temperature	Operating: 0 ~ 40 degrees C Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing) Storage: 5 ~ 95% (non-condensing)

Chapter 2. Hardware Installation

Please follow the instructions below to connect the WDRT-1800AX to the existing network devices and your computers.

Hardware Description

- **Dimensions**: 234 x 148 x 31 mm (W x D x H)
- **Diagrams:**

Figure 2-1

Figure 2-2

2.1.1 Front LED

The front LED provides a simple interface monitoring the router. Figure 2-3 shows the front LED of the WDRT-1800AX.

Front LED

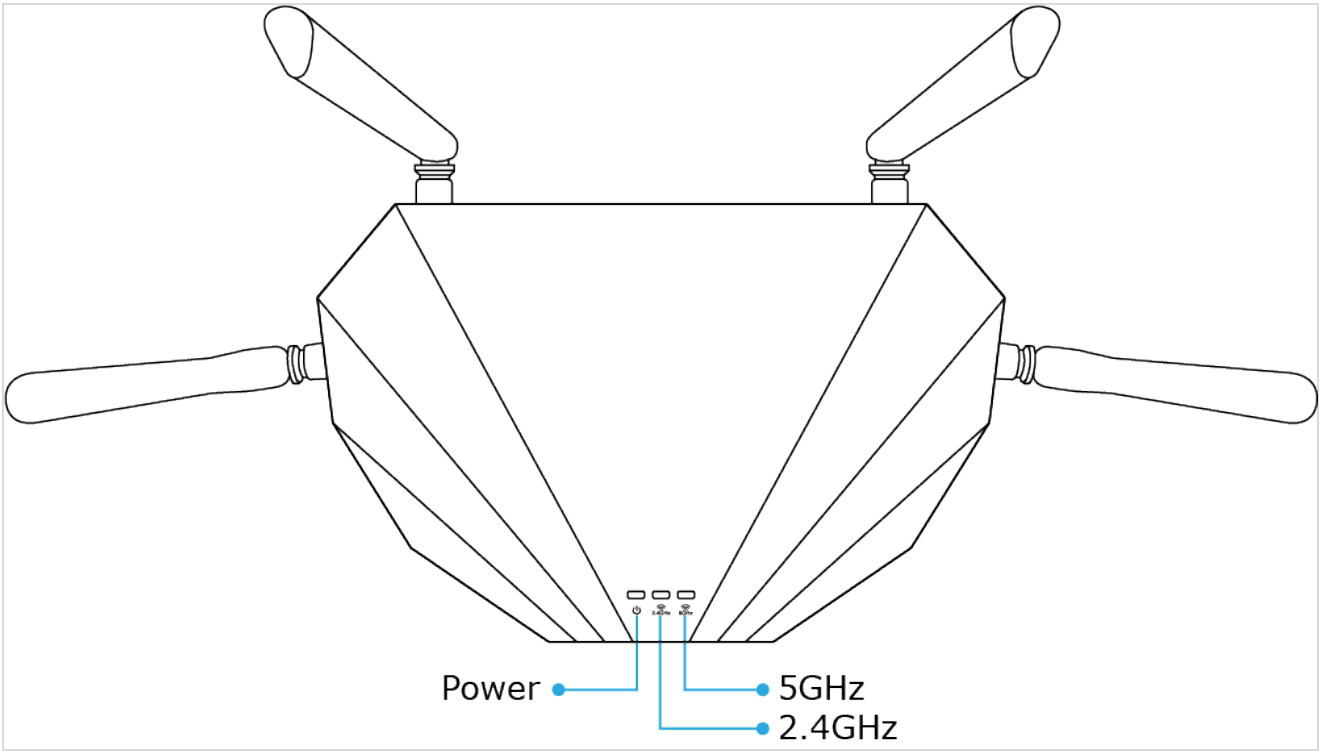


Figure 2-3 WDRT-1800AX Top View

2.1.2 LED Indications

The LEDs on the front panel indicate instant status of port links, wireless data activity and system power, and help monitor and troubleshoot when needed. Figure 2-3 and Table 2-1 show the LED indications of the Wireless Router.

LED	STATE	FUNCTION
PWR	On	Device power on
	Off	Device power off
2.4GHz	On	The 2.4GHz Wi-Fi is activated.
	Flash	Device is transmitting data wirelessly over 2.4GHz.
	Off	The 2.4GHz Wi-Fi is disabled.
5GHz	On	The 5GHz Wi-Fi is activated.
	Flash	Device is transmitting data wirelessly over 5GHz.
	Off	The 5GHz Wi-Fi is disabled.

Table 2-1 LED Indications

2.1.3 Rear Panel

The rear panel provides the physical connectors connected to the power adapter and any other network device. Figure 2-4 shows the rear panel of the WDRT-1800AX.

Rear Panel

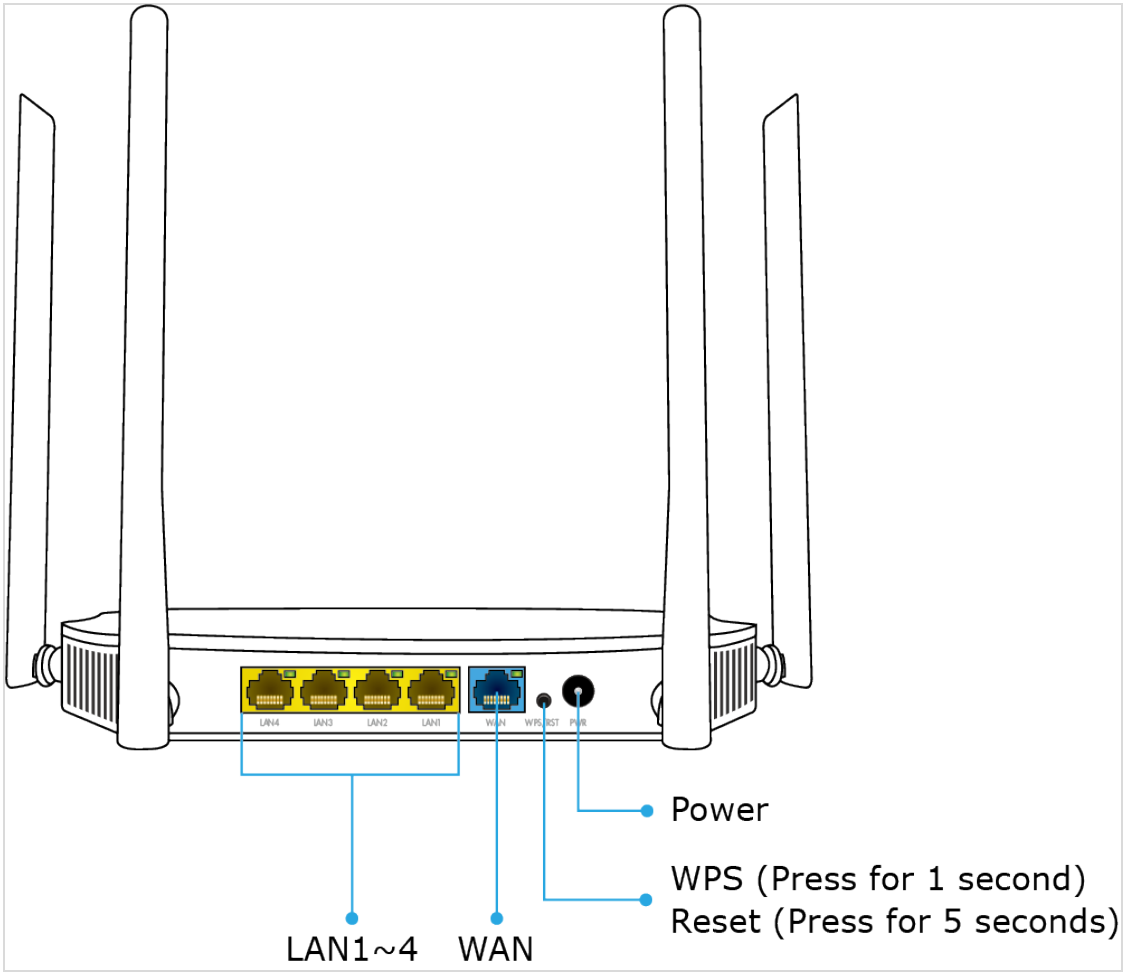


Figure 2-4 Rear Panel of the WDRT-1800AX

Interface	Description
WPS/Reset	■ Press for 1 second to enable or disable WLAN function; press over 5 seconds to enable WPS function ■ Press over 5 seconds and then the system restores to the factory default settings
LAN1-4	Connect to the user's PC or network devices
WAN	Connect to the Cable/xDSL Modem or the Ethernet
Power	Connect to the power adapter provided in the package

Table 2-2 Interface Indications

Chapter 3. Connecting to the Router

System Requirements

- Broadband Internet Access Service (Cable/xDSL/Ethernet connection)
- One Cable/xDSL Modem that has an RJ45 connector (not necessary if the Router is connected directly to the Ethernet.)
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ45 connectors
- PC subscribers use Windows XP, Windows Vista, Windows 7/8/10, MAC OS 9 or later, or Linux, UNIX or other platforms compatible with **TCP/IP** protocols
- The above PC is installed with a Web browser

Note

1. The Router in the following instructions refers to PLANET WDRT-1800AX.
2. It is recommended to use Internet Explorer 7.0 or above to access the Router.

Installing the Router

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

Step 1. Power off your PC, Cable/xDSL Modem and the Router.

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

Step 3. Connect the PC or Switch/Hub in your LAN to the LAN Ports of the Router with Ethernet cable, shown in Figure 3-1.

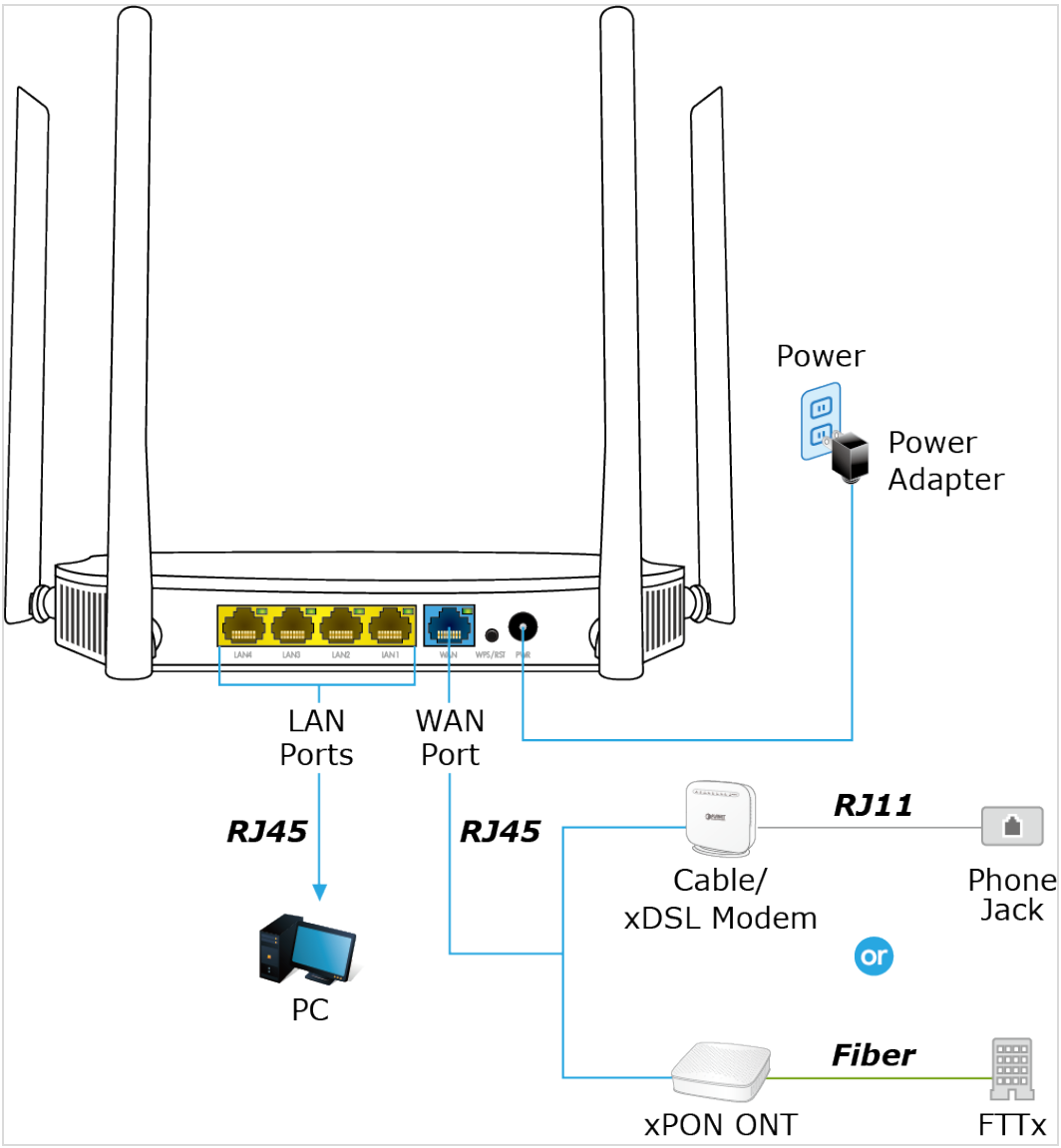


Figure 3-1 Hardware Installation of the WDRT-1800AX Wireless Router

Step 4. Connect the power adapter to the power socket on the Router, and the other end into an electrical outlet. Then power on the Router.

Step 5. Power on your PC and Cable/xDSL Modem.

Chapter 4. Quick Installation Guide

This chapter will show you how to configure the basic functions of your Wireless Router using **Quick Setup** within minutes.

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

Manual Network Setup - TCP/IP Configuration

The default IP address of the Wireless Router is **192.168.1.1** and the default Subnet Mask is **255.255.255.0**. These values can be changed as you desire in the web UI of the Wireless Router. In this section, we use all the default values for description.

Whether the Wireless Router is configured via wired or wireless connection, the PC needs to be assigned an IP address first. Before you connect the local PC to the Wireless Router via wired or wireless connection, please configure the IP address for your PC in the following two ways first.

- **Obtaining an IP address automatically**
- **Configuring the IP address manually**

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's manual if needed.

4.1.1 Obtaining an IP Address Automatically

Summary:

1. Set up the TCP/IP Protocol in "**Obtain an IP address automatically**" mode on your PC.
2. Then the Wireless Router built-in DHCP server will assign IP address to the PC automatically.

If you are sure the DHCP server of Wireless Router is enabled, you can set up the TCP/IP Protocol in "**Obtain an IP address automatically**" mode on your PC. And then the Wireless Router built-in DHCP server will assign an IP address to the PC automatically.

1. Installing TCP/IP Component

1) On the Windows taskbar, click the **Start** button, point to **Control Panel,** and then click it.

2) Under the **Network and Internet** icon, click on the **View network status and tasks.** And then click **Change adapter settings**.

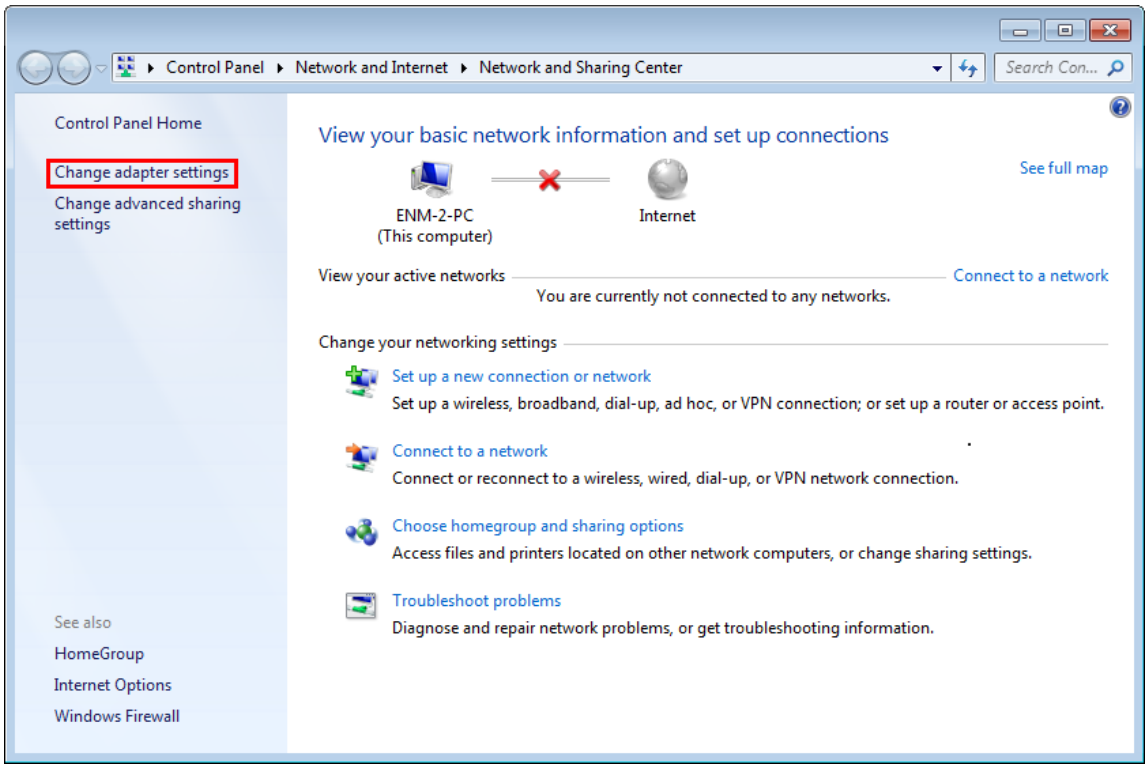


Figure 4-1 Change Adapter Settings

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

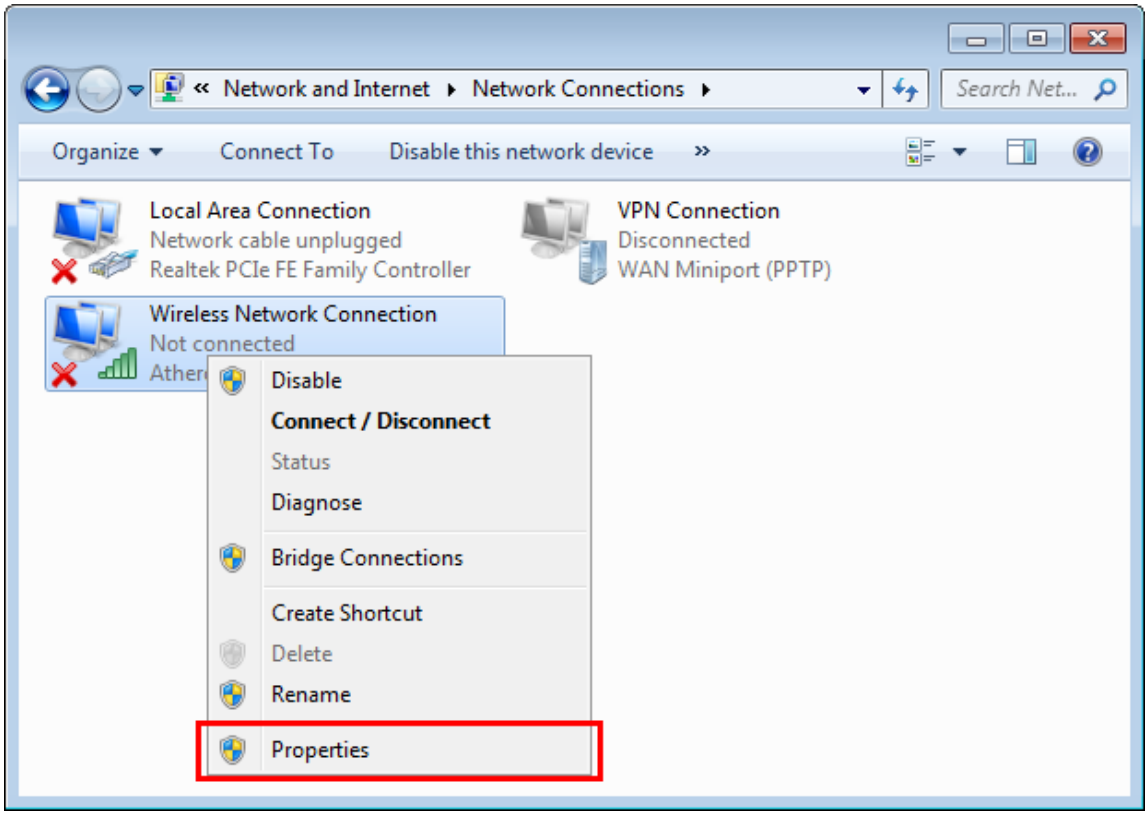


Figure 4-2 Network Connection Properties

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

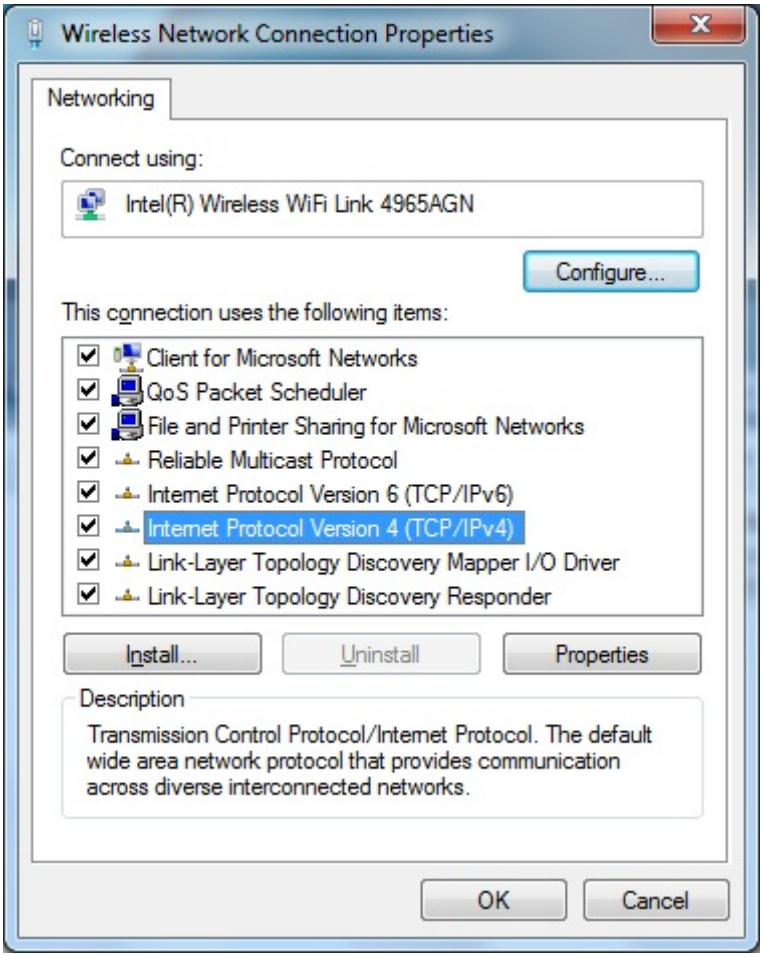


Figure 4-3 TCP/IP Setting

5) Choose **Obtain an IP address automatically**, and **Obtain DNS server address automatically** as shown in the figure below. Then click **OK** to save your settings.

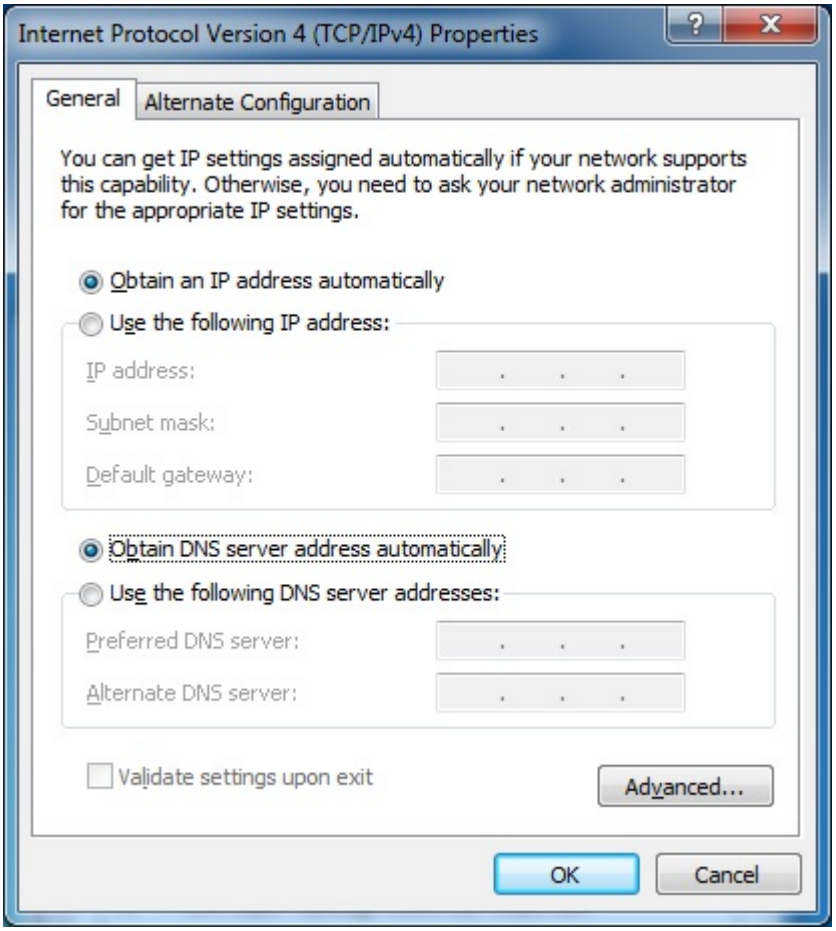


Figure 4-4 Obtain an IP Address Automatically

4.1.2 Configuring the IP Address Manually

Summary:

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

If you are sure the DHCP server of Wireless Router is disabled, you can configure the IP address manually. The IP address of your PC should be 192.168.1.xxx (the same subnet of the IP address of the Wireless Router, and "xxx" is any number from 2 to 254), Subnet Mask is 255.255.255.0, and the Gateway is 192.168.1.1 (The default IP address of the Wireless Router)

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

2) If the LAN IP address of the Wireless Router is 192.168.1.1, enter IP address 192.168.1.x (x is from 2 to 254), and Subnet mask 255.255.255.0.

3) Enter the LAN IP address of the Wireless Router (the default IP is 192.168.1.1) into the default gateway field.

4) Select **Use the following DNS server addresses** radio button. In the preferred DNS Server field, you can enter the DNS server IP address provided by your local ISP. Then click OK to save your settings.

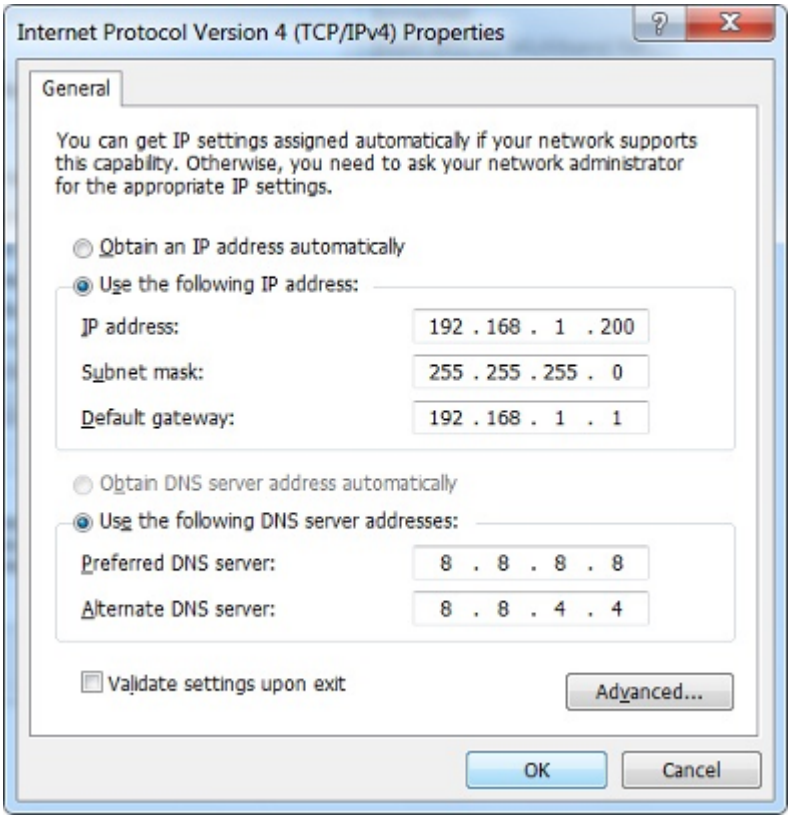


Figure 4-5 IP and DNS Server Addresses

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

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

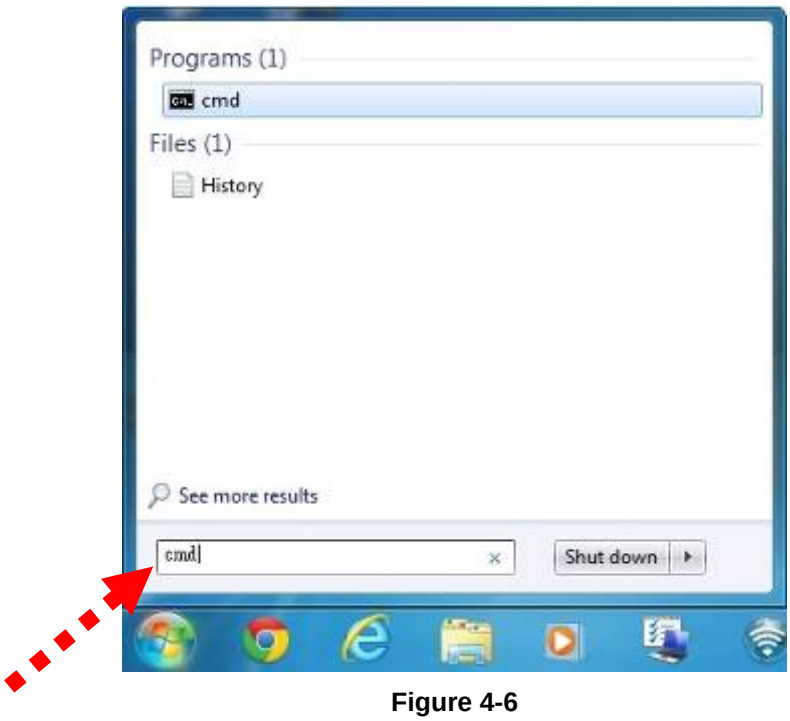


Figure 4-6

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

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

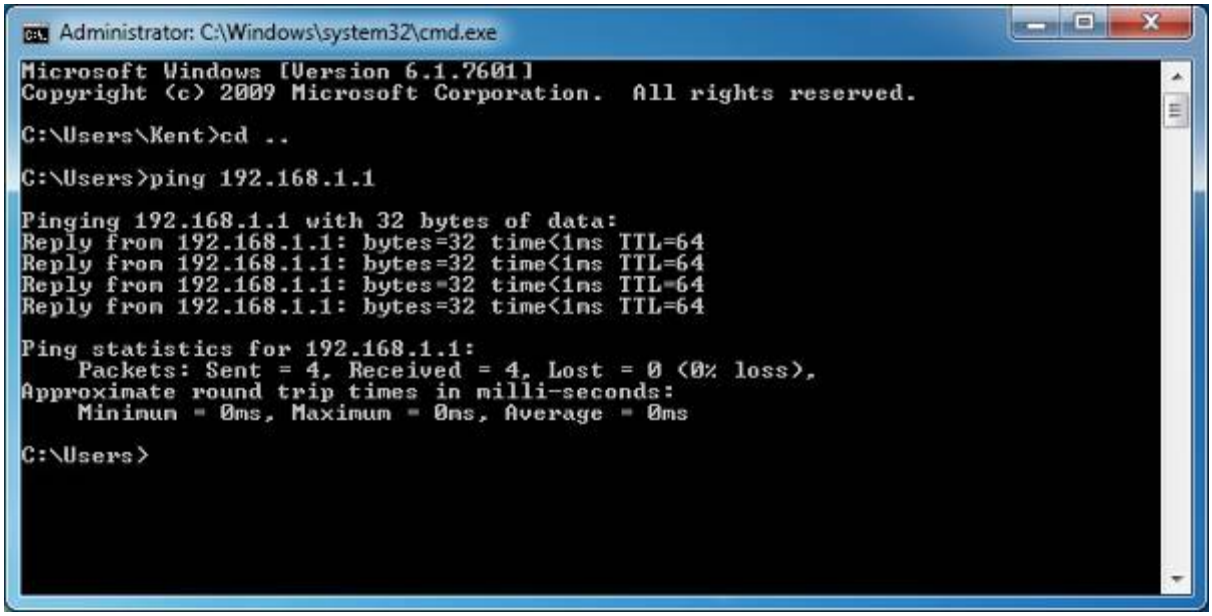


Figure 4-7 Successful Ping Command

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

Figure 4-8 Failed Ping Command

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

If the Router's IP address is 192.168.1.1, your PC's IP address must be within the range of 192.168.1.2 ~ 192.168.1.254.

Starting Setup in the Web UI

It is easy to configure and manage the WDRT-1800AX with the web browser.

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

Figure 4-9 Login the Router

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

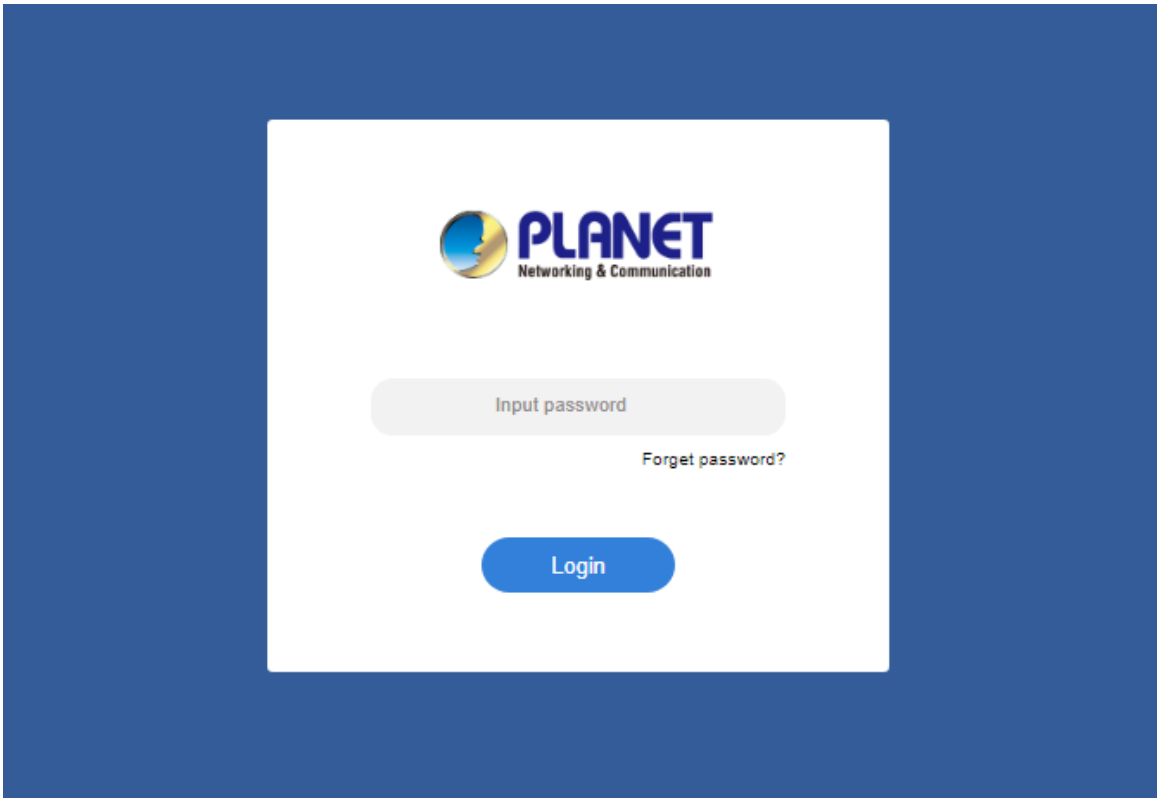


Figure 4-10 Login Window

Default IP Address: **192.168.1.1**

Default Password: **admin**

Note

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

After entering the password, the **Wizard Setup** page screen appears as shown in Figure 4-11 . You can configure the router by yourself, and the default WAN setting is "**Dynamic**".

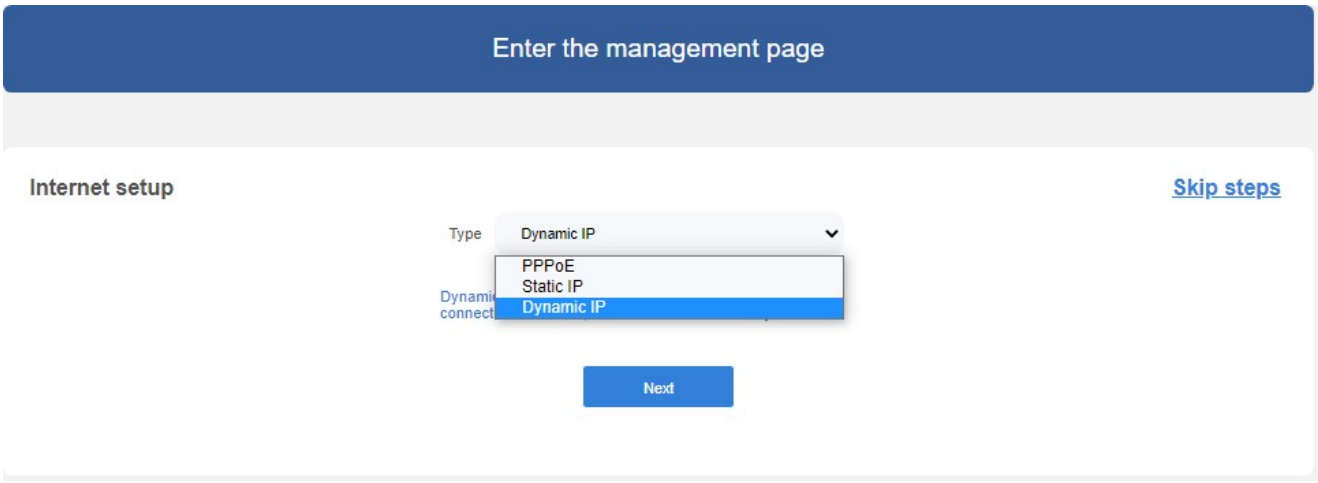


Figure 4-11 Configure the WAN setting.

Step 2. Choose "**Next**" and please enter the **Wi-Fi Password**. Then click **Next** button.

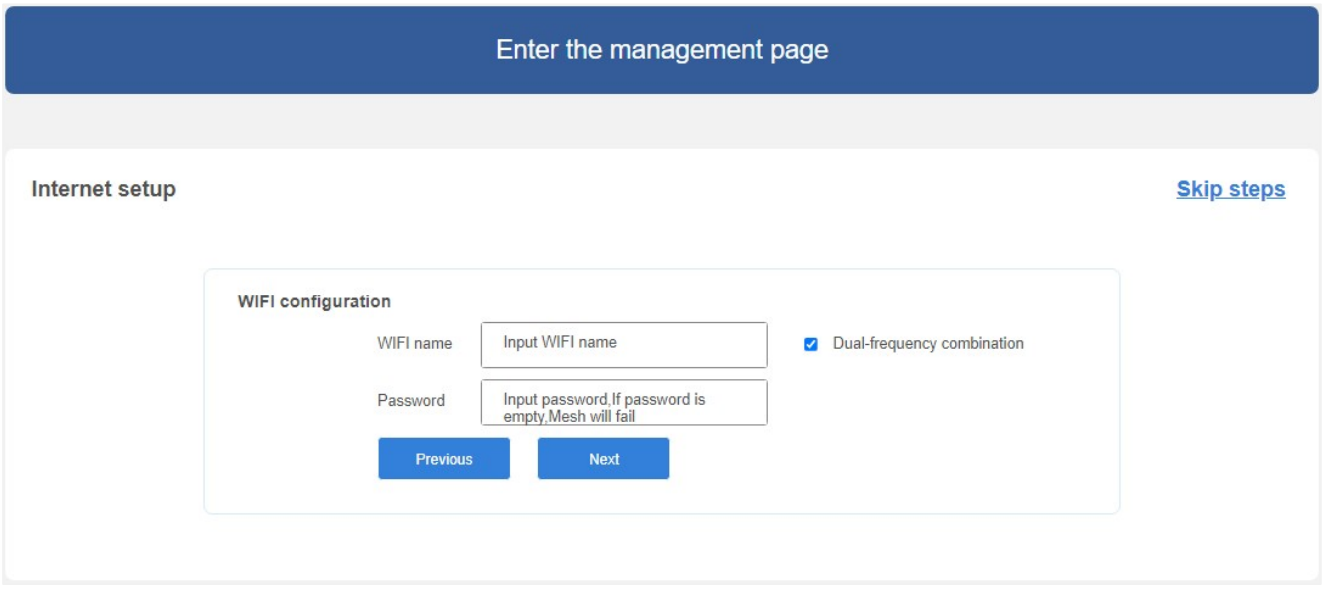


Figure 4-12 Wi-Fi Settings

Step 3. Please enter the **Device new Password**. Then click the **Confirm** button.

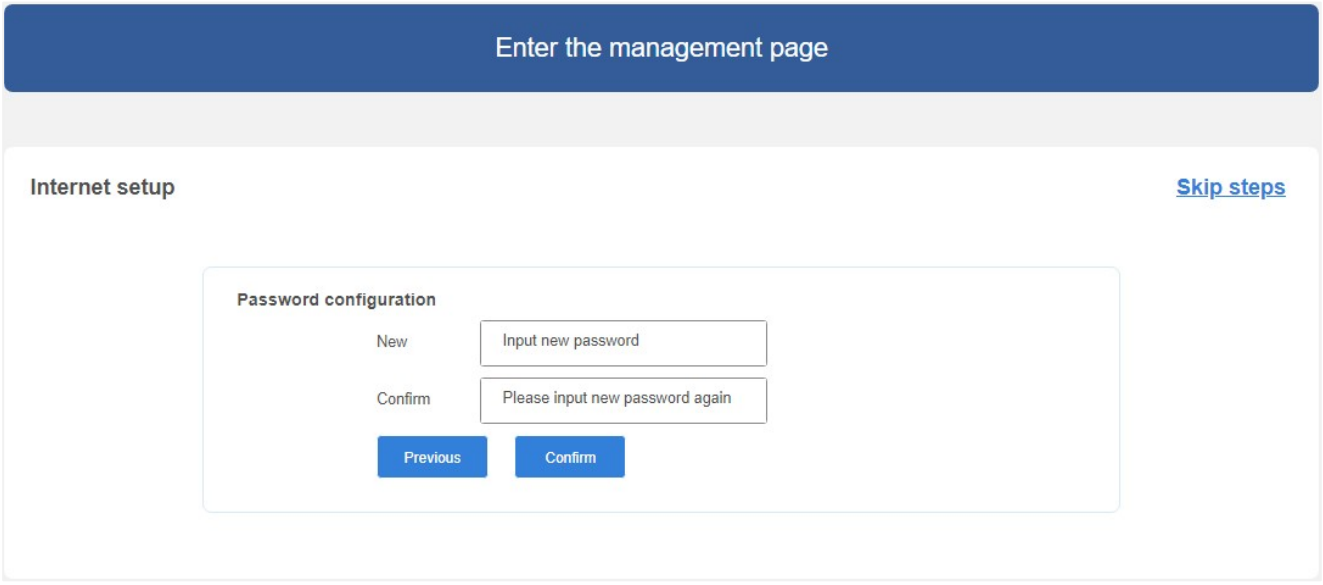


Figure 4-14 Device Password configuration

Step 4. Click the **"Enter the management page"** button to enter the main interface of the Wi-Fi router to further set up the W-Fi router.

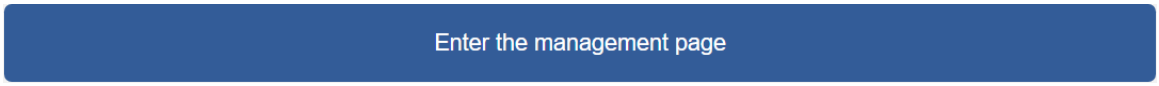


Figure 4-15 Step 4. Enter the management page

Chapter 5. Configuring the Router

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

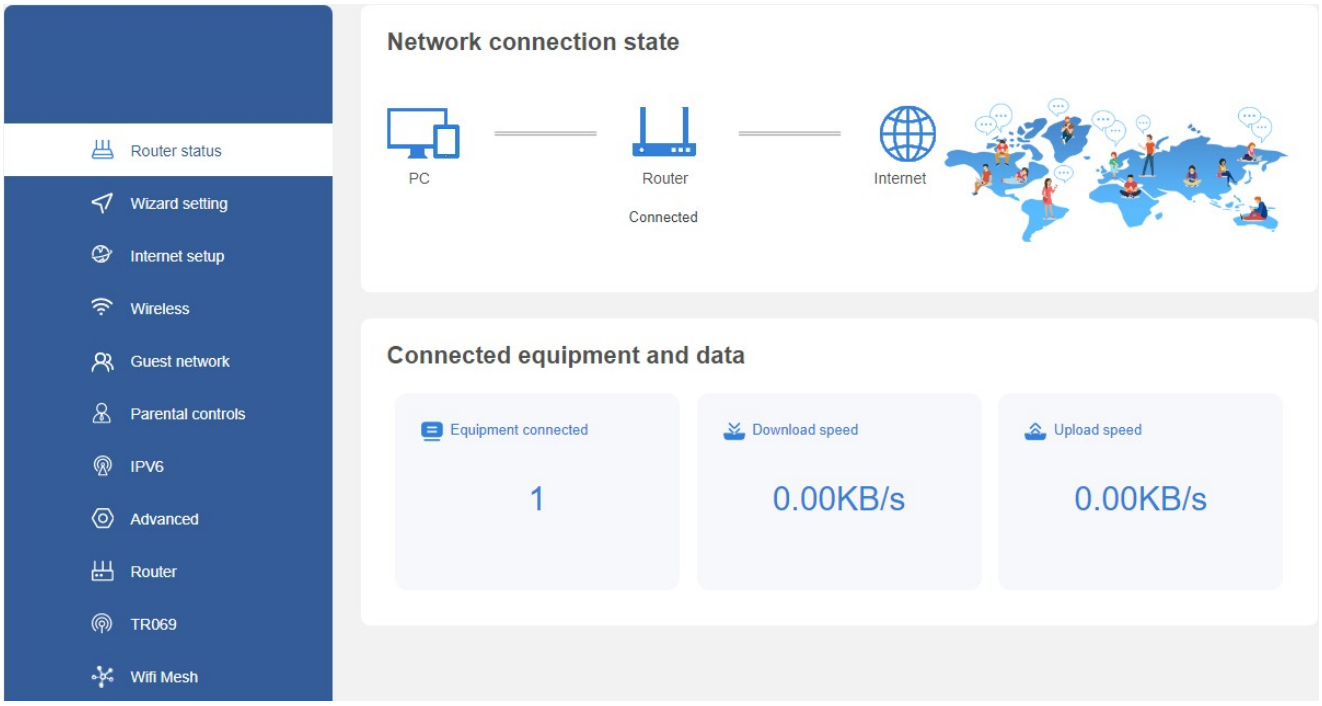


Figure 5-1 Router's Functions

Router status

On this page, you can view information about the Internet status and connection state of the WDRT-1800AX, including Network Status, Equipment connected, Download or Upload speed.

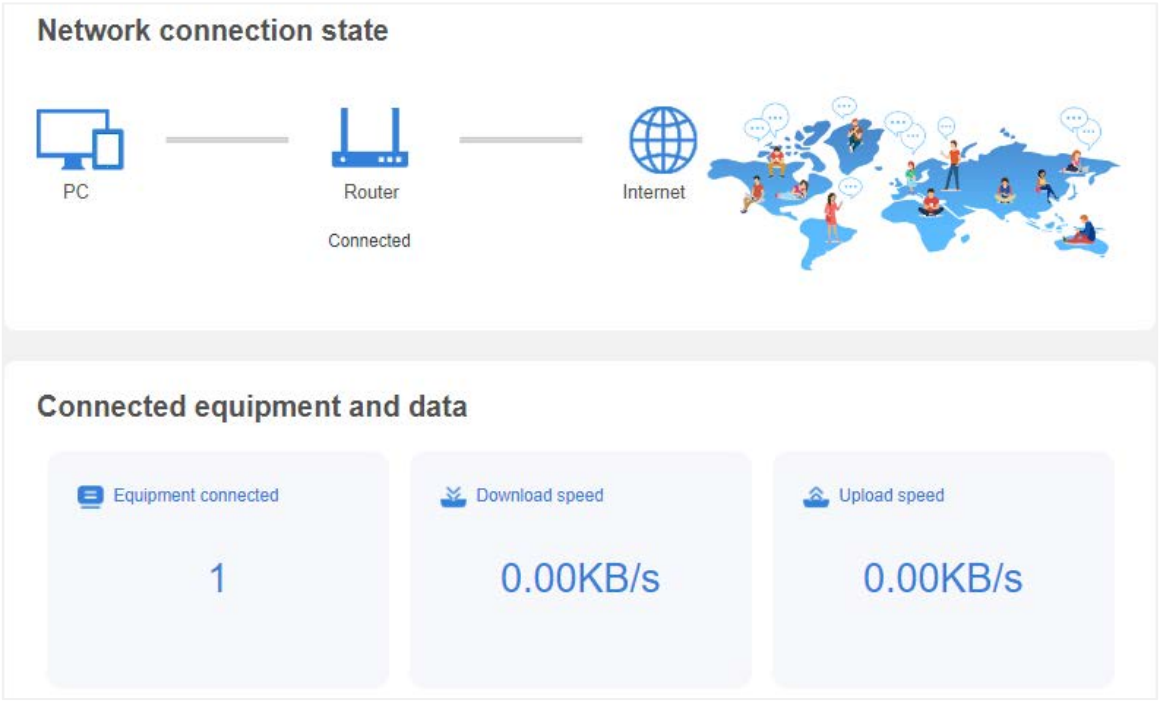


Figure 5-2 Network connection state

Wizard setting

When the device that has just been shipped from the factory enters the web management, you can go to the Wizard setting on the management page.

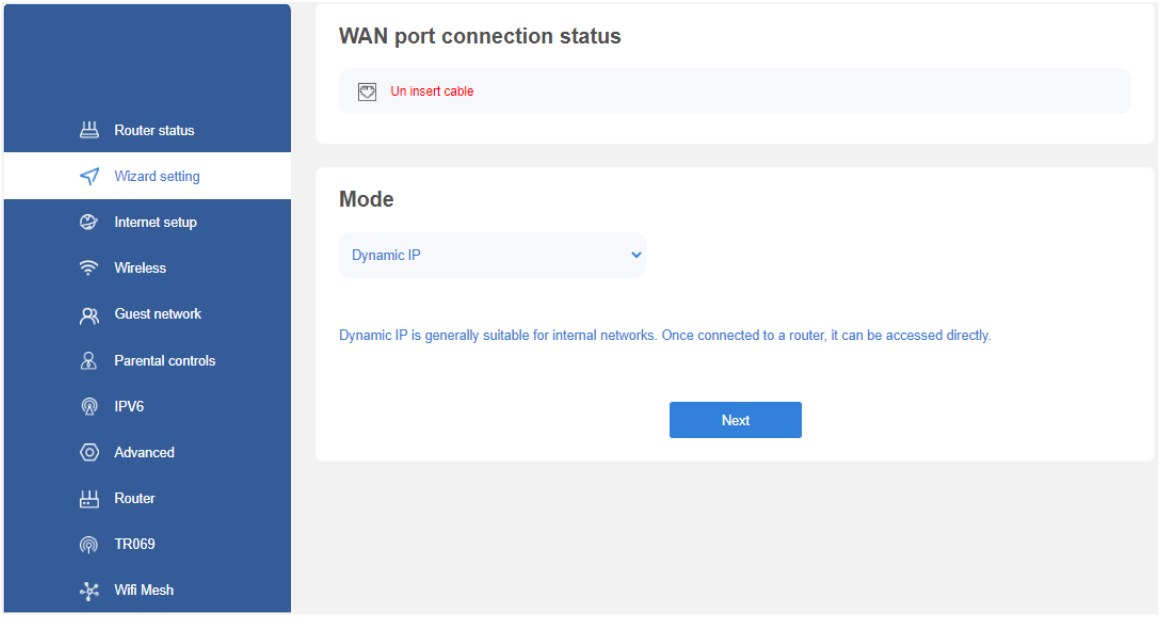


Figure 5-3 Wizard setting

If you have installed PPP software such as WinPoET (from Earthlink) or Enternet (from PacBell), then you have PPPoE. Select Yes. After selecting Yes and configuring your router, you will not need to run the PPP software on your PC to connect to the Internet.

5.1.1 WAN port connection status

If there is a WAN port connected, it will show **"Inserted cable**", otherwise will be "**Un insert cable**".

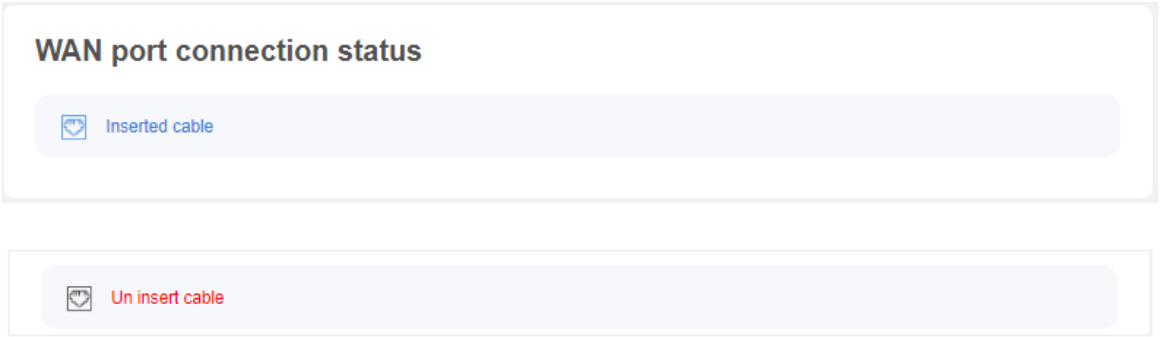


Figure 5-4 Connection status

5.1.2 Mode

In this part, you can check your current Internet connection settings. You can also modify the settings according to the service information provided by your ISP.

■ Dynamic

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

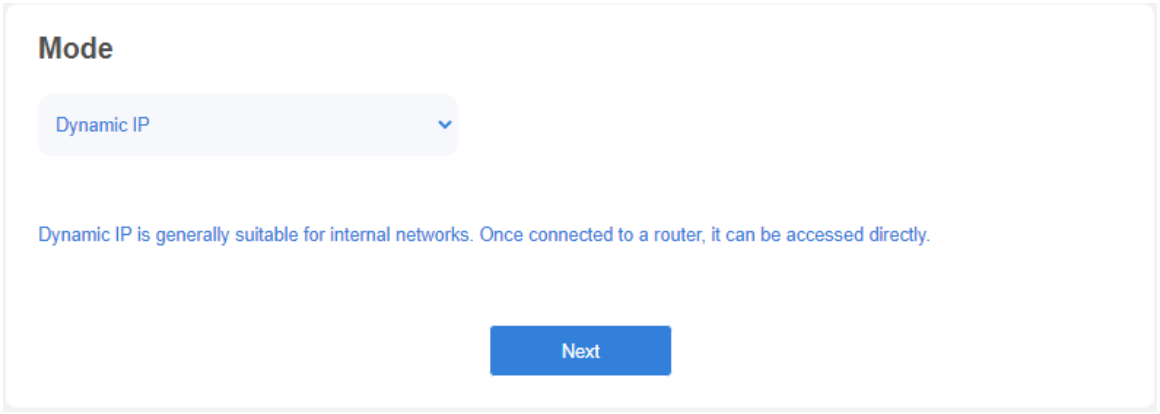


Figure 5-5 Dynamic IP

■ Static IP

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

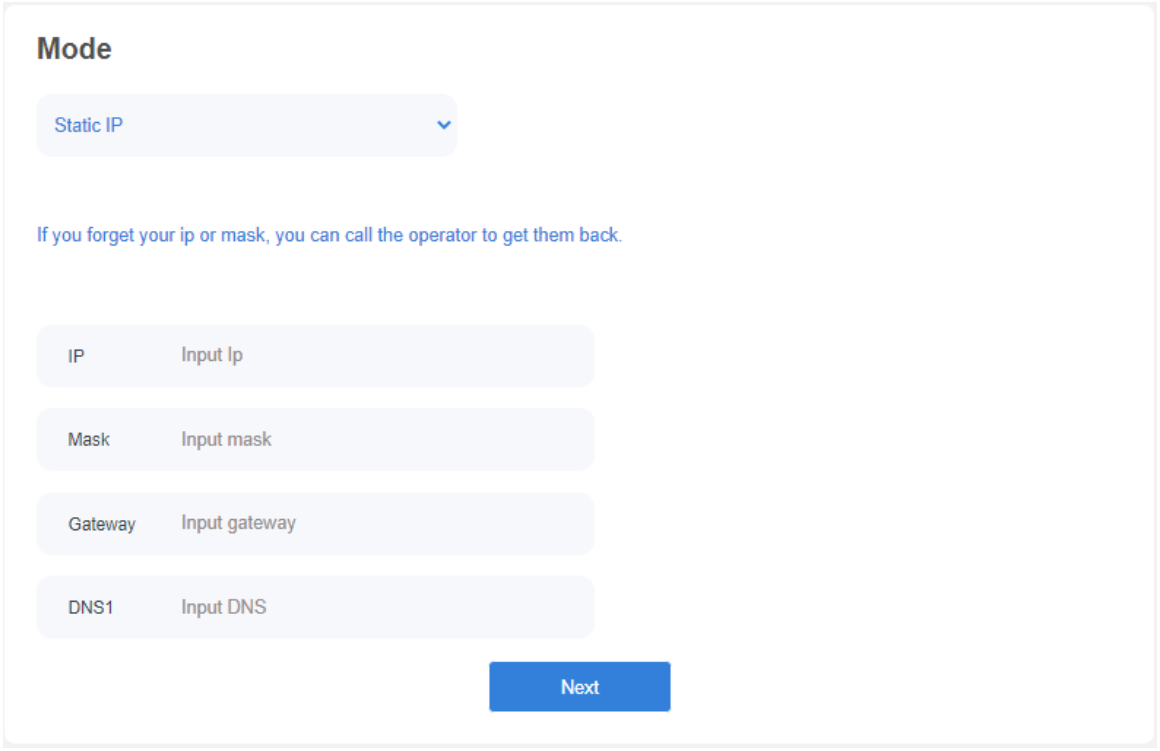


Figure 5-6 Static IP

Object	Description
IP Address	Enter the WAN IP address provided by your ISP. Inquire your ISP if you are not clear.
Subnet Mask	Enter WAN Subnet Mask provided by your ISP.
Gateway	Enter the WAN Gateway address provided by your ISP.
DNS1	Enter the necessary DNS address provided by your ISP.

■ PPPoE

Select **PPPoE**, if your ISP is using a PPPoE connection and provides you with PPPoE user name and password information.

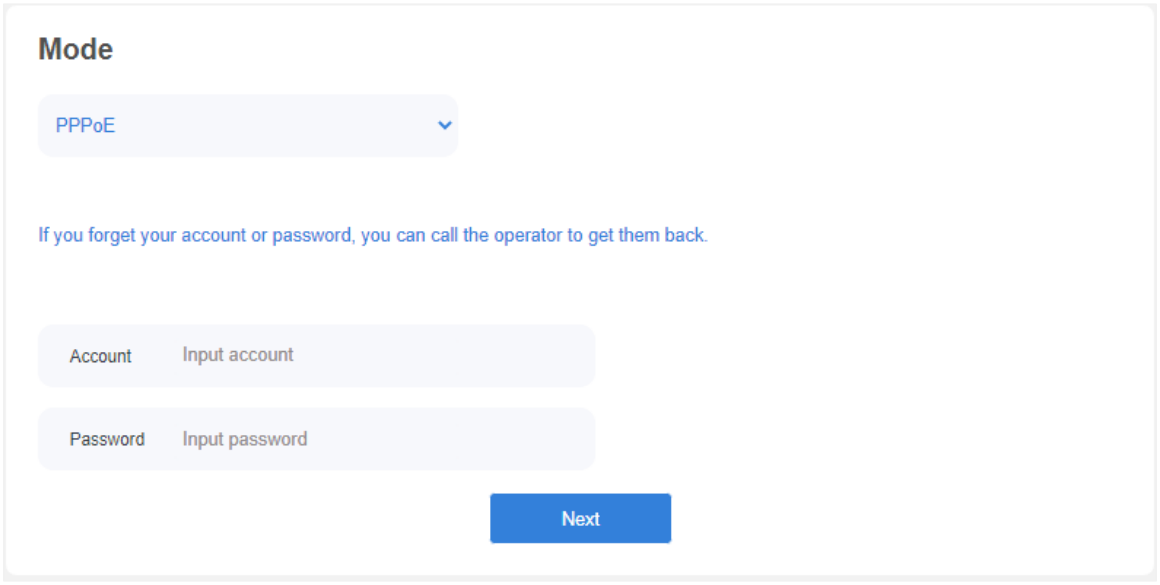
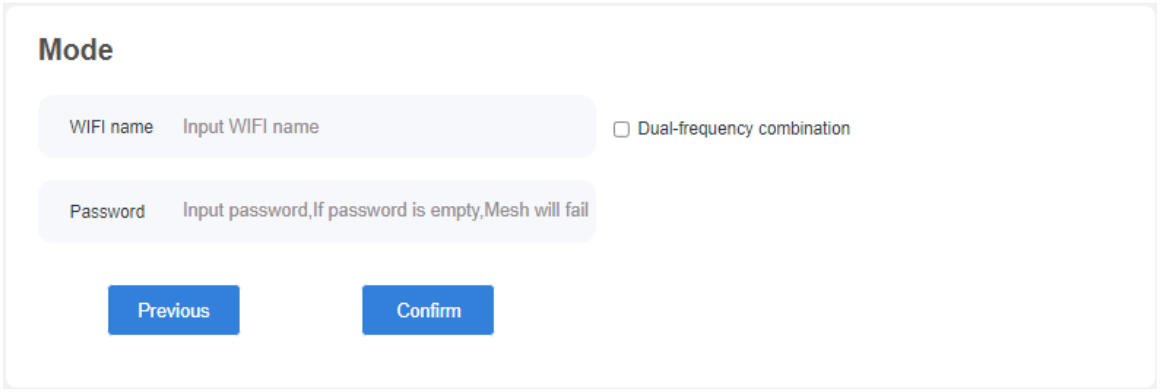


Figure 5-7 PPPoE

Object	Description
Account	Enter the account provided by your ISP.
Password	Enter the password provided by your ISP.

Select Wi-Fi name, and fill out the password.



Click **Enable** to check your Internet connection, and click Router status on the right of the page. After the connection succeeds, the screen will display as follows. Here we take Dynamic IP as an example.

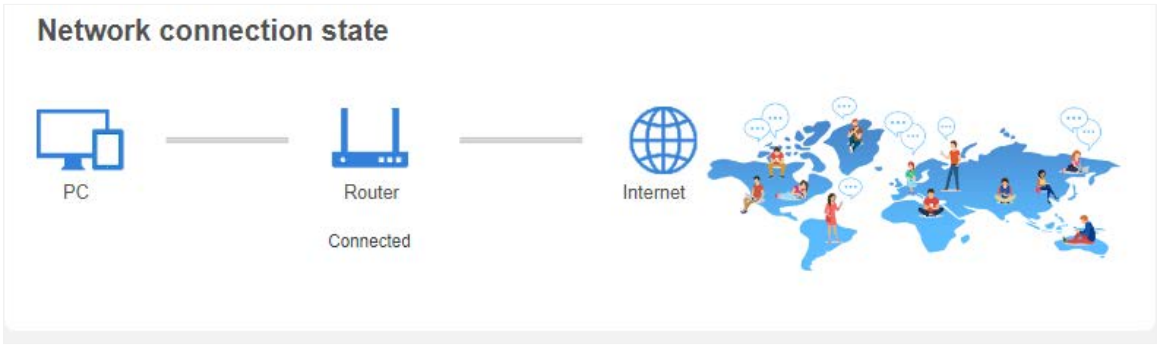
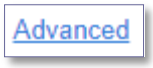


Figure 5-8 PPPoE

Internet setup

5.1.3 Advanced

Please follow the instructions on the **5.2.2 Mode** to continue the configuration. Press the 

button for advanced settings.

1) If **Dynamic IP** is chosen, you need to select whether to clone the MAC address. Dynamic IP users are usually equipped with a cable TV or fiber cable.

Figure 5-9 Advanced Dynamic IP

Object	Description
DNS1	Enter the necessary DNS address provided by your ISP.
DNS2	Enter the secondary DNS address provided by your ISP
MTU	Maximum Transmission Unit. Default is 1500
MAC clone	Enable to clone the MAC address

2) If **Static IP**is chosen, enter the information provided by your ISP in the corresponding fields.

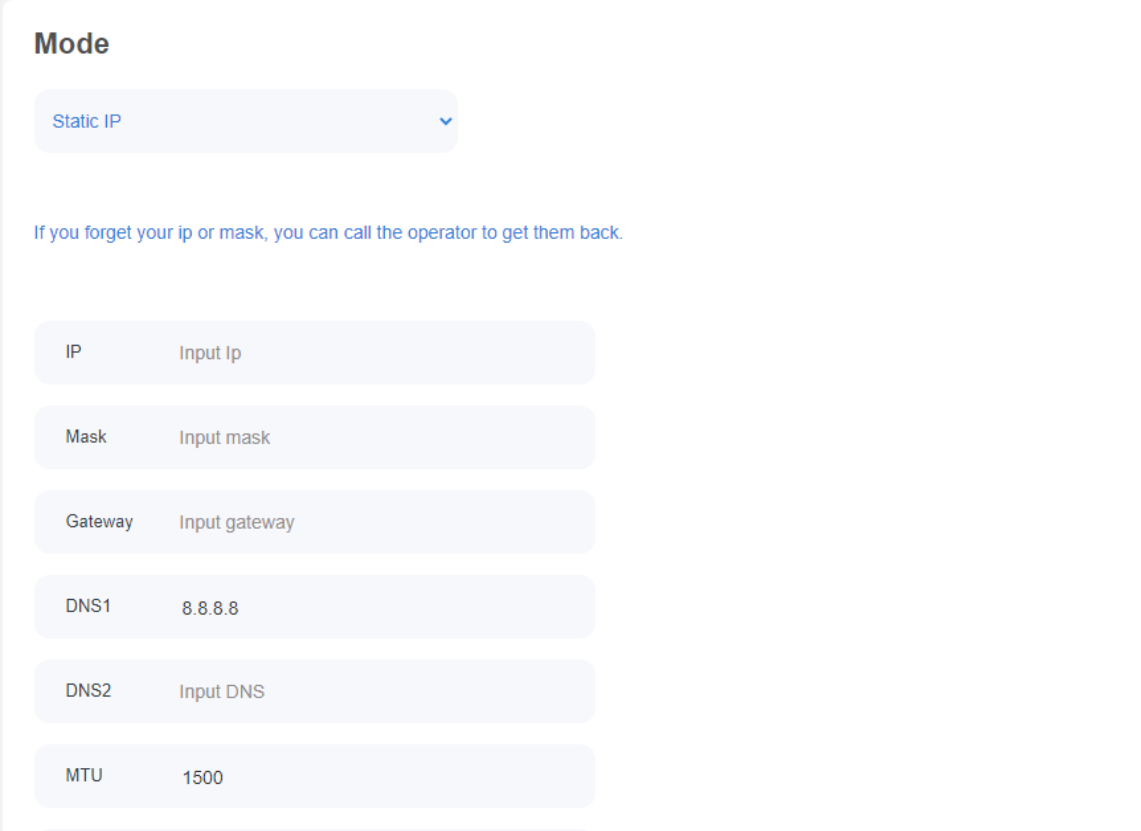


Figure 5-10 Advanced Static IP

Object	Description
IP Address	Enter the WAN IP address provided by your ISP. Inquire your ISP if you are not clear.
Subnet Mask	Enter WAN Subnet Mask provided by your ISP.
Gateway	Enter the WAN Gateway address provided by your ISP.
DNS1	Enter the necessary DNS address provided by your ISP.
DNS2	Enter the secondary DNS address provided by your ISP
MTU	Maximum Transmission Unit. Default is 1500

3) If **PPPoE** is chosen, enter the username and password provided by your ISP.

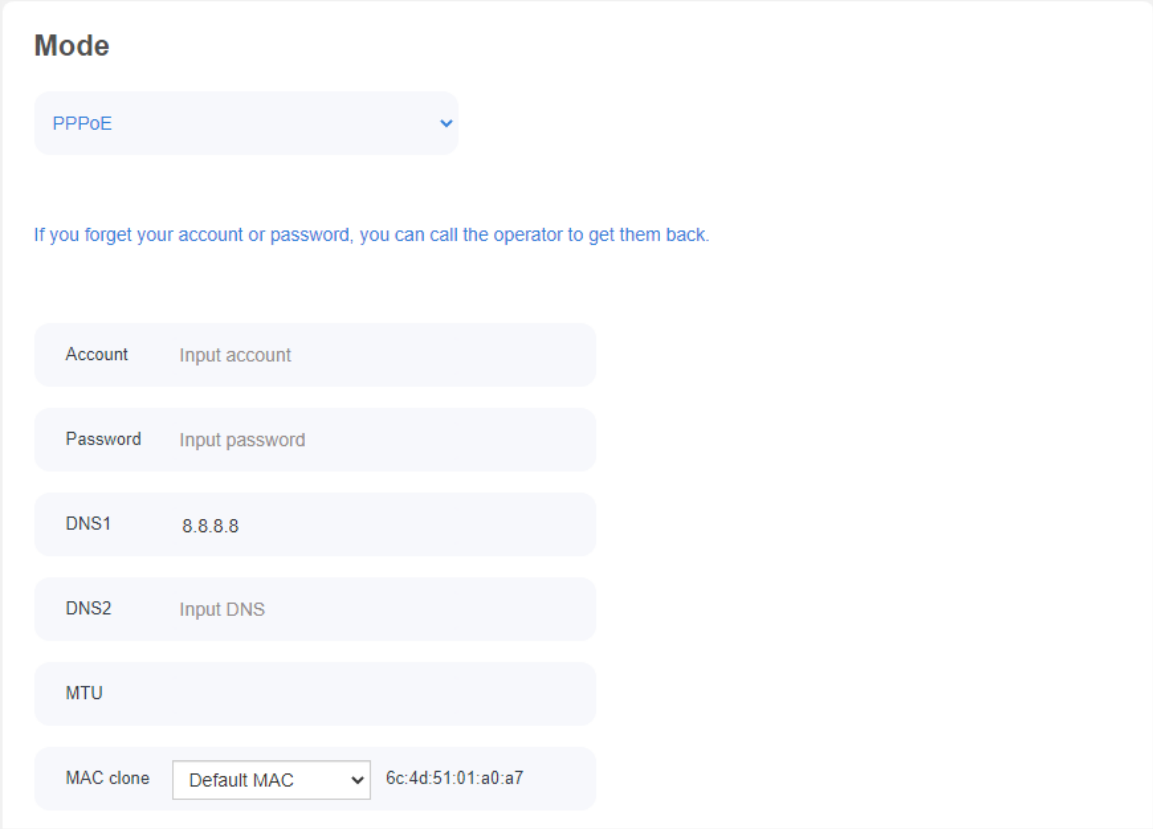


Figure 5-11 Advanced PPPoE

Object	Description
Account	Enter the account provided by your ISP.
Password	Enter the password provided by your ISP.
DNS1	Enter the necessary DNS address provided by your ISP. Default is 8.8.8.8
DNS2	Enter the secondary DNS address provided by your ISP
MTU	Maximum Transmission Unit. Default is 1500
MAC clone	Enable to clone the MAC address

Wireless

Input router web main interface, click **Wireless→2G WIFI name and password** or **5G WIFI name and password**, and then we can view WIFI mode, Channel and Bandwidth, etc.

5.1.4 2.4G WIFI name and password

Click Wireless→2G WIFI name and password, and then config wireless as shown in the following parameter:

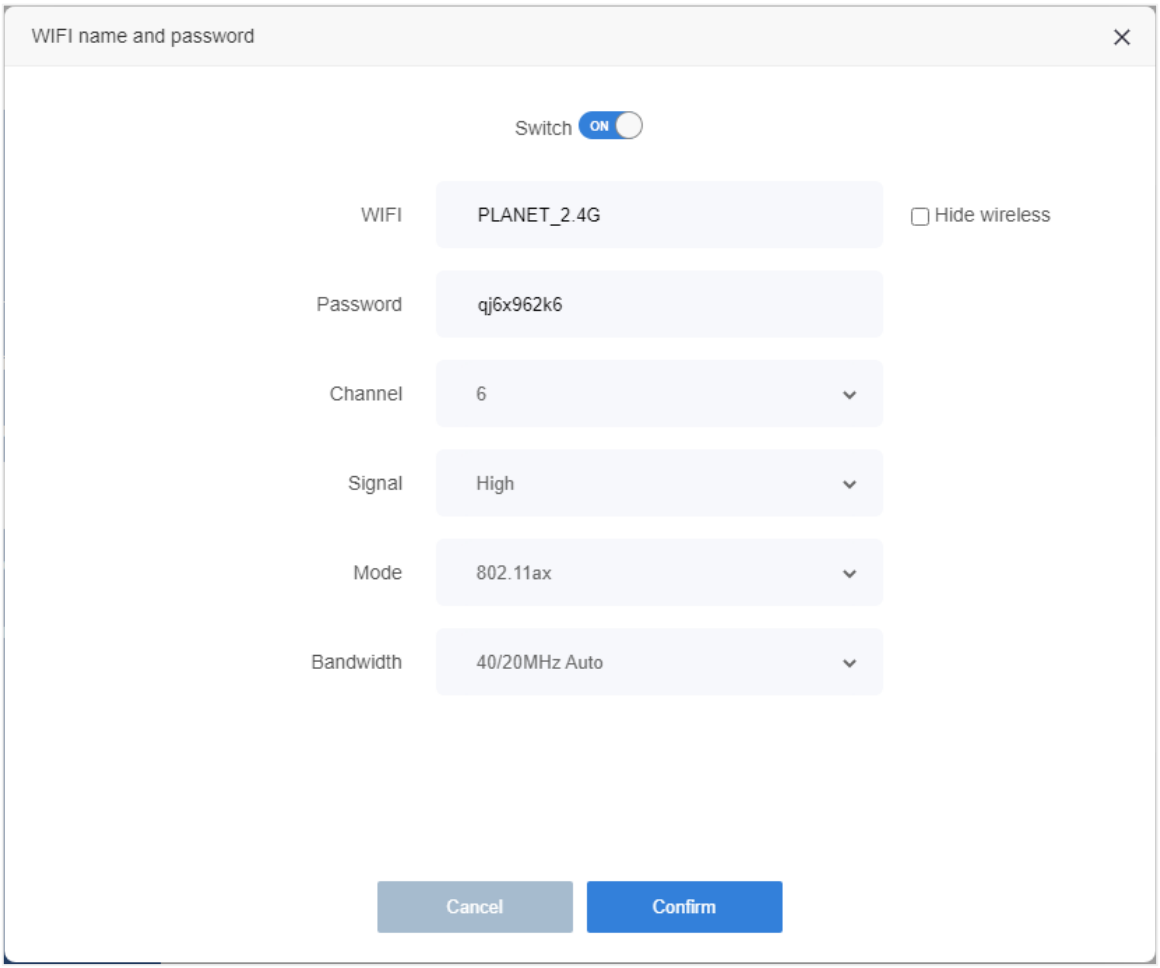


Figure 5-12 2.4G Wi-Fi name and password

Object	Description
Switch	Click the button next to switch to switch on and off the Wi-Fi.
Wi-Fi Name (SSID)	Set a name (SSID) for your wireless network. The ID of the wireless network. User can access the wireless network through it only. However, if you switch to Client Mode, this field becomes the SSID of the AP you want to connect with. Default: **PLANET_2.4G**
Password	Enter the Wi-Fi password Default: **qj6x962k6**
Channel	For optimal wireless performance, you may select the least interferential channel. It is advisable that you select the best possible channel for your wireless network to operate on from the drop-down list.
Signal	There are three signal modes to choose from. Default is **High**.
802.11 Mode	Set the wireless mode to which you need. Default is "**802.11 ax**". It is strongly recommended that you set the Band to "802.11 ax", and all of 802.11b, 802.11g, and 802.11n wireless stations can

	connect to the WDRT-1800AX.
BandWidth	Select a proper channel bandwidth to enhance wireless performance. Default is 40/20MHz Auto

5.1.5 5G Wi-Fi name and password

Click Wireless→5G Wi-Fi name and password, and then config wireless is shown in the following parameter:

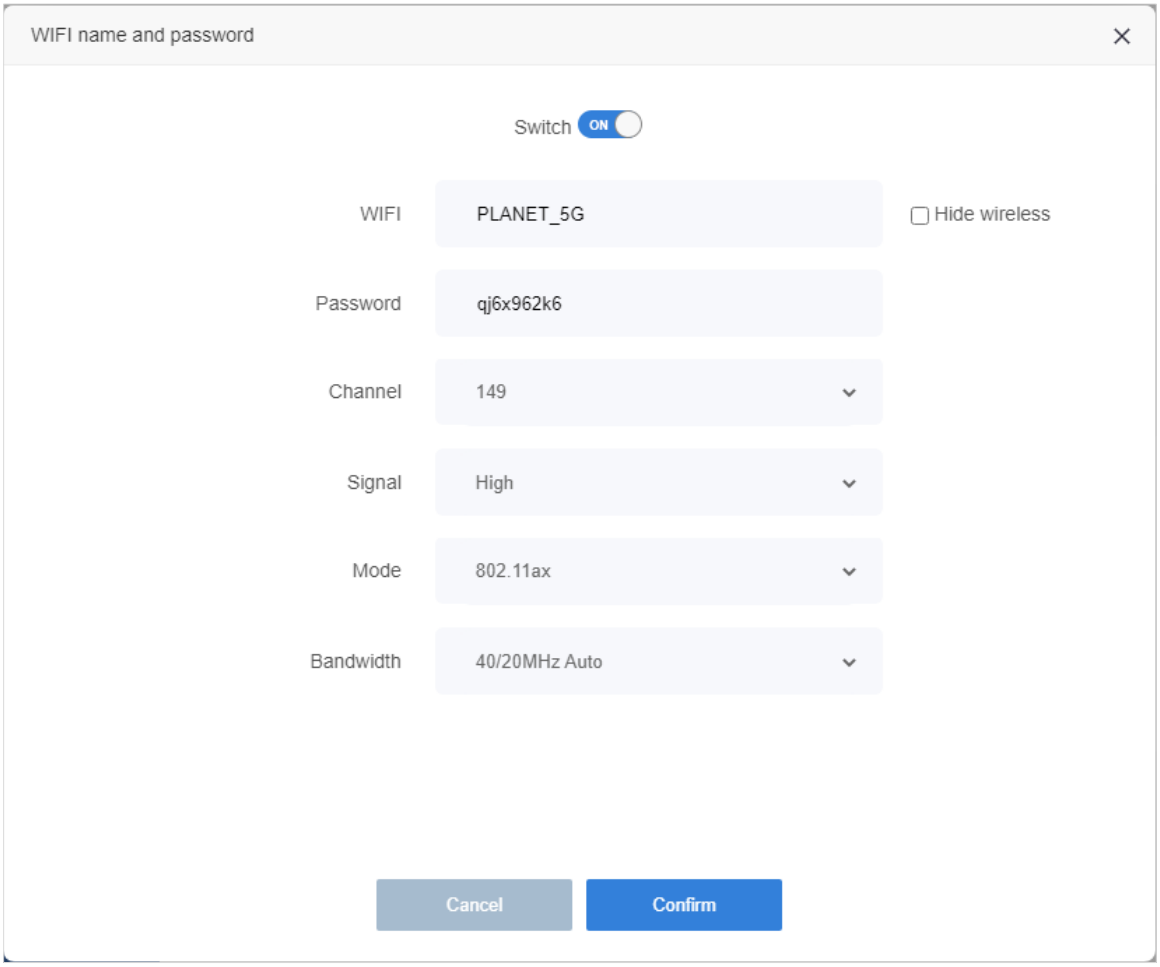


Figure 5-13 5G Wi-Fi name and password

Object	Description
Switch	Click the button next to switch to switch on and off the Wi-Fi.
Wi-Fi Name (SSID)	Set a name (SSID) for your wireless network. The ID of the wireless network. User can access the wireless network through it only. However, if you switch to Client Mode, this field becomes the SSID of the AP you want to connect with. Default: **PLANET_5G**
Password	Enter the Wi-Fi password Default: **qj6x962k6**

Channel	For optimal wireless performance, you may select the least interferential channel. It is advisable that you select the best possible channel for your wireless network to operate on from the drop-down list.
Signal	There are three signal modes to choose from. Default is **High**.
802.11 Mode	Set the wireless mode to which you need. Default is "**802.11 ax**". It is strongly recommended that you set the Band to "802.11 ax", and all of 802.11ac and 802.11n wireless stations can connect to the WDRT-1800AX.
BandWidth	Select a proper channel bandwidth to enhance wireless performance. Default is 40/20MHz Auto

5.1.6 Wireless timing closure

Here you can set the fixed interval time and day of the week for "Wireless timing closure".

For example:

Setting the time of **16:14 to 16:15** will turn off the wireless and repeat it for **all week**. After 16:15, wireless will be back on it.

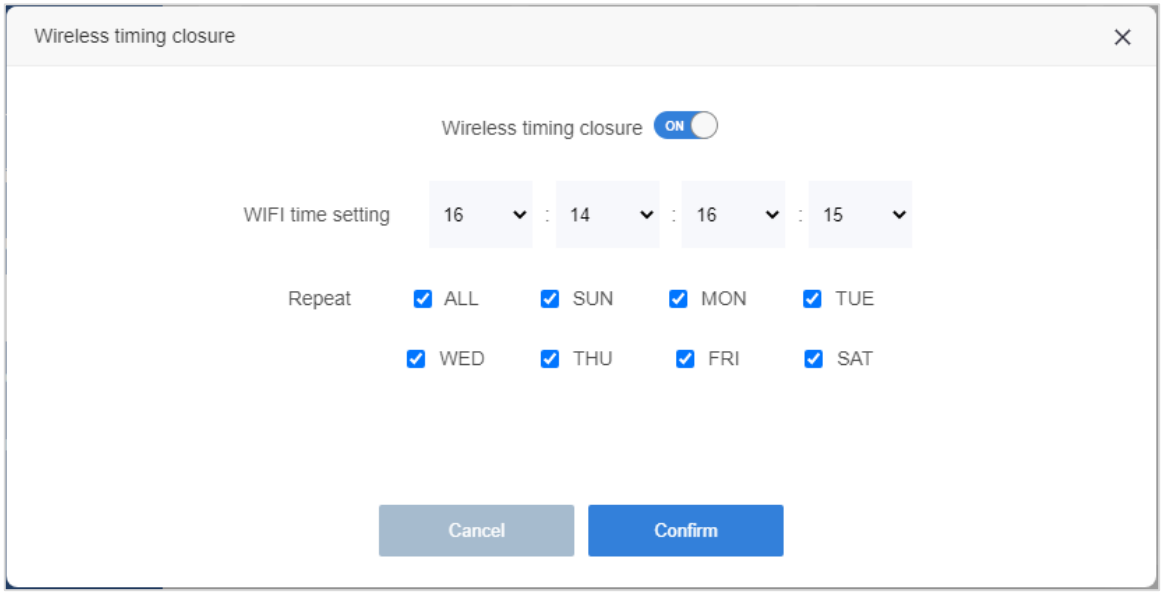


Figure 5-14 Wireless timing closure

Object	Description
Wireless timing closure	Click the button next to switch to control the on and off of Wireless timing closure.
Wi-Fi time setting	Enter the time interval for turning off the wireless.
Repeat	Choose a date for execution.

5.1.7 WISP (Wireless Relay)

Turn on WISP and select the operation mode you need, and then press the "Refresh" button to scan the Wi-Fi that you need to be relayed. After successful, the router will restart. After the router restarts, some functions cannot be used. If you want to use all the functions, please switch to the router mode. Please refer to the FAQs on how to switch to the router mode.

Here're two modes to choose from:

■ WISP

The upper-level router will only display your routing information, and the devices under your router will not display it.

The IP of the connected device is assigned by your router, and the two network segments are different.

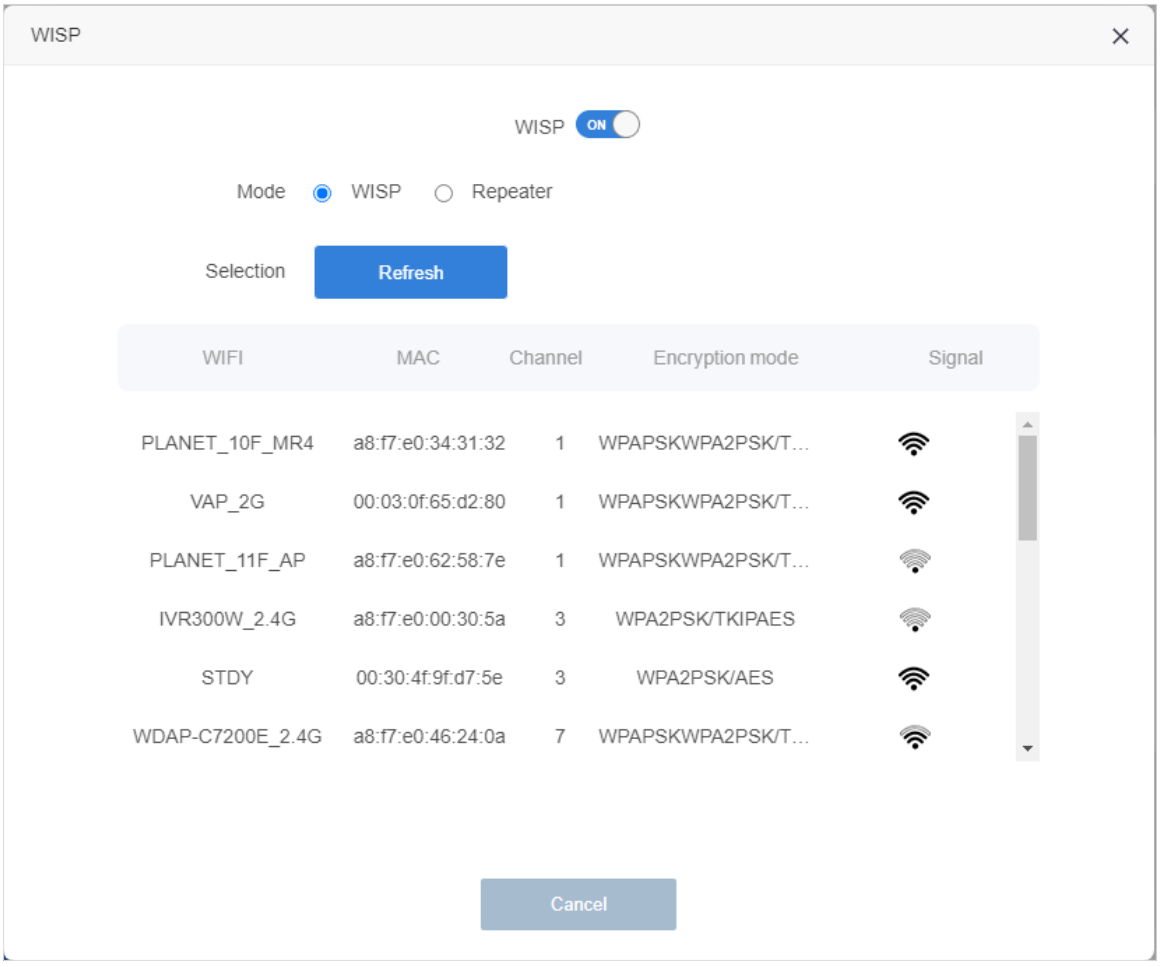


Figure 5-15 WISP

■ Repeater

The upper-level router will not only display your routing information, but also the devices connected to your router will display.

The IP of the connected device is allocated by the other party's router, and the network segment is the same.

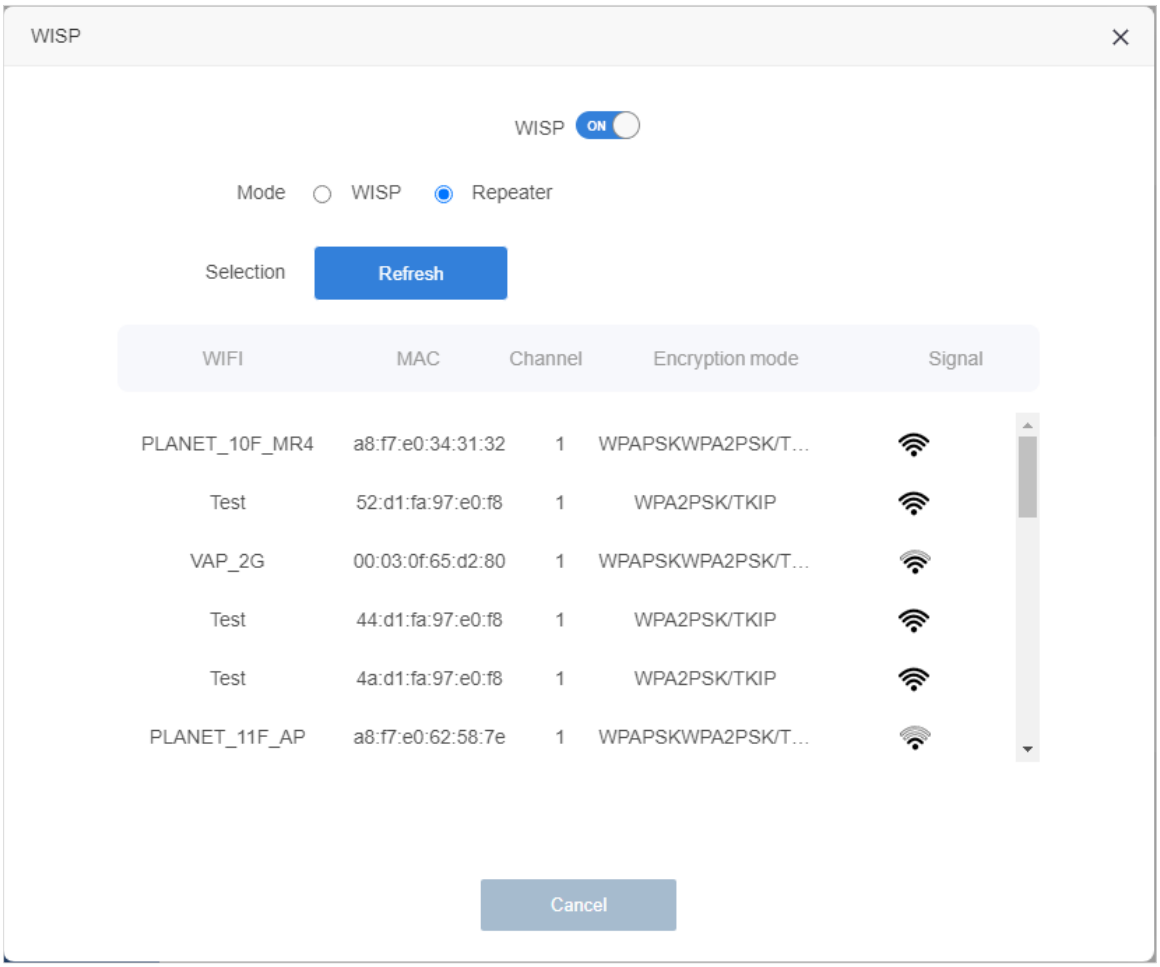


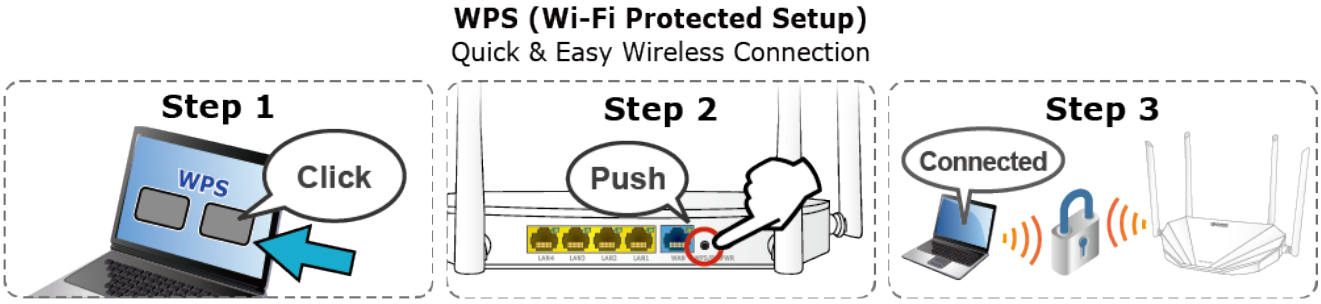
Figure 5-16 Repeater

5.1.8 WPS

WPS (Wi-Fi Protected Setup) is designed to ease setup of security Wi-Fi networks and subsequently network management. The WPS enables the PC with WPS function to connect to the wireless network of the AP without setting any parameters, such as SSID, security mode, or password.

1) Choose Connect WPS on your device.

2) Click the WPS button ”PBC” on the web management or HW button on the rear panel.



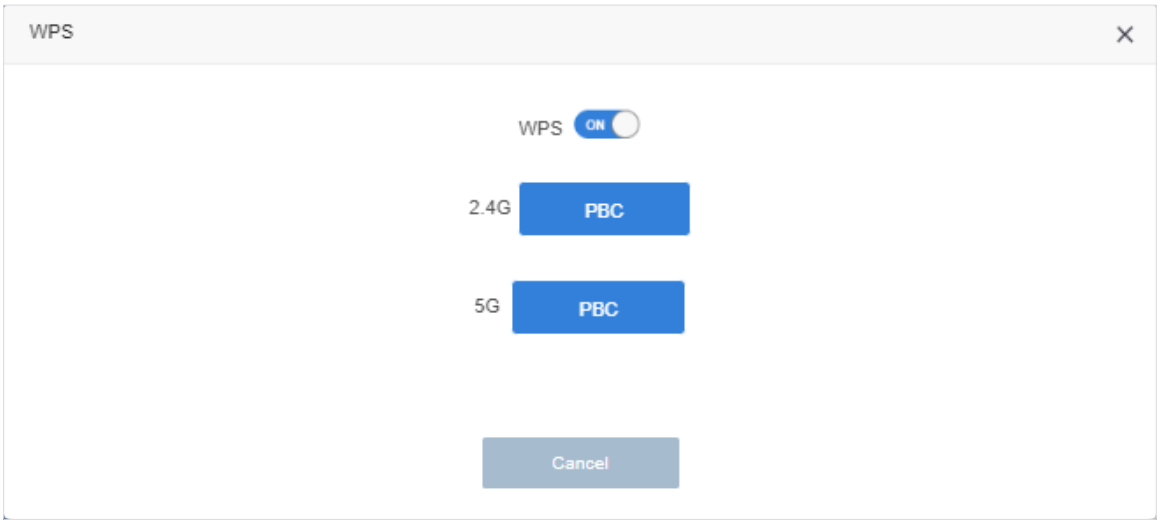


Figure 5-17 WPS

Guest network

This page allows you to configure Wi-Fi Guest Network here and create a guest network as needed.

Steps to follow:

1) Enable **2.4GHz Wireless network** or **5GHz Wireless network.**
2) Customize the SSID
3) Set **Password**, **Guest speed**
4) Click **Confirm**

Now your guests can access your guest network using the SSID and password you have set!

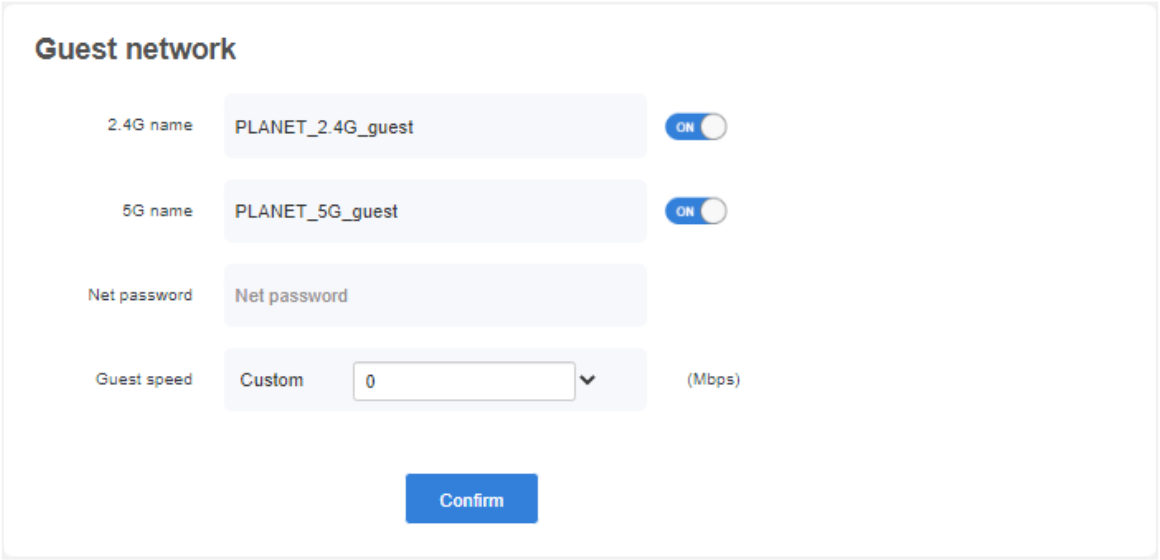


Figure 5-18 Guest Network

Object	Description
2.4G Name	Specifies the 2.4G SSID for the current profile. Default: **PLANET_2.4G_guest**
5G Name	Specifies the 5G SSID for the current profile. Default: **PLANET_5G_guest**
Net password	Configure the wireless security of the guest network Wi-Fi.
Guest speed	Choose a limited speed of guest network.

Parental controls

This page can help parents control children's Internet time, and protect children's eyesight and health.

Steps to follow:

1) Go to Parental controls→**Equipment connected**

2) Select the corresponding device in the list. Click **Add**

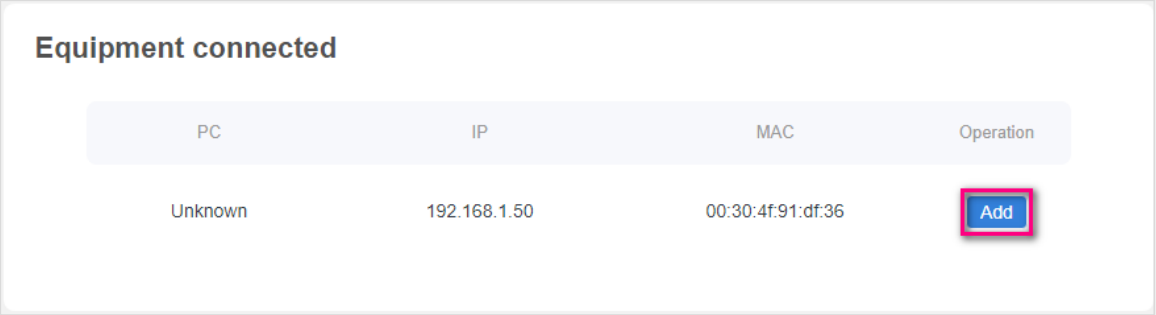


Figure 5-19 Equipment connected

3) Select the time and date to go online. For example, only allow children to surf the Internet from 20:00 to 21:00 every day; the settings are as follows:

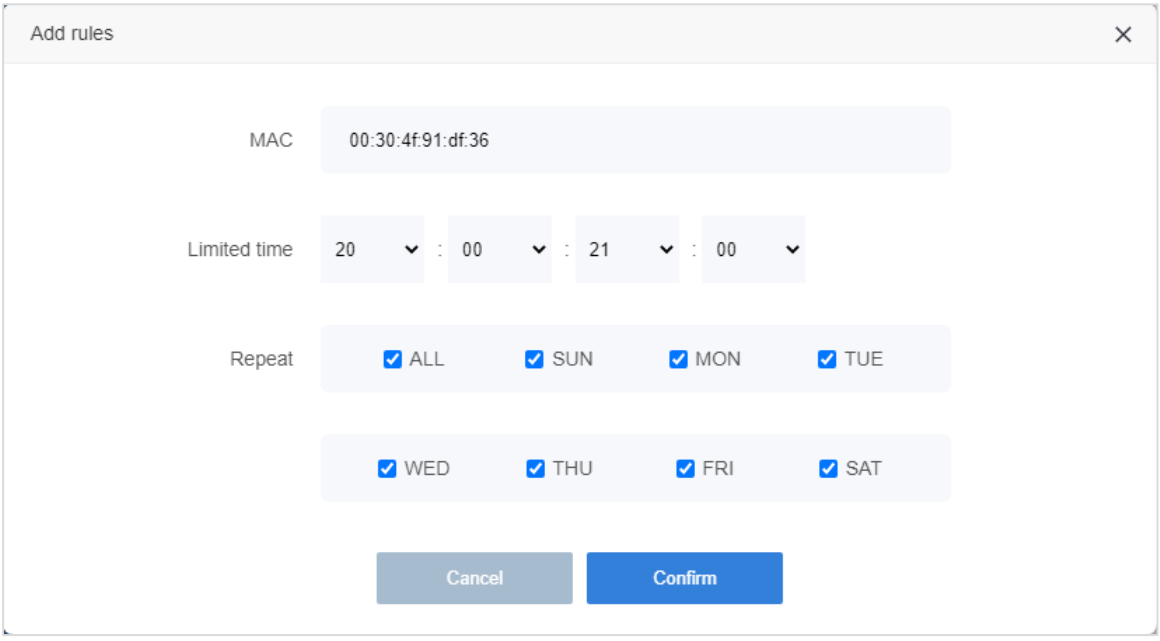


Figure 5-20 Restrictions added for equipment

4) Or click the "**Add**" button to define the device's MAC address that needs to be controlled.

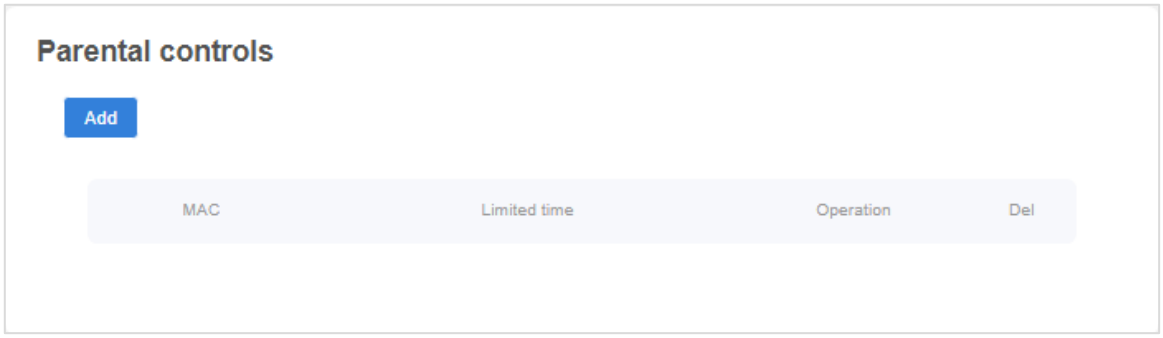


Figure 5-21 Add devices manually

IPv6

5.1.9 IPv6 WANSetting

There are two options in IPv6 WANsetting mode, **Automatic** and **PPPoEv6**; default is Automatic mode. Please check "G**et ipv6 prefix agent**", meaning WAN IPv6 will get a prefix address from IPv6 server.

■ Automatic

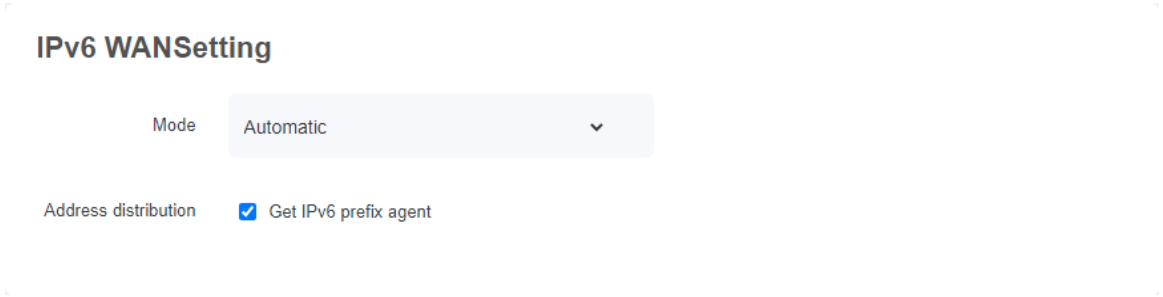


Figure 5-22 IPv6 WANSetting- Automatic

Object	Description
Mode	Select IPv6 WANsetting mode; default is Automatic mode.
Address distribution	Enable it and WAN IPv6 will get a prefix address from IPv6 server.

■ PPPoEv6

If you get information of IPv6 connection from ISP, you can choose PPPoEv6 mode, and fill in blank with information of account and password.

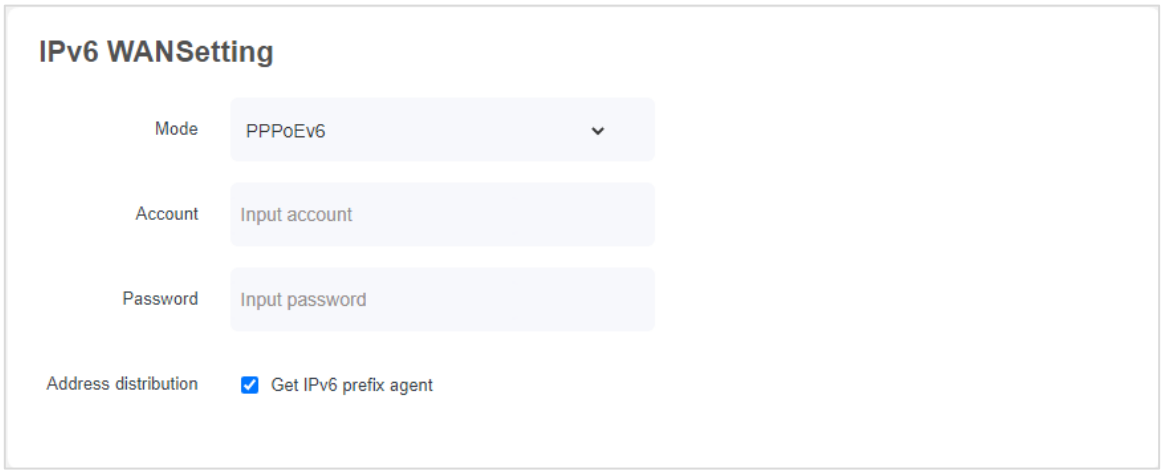


Figure 5-23 IPv6 WANSetting- PPPoEv6

Object	Description
Mode	Select IPv6 WANsetting mode; default is Automatic mode.
Account	Enter the account provided by your ISP.
Password	Enter the password provided by your ISP.
Address distribution	Enable it and WAN IPv6 will get a prefix address from IPv6 server.

5.1.10 IPv6 LAN Setting

Configure LAN ports, let IPv6 LAN-address and IPv6 LAN prefix in Automatic mode. You can enable or disable DHCPv6 function .

Figure 5-24 IPv6 LANSetting

Object	Description
IPv6 LAN-address	LAN IPv6 address will automatically assigned by ISP.
IPv6 LAN Prefix	LAN Prefix will automatically get by ISP.
DHCPv6	Enable or disable DHCPv6 function.

Advanced

5.1.11 Internet control (Flow Control)

This page can specify upload and download speeds for some devices.

Steps to follow:

1) Go to Advanced→Internet control→Turn on **"Hardware speedup"**
2) Find your device in the list and turn "**ON**" speed
3) Enter the speed you need in **Download(KB) / Upload(KB)**
4) Click **Confirm**

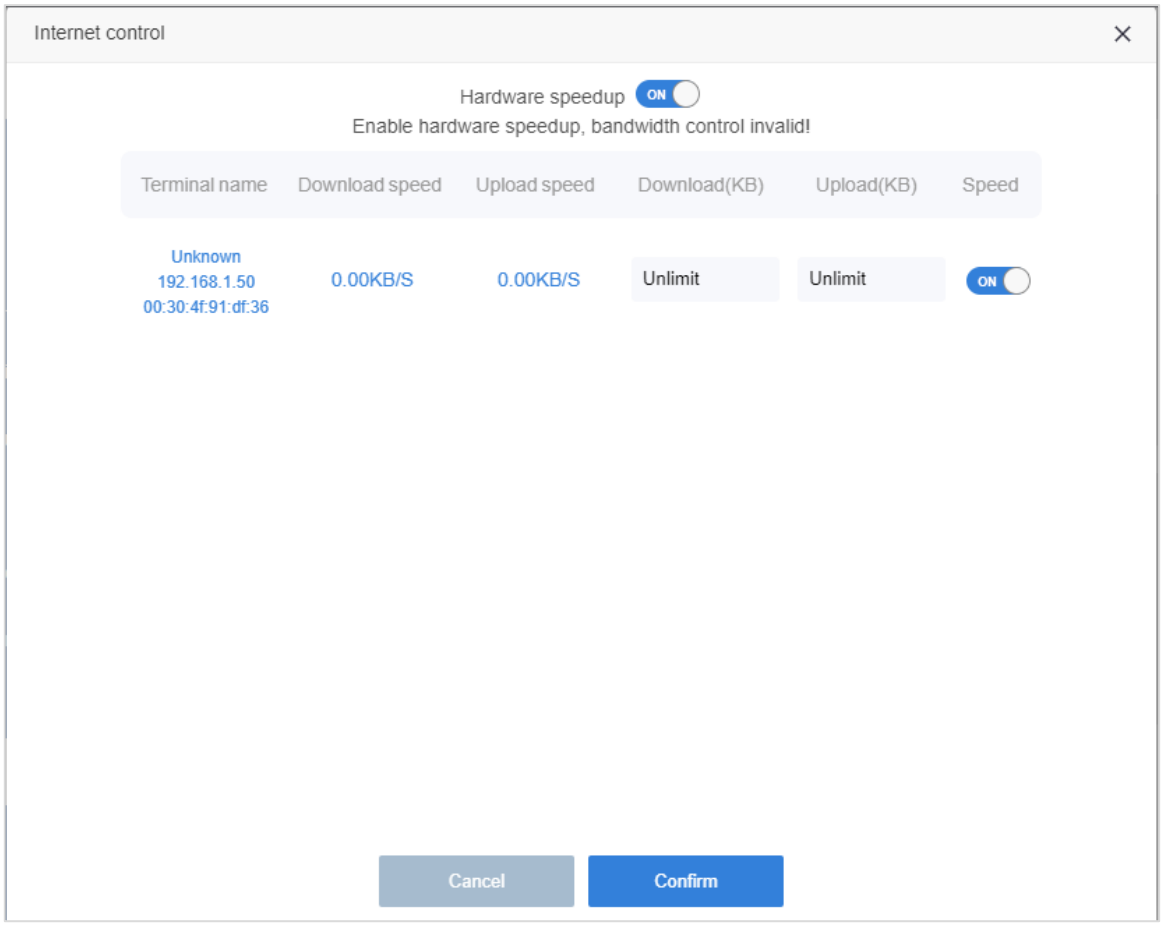


Figure 5-25 Add rule of Internet control (Speed Limit)

Object	Description
Hardware speedup	Enable or disable hardware speedup, bandwidth control invalid.
Terminal name	Shows device name, IP address, and MAC address.
Download speed	Shows device download speed.
Upload speed	Shows device upload speed.
Download(KB)	Enter the downstream limited for kbps

Upload(KB)	Enter the upstream limited for kbps
Speed	Enable or disable to limit the speed on the device you select.

5.1.12 DDNS

The capability of assigning a fixed host and domain name to a dynamic Internet IP Address.

Most ISPs assign a dynamic IP address to the router and you can use this IP address to access your router remotely. However, the IP address can change any time and you don't know when it will change. In this case, you might apply the DDNS (Dynamic Domain Name Server) feature on the router to allow you and your friends to access your router and local servers (FTP, HTTP, etc.) using domain name without checking and remembering the IP address.

Steps to follow:

1) Go to **Advanced→DDNS**
2) Select **service provider** you need and Turn "**On**" it.
3) Fill in **Domain / Username / Password** of your DDNS Option
4) Confirm

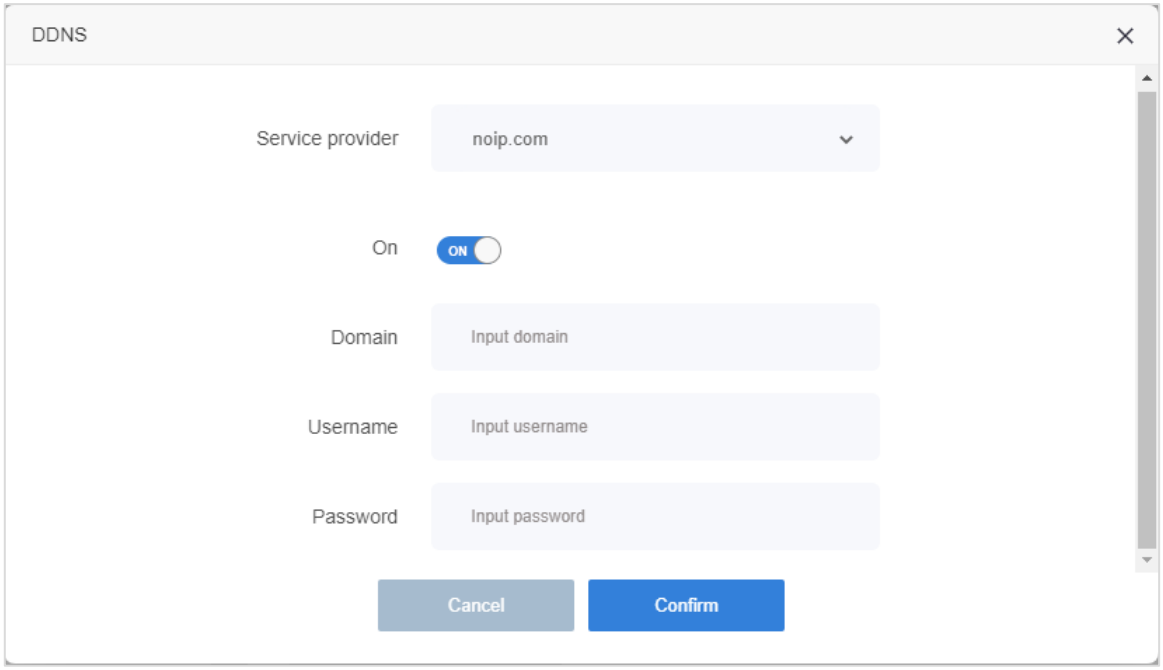


Figure 5-26 DDNS setting

Object	Description
Service provider	Select service provider you need.
Domain	Enter unique domain name for device. If you use **Easy DDNS** it will be automatically generated
Username	Enter user account for DDNS. If you use **Easy DDNS,** it is not necessary to do it.

Password	Enter password for DDNS. If you use **Easy DDNS,** it is not necessary to do it.

5.1.13 ALG service

WDRT-1800AX supports IPSec/L2TP VPN Pass-through.

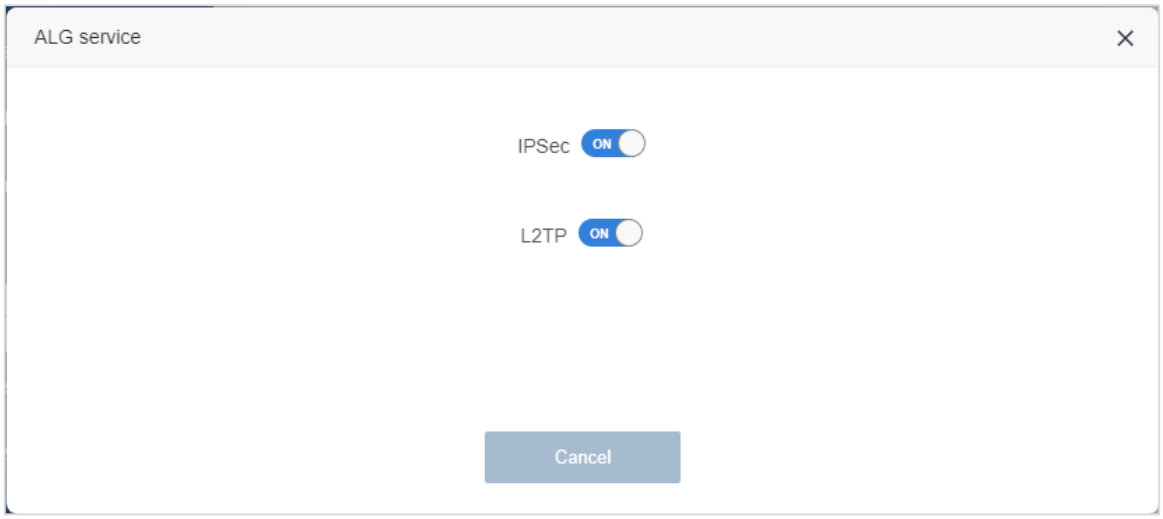


Figure 5-27 ALG service

Object	Description
IPsec	Enable or disable IPSec to pass through IPSec communication data.
L2TP	Enable or disable L2TP to pass through L2TP communication data.

5.1.14 DMZ host

When a PC is set to be a DMZ (Demilitarized Zone) host in the local network, it is totally exposed to the Internet, which can realize the unlimited bidirectional communication between internal hosts and external hosts. The DMZ host becomes a virtual server with all ports opened. When you are not clear about which ports to open in some special applications, such as IP camera and database software, you can set the PC to be a DMZ host.

Demand: Make the home PC join the Internet online game without port restriction.

For example, due to some port restriction, when playing the online games, you can log in normally but cannot join a team with other players. To solve this problem, set your PC as a DMZ with all ports opened.

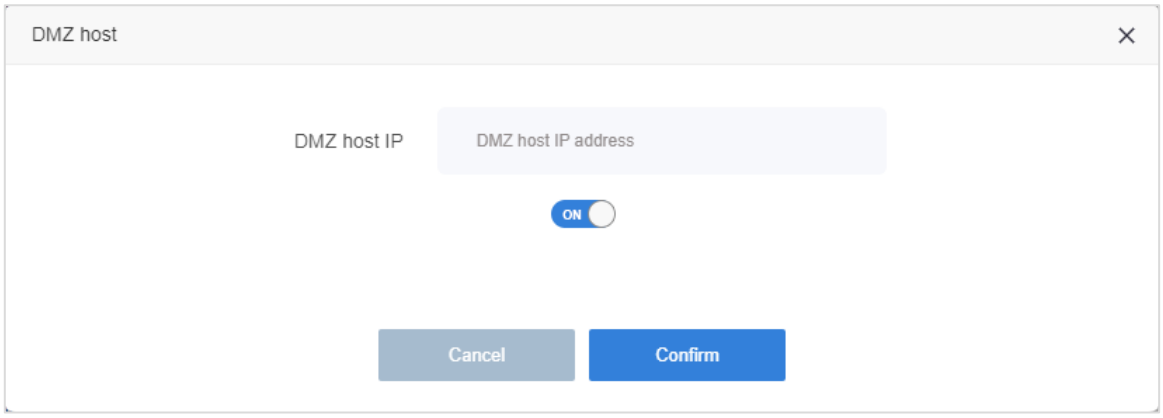


Figure 5-28 DMZ host setting

Object	Description
DMZ host IP	Enter the **DMZ host IP address**
Enable DMZ	Enter the DMZ LAN IP.

5.1.15 IP filter

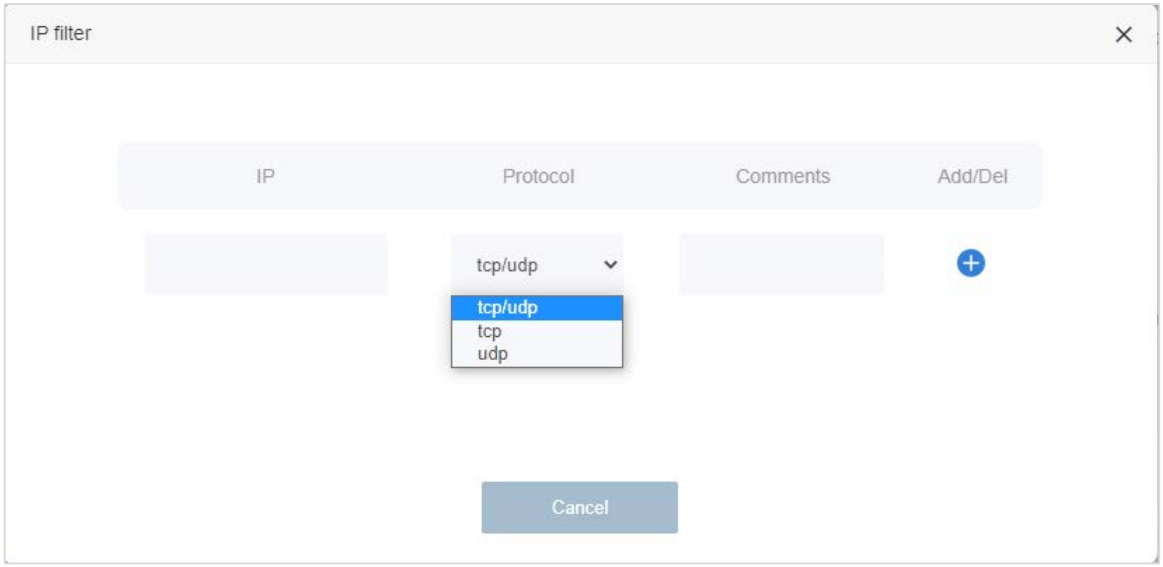


Figure 5-29 IP filter

Object	Description
IP	Blacklist: Enter the IP that you prohibited rules within the device through.
Protocol	Select **TCP**, **UDP** or **TCP+UDP**
Comments	Enter the mark string, or not
Add/Del	Press the "**+**" or "-" button to add or delete the IP that you need to put in black list

5.1.16 URL filter

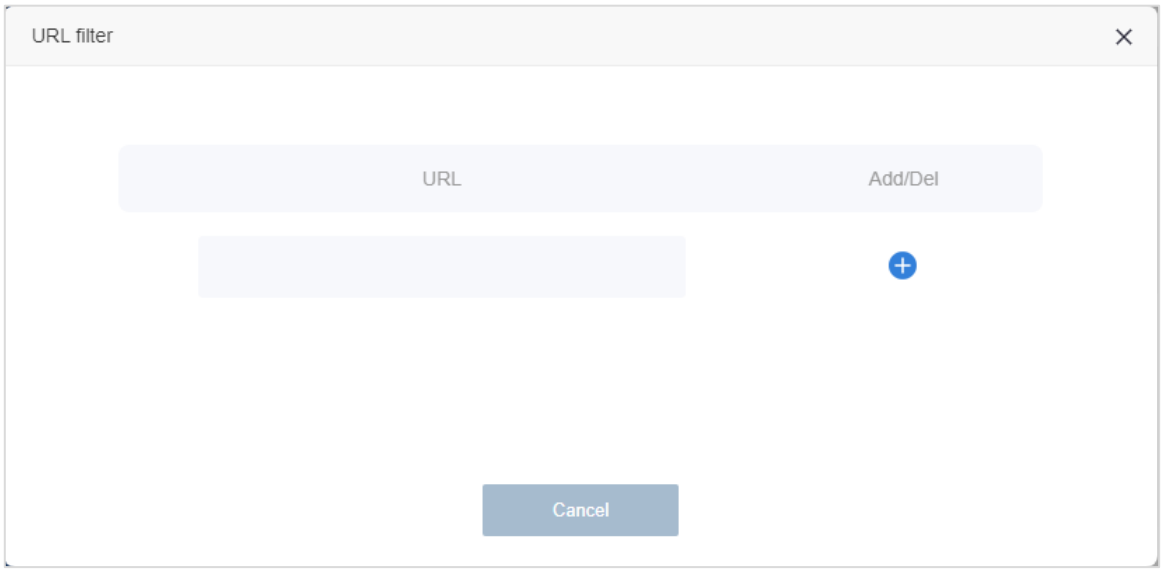


Figure 5-30 URL filter

Object	Description
URL	Enter the URL that you need to put in black list
Add/Del	Press the "**+**" or "-" button to add or delete the URL that you need to put in black list

5.1.17 Port filter

Port filtering is the practice of allowing or blocking (opening/closing) network packets into or out of a device or the network based on their port number. Blocking network ports with a port filter allows administrators to restrict specific operations such as file transfers through ports used for FTP and torrents.

Steps to follow:

1) Advanced →**Port Filter** page
2) Enter the desired port number in the **S**tart Port & **End Port** fields.

   NOTE: When forwarding a range of ports, enter the start and end of the port range in the two fields.
3) Click the **Protocol** drop-down menu and select the appropriate protocol (TCP, UDP, or Both).
4) Click the "**+**" button to add the rule

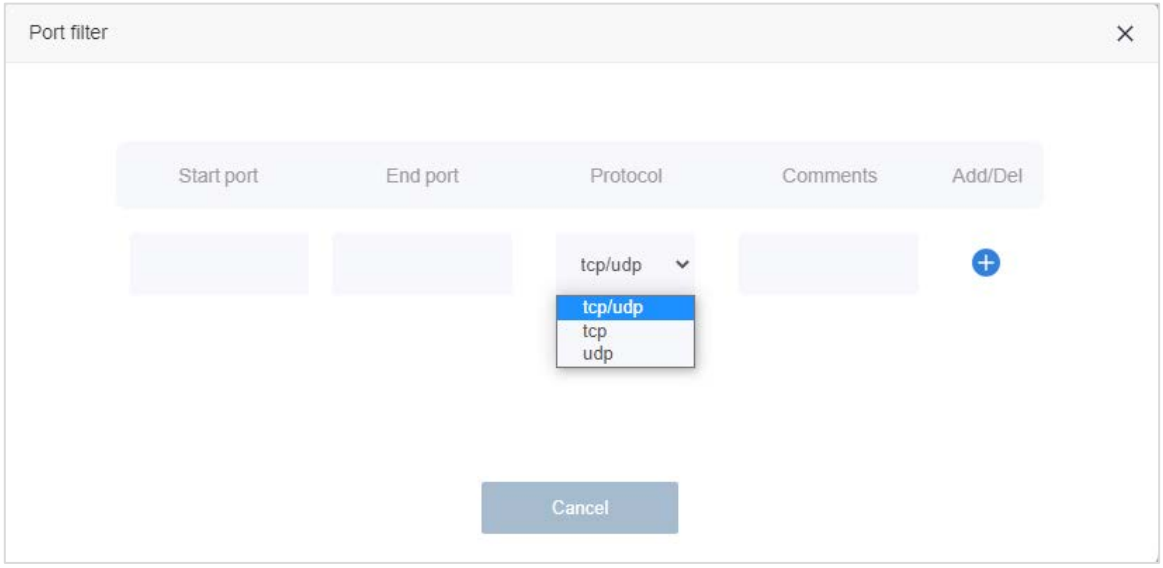


Figure 5-31 Port filter

Object	Description
Start port	Enter the desired port number in the Start Port
End port	Enter the desired port number in the End Port
Protocol	Select **TCP**, **UDP** or **TCP+UDP**
Comments	Enter the mark string, or not
Add/Del	Press the "**+**" or "-" button to add or delete the port that you need to put in black list

5.1.18 Virtual server

After using the router, Internet users cannot access the hosts in the LAN, so they cannot access Web, FTP, Mail and other servers built on the intranet. The virtual server function can realize the mapping of the server of the intranet to the Internet, so as to realize the opening of the server to the outside world.

Requirements: A small enterprise needs to open the file server and web server to the Internet through a router, and the external port of the web server is **8080**.

The configuration information is as follows:

WAN IP	10.11.104.11	
Web Services	IP	192.168.1.10
	Port	80
FTP Services	IP	192.168.1.11
	Port	21

Users on the Internet can enter http:// WAN IP:External port (in this example: http:// 10.11.104.11:8080) to visit your personal website.

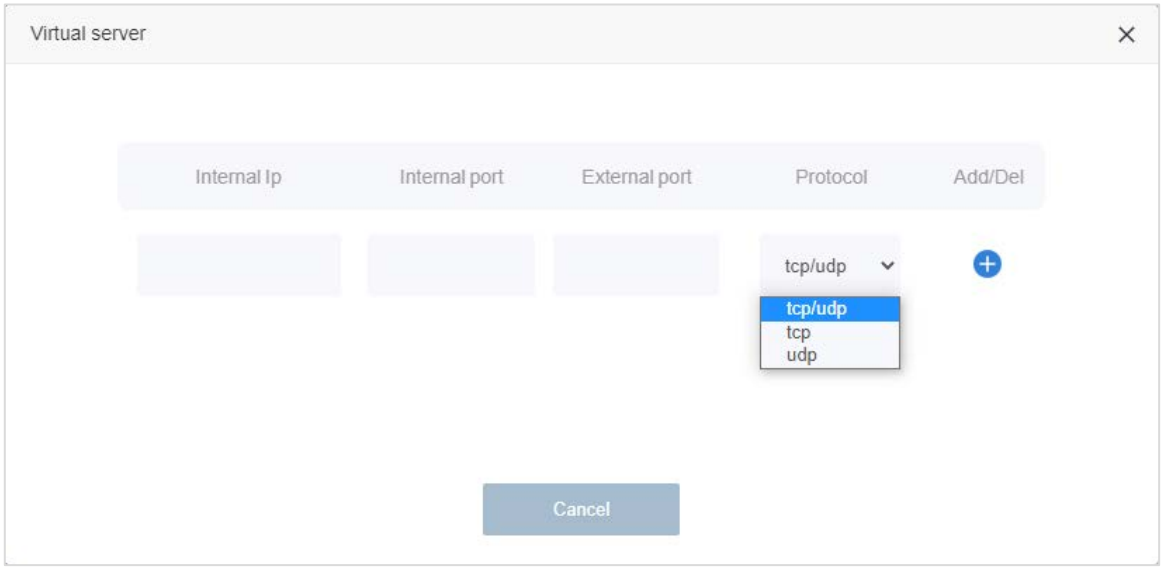


Figure 5-32 Virtual server

5.1.19 Firewall (Protect the Network from Cyber Attacks)

Firewall protects your home network from DoS attacks that can flood your network with server requests. Follow the steps below to configure DoS protection.

Steps to follow:

1) Go to **Advanced→Firewall**
2) Turn on "**prevent flooding attack**"
3) If you want to ignore the ping packets from the WAN port,Turn on "**anti WAN port ping**".

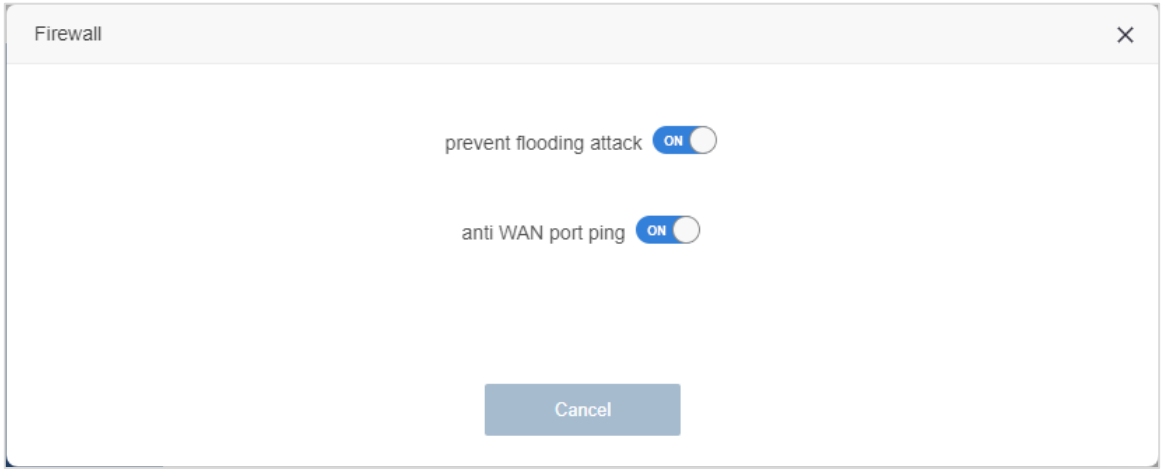


Figure 5-33 Firewall

Router

5.1.20 LAN settings

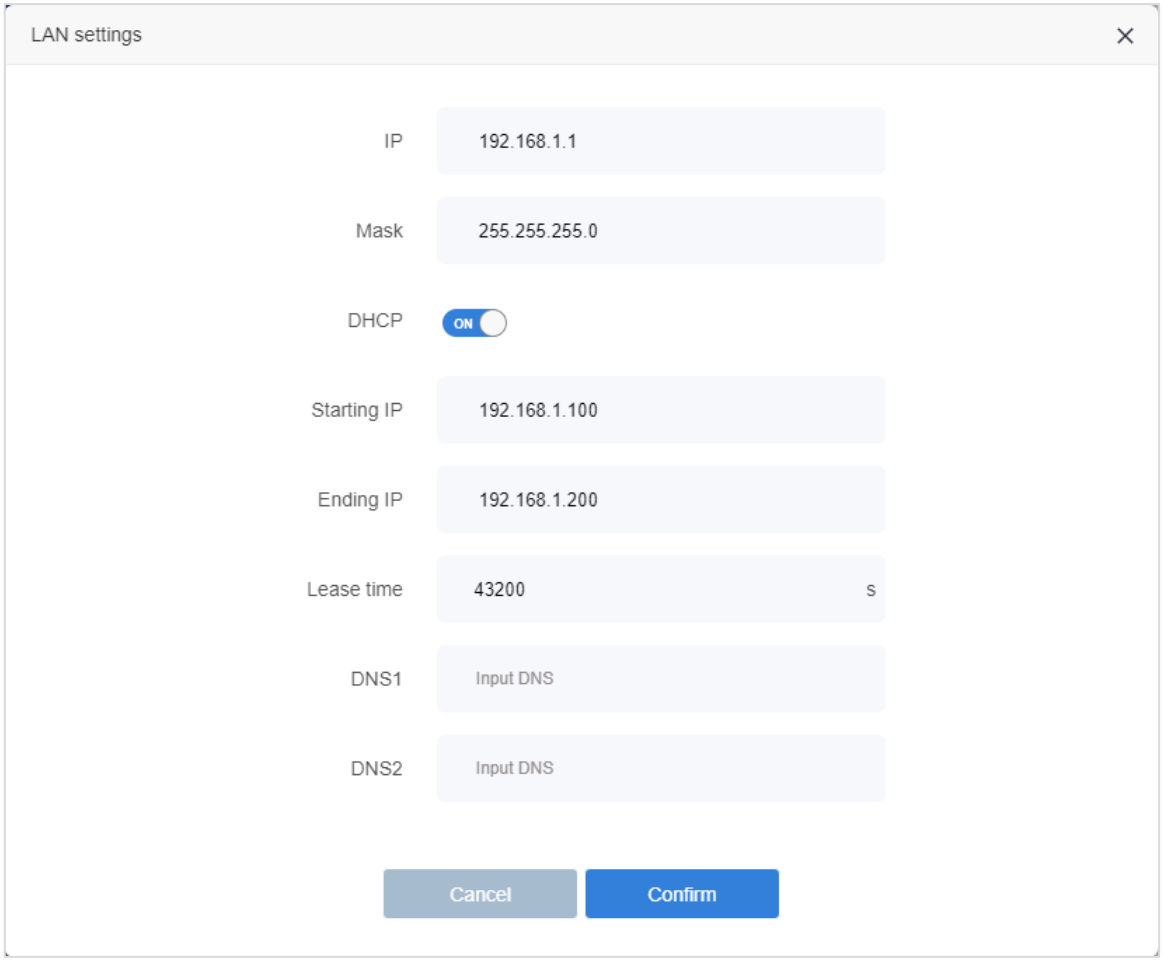


Figure 5-34 LAN settings

Object	Description
IP Address	Router's LAN IP. The default is **192.168.1.1**. You can change it according to your needs.
Mask	Router's LAN subnet mask.
DHCP	Click the button to enable or disable Router DHCP Server function.
Starting IP / Ending IP	Configure the IP address interval that allocated to the terminal. The address interval must be on the same network segment as the management IP address of the Router.
Lease Time	Select the time for using one assigned IP from the dropdown list. After the lease time, the AP automatically assigns new IP addresses to all connected computers.
DNS1	Set main DNS for internet wan connection(If not filled, the gateway address will be used as the DNS address)
DNS2	Set second DNS for internet wan connection(If not filled, the gateway address will be used as the DNS address)

5.1.21 Static IP allocation (IP & MAC Binding)

IP and MAC Binding is used to bind the IP address of a network device to its MAC address. This will prevent ARP spoofing and other ARP attacks by denying network access to devices in the binding list with matching IP addresses but unrecognized MAC addresses.

Steps to follow:

1) Go to **Router→Static IP allocation**

2) Bind your device according to your need

Note: The bound IP cannot be the IP in use

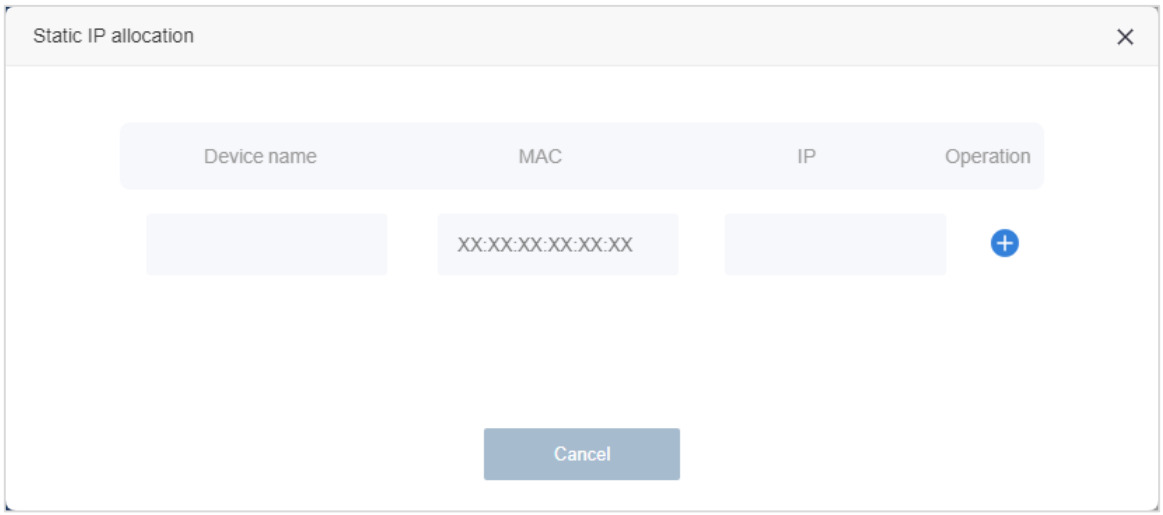


Figure 5-35 IP & MAC Binding

Object	Description
Device Name	Enter a name for the device
MAC Address	Enter a MAC address
IP	Enter the specified IP address in the IP pool range, which is assigned to the host.
Operation	Press the "**+**" or "-" button to add or delete the rule.

5.1.22 Time setting

In this interface, user can configure “local time” and “Time zone”.

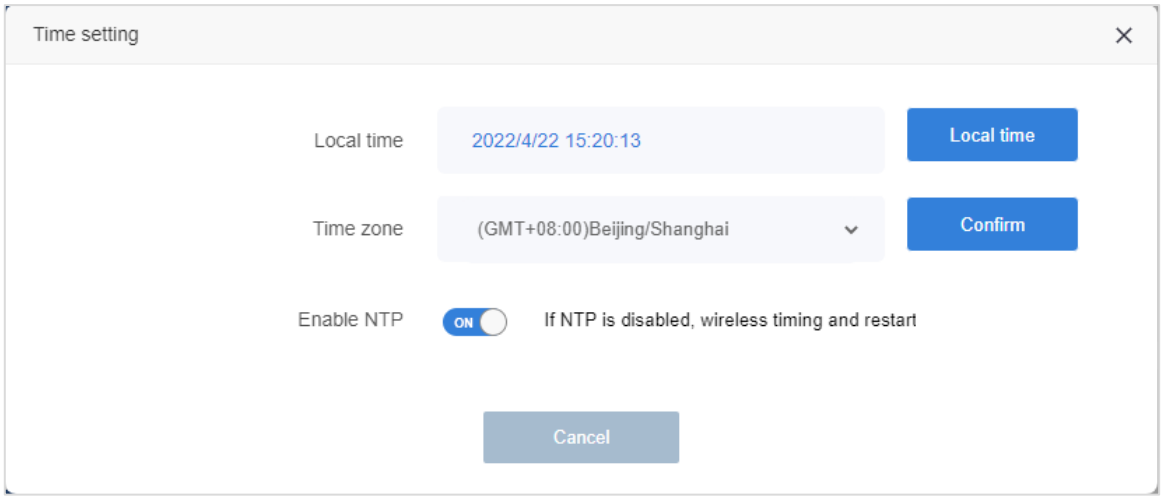


Figure 5-35 Time setting

Object	Description
Local Time	Use your local time as your device’s system time.
Time Zone	Select time zone
Enable NTP	Select Enable or Disable NTP function
Sync with Host	Press to sync system time with host server

5.1.23 Admin password

After changing the WIFI router login password, you need to enter the new password to log in to WIFI router web interface again.

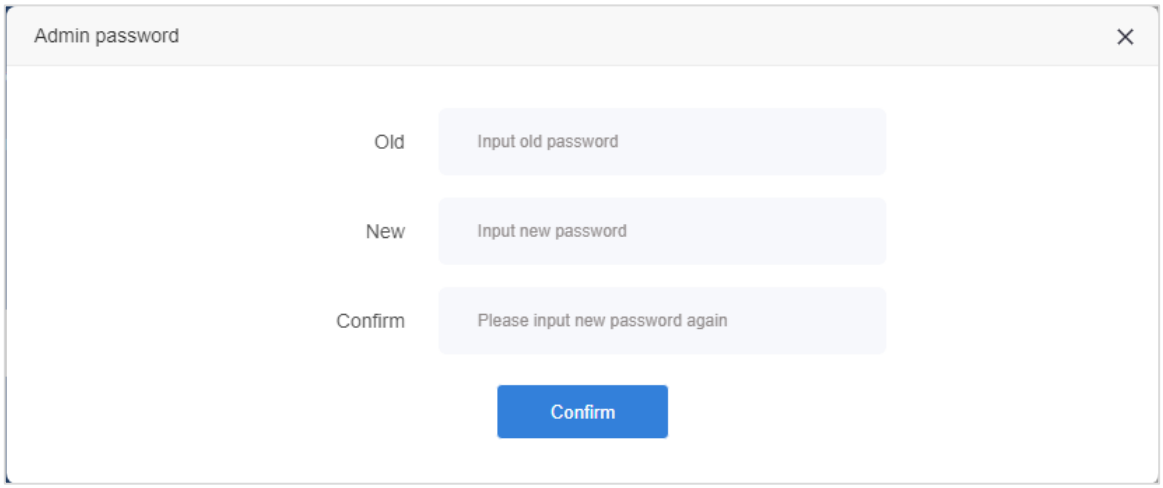


Figure 5-36 Configure WIFI Router Login Password

Object	Description
Old	Enter the old password
New	Enter the new password
Confirm	Enter the new password again

5.1.24 Restart

To reboot and reset default settings your WIFI Router.

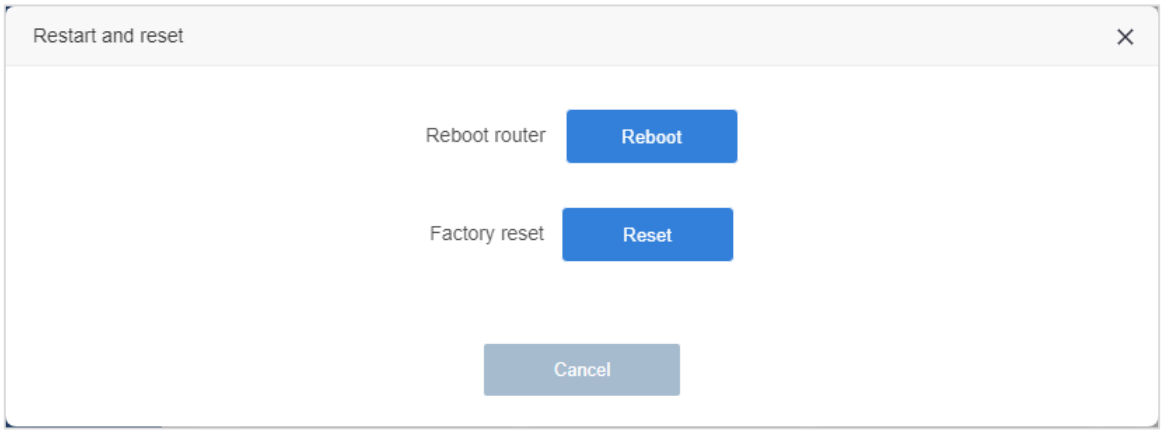


Figure 5-37 Restart and reset

Object	Description
Reboot router	Press to reboot the device
Factory reset	Press to reset the device to default

5.1.25 Software upgrade

Upgrade WIFI router needs about four minutes, then WIFI router will auto reboot.

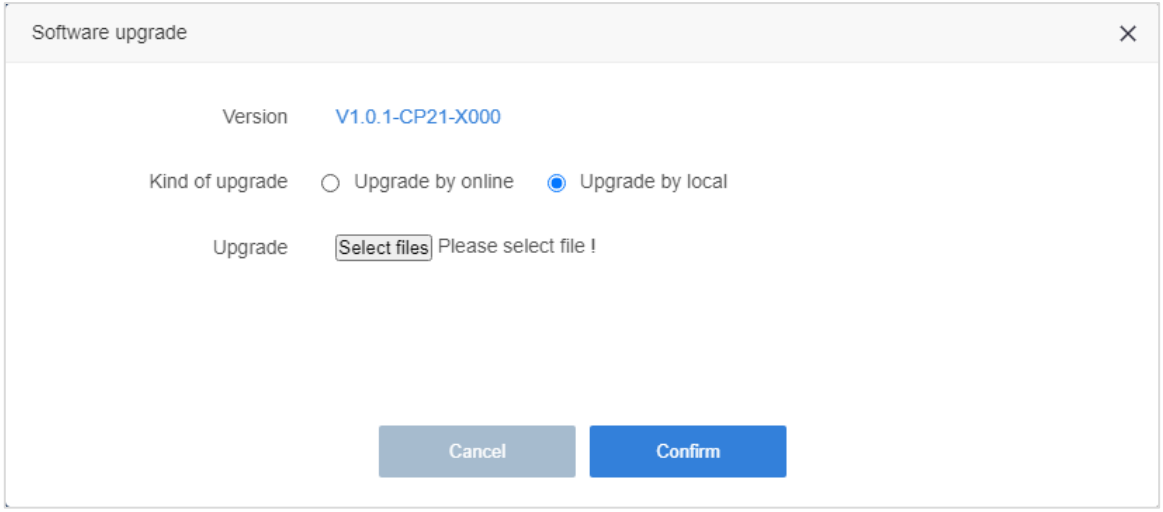


Figure 5-38 Upgrade Firmware

Object	Description
Version	Show the current version
Firmware Upgrade	Press to upgrade firmware via online or local management
Upgrade	Press to select the firmware file
Restore Factory Settings	Select to reset the device to default when upgrading firmware

5.1.26 Backup and restore

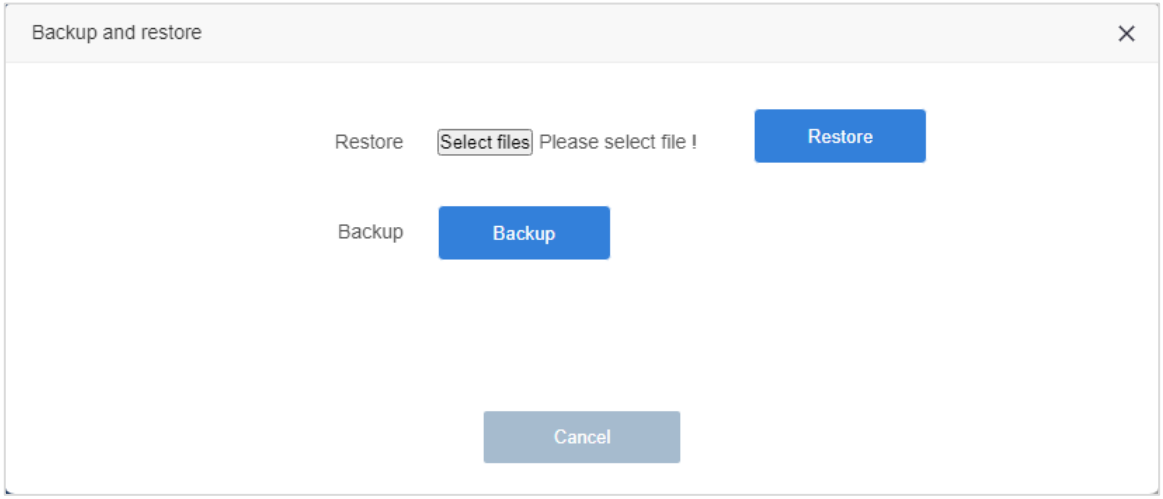


Figure 5-39 Backup and restore

Object	Description
Restore	Press to restore the configuration **Select files:** Press to select the configuration file
Backup	Press to back up the configuration

5.1.27 Web management

On this page, users can modify web language, remote web, turn off LED, Telnet service, and Smart discovery function.

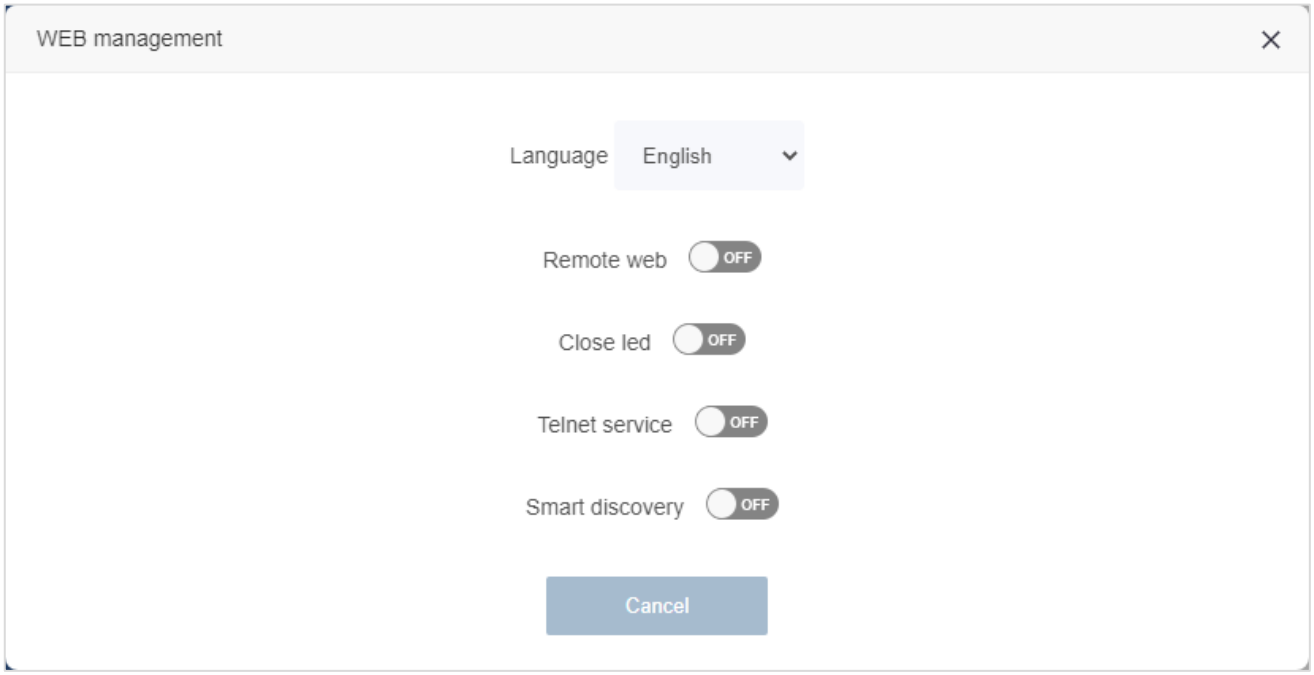


Figure 5-40 WEB management

Object	Description
Language	English
Remote web	You can visit web by WAN interface if switched to on. Default is **off**.
Close LED	The LED will be turned off if you switch to on. Default is **off**.
Telnet service	You can Telnet the router by LAN interface if you switch to on. Default is **off**.
Smart discovery	Turn on the **Planet Smart discovery function**.

5.1.28 System log

You can get system log information of router operating on this page for diagnosis.

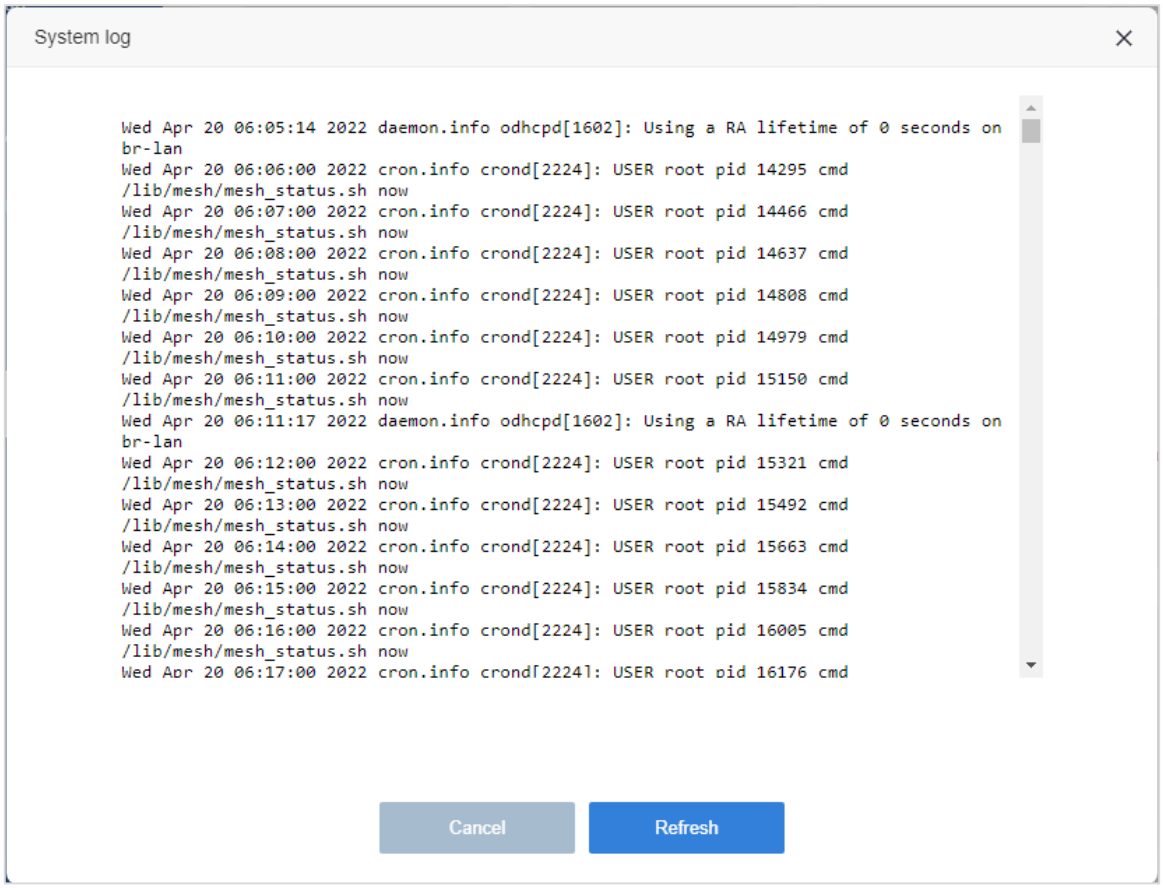


Figure 5-41 System log

5.1.29 System state

Enter router web main interface, click **Router→System state** , and then you can see router System time, firmware version and Running time

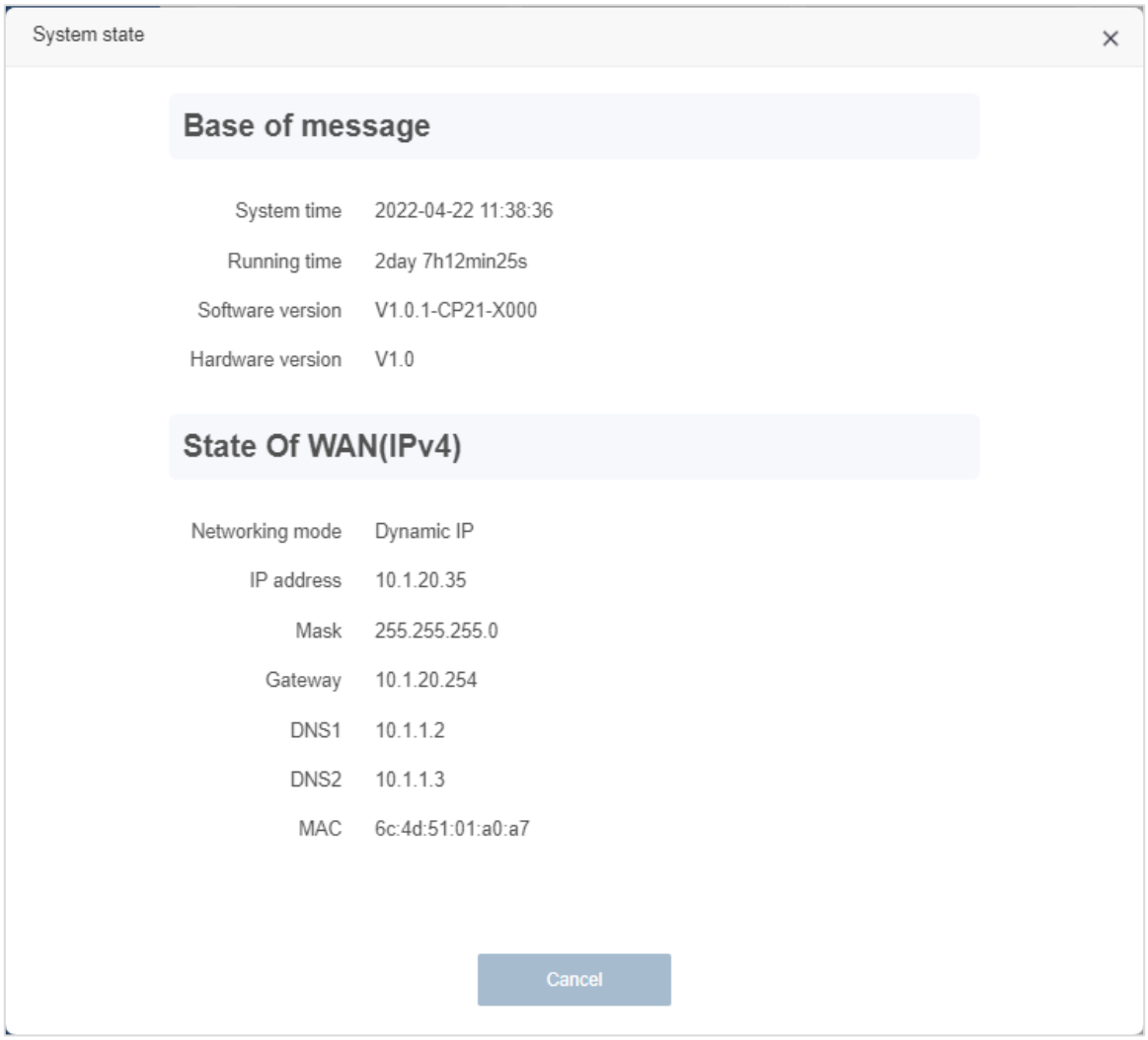


Figure 5-42 System state

5.1.30 Equipment mode

There are 3 modes that you can configure: Route mode, Bridge mode and Relay mode. The default mode is **Route.**

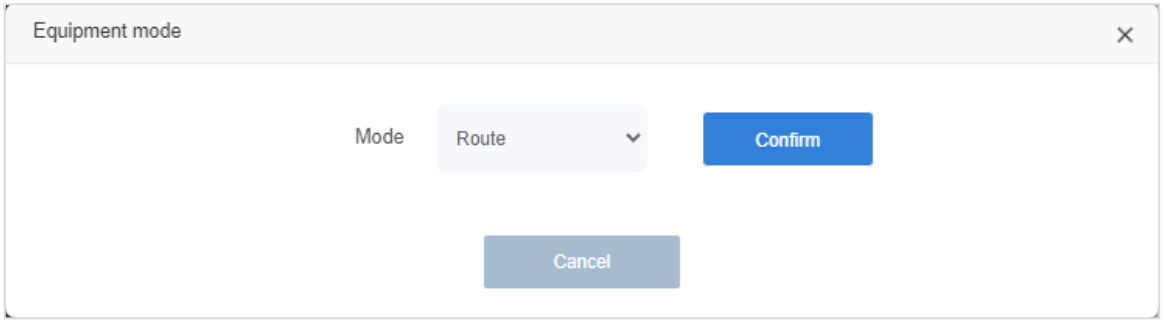


Figure 5-43 Device working mode

5.1.31 Automatic maintenance

Here you can set the auto maintenance time and day of the week.

For example:

User needs to maintain the router at **2 am every day**, the configuration is as shown below:

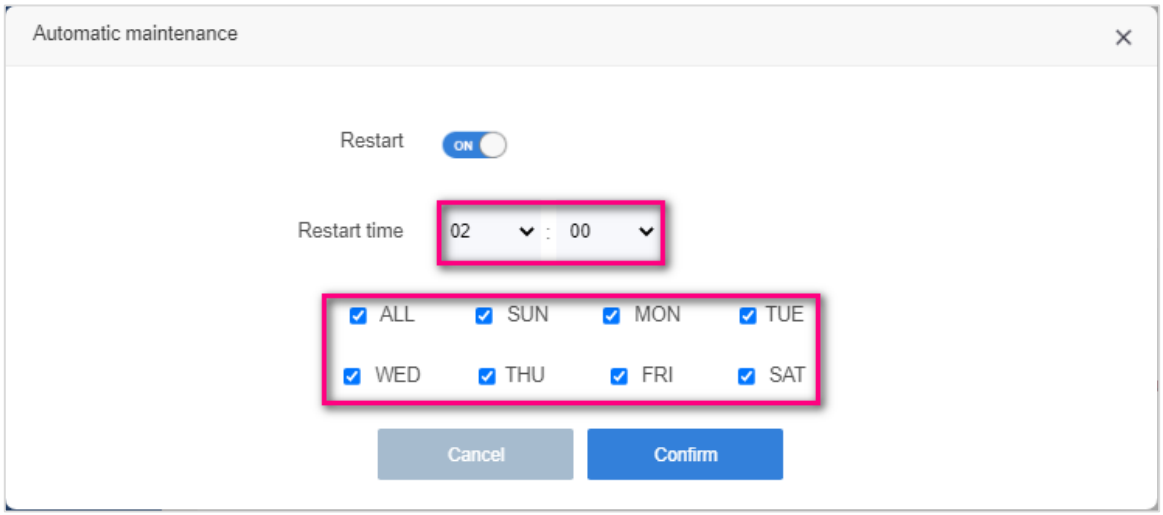


Figure 5-43 Automatic maintenance

Object	Description
Restart	Enter the automatic maintenance.
Restart time	Select reboot time for clock and duty by day.

TR069

TR069 is a protocol. It provides operators with multiple management methods for easy maintenance of sold products. All of parameters of TR069 are offered by ISP.

Step:

1) Go to **TR069→Turn on**

2) You can set the router parameters of the TR069 client

(**ACS URL address, username, password, periodic notification interval**).

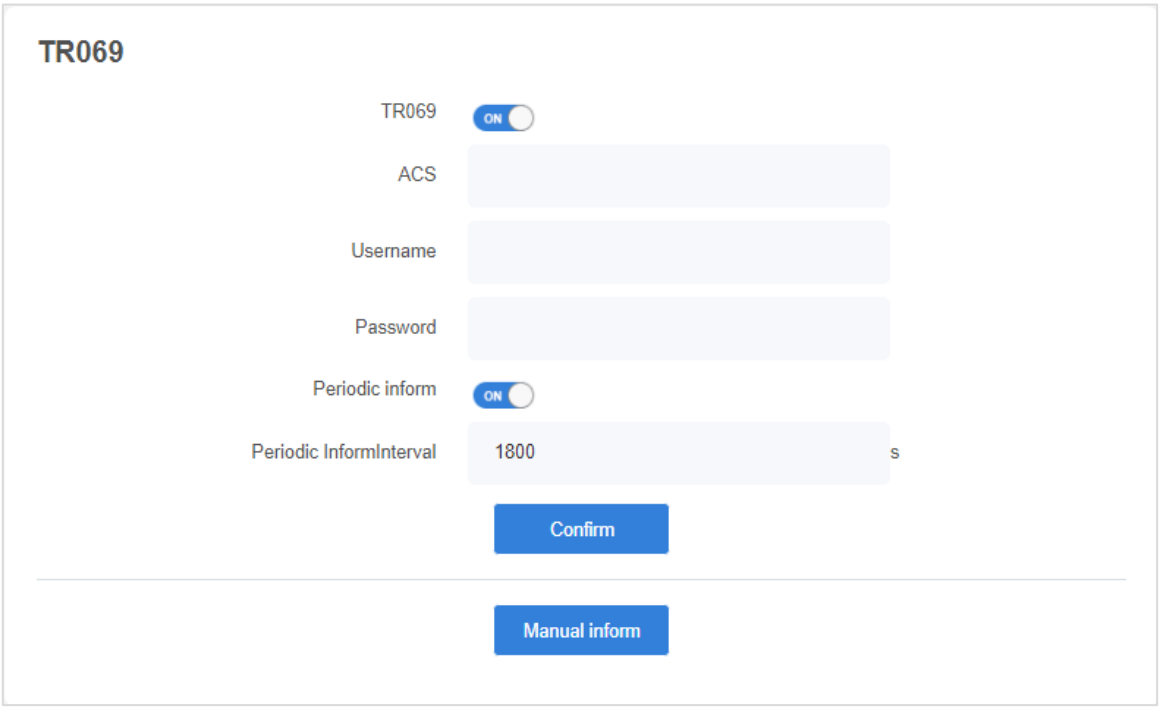


Figure 5-44 TR069

Object	Description
TR069 ON/OFF	Enable/Disable CWMP protocol
ACS-URL	URL of ACS. Examples: "https://example.com:8080/path/", "http://192.168.128.100:80/acs"
Username	HTTP authentication username (used by CPE to "login" into ACS)
Password	HTTP authentication password (used by CPE to "login" into ACS)
Periodic inform ON/OFF	Enable/disable CPE periodical session initiation. Timer is started after every successful session. When session is started by periodic interval then Inform RPC contains "2 PERIODIC" event. Maps to "Device. ManagementServer.PeriodicInformEnable" Parameter
Periodic inform interval	Timer interval of periodic inform. Maps to "Device.

	ManagementServer.PeriodicInformInterval"
Manual inform	Send inform messages manually
Confirm	Confirm the configuration of TR069 client

Wi-Fi Mesh

Wi-Fi Mesh network is a new wireless networking solution developed based on Wi-Fi technology. Compared with the traditional wireless network, the transmission distance and mobility of the Wi-Fi Mesh network will be greatly improved, especially if it is compatible with the Wi-Fi function. Therefore, the Wi-Fi Mesh network provides great help to increase the transmission distance and mobility of the wireless network and expand the wireless network application.

Note: The wireless repeater function cannot be used after using the Wi-Fi Mesh function

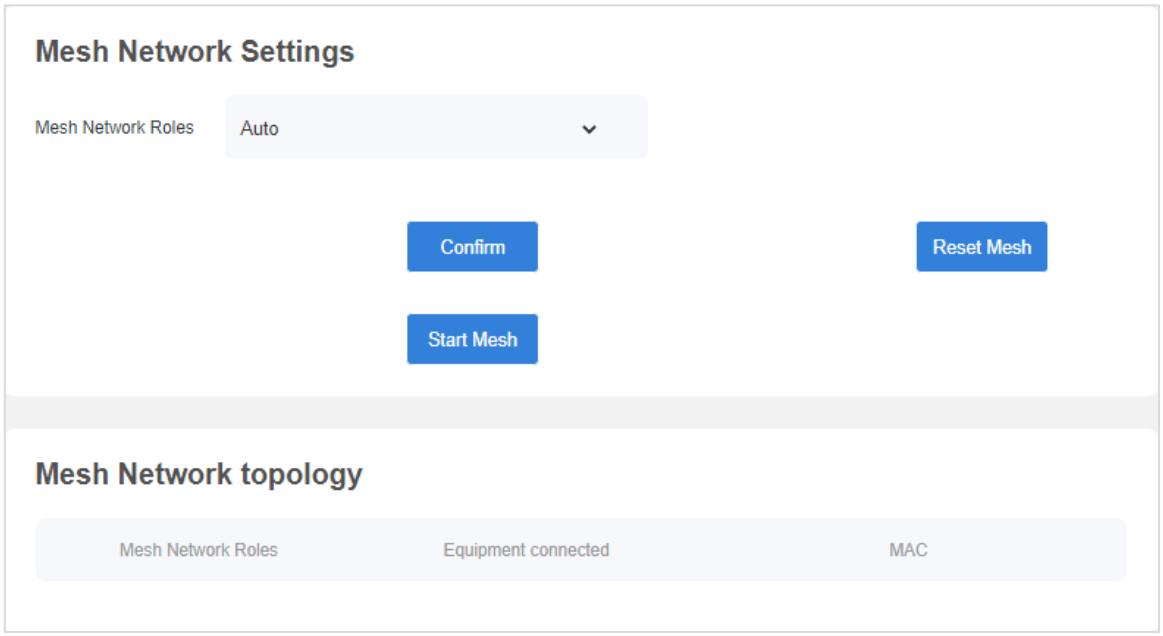


Figure 5-45 Wi-Fi Mesh Configuration

Chapter 6. FAQs

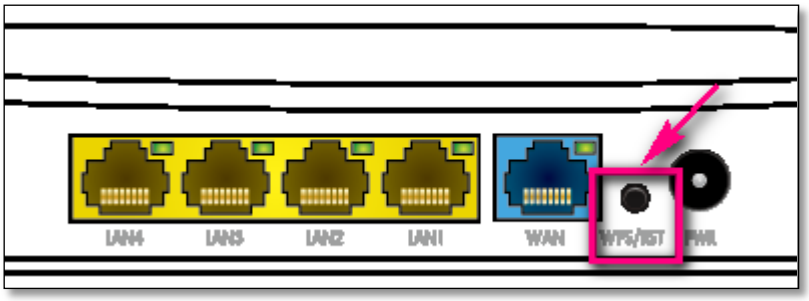
FAQ 1. What can I do if I forgot my wireless password?

The default wireless password is printed on the label of the router. If the password has been altered, please connect your computer to the router using an Ethernet cable and follow the steps below:

1. Visit **http://192.168.1.1**
2. Go to **Wireless 2.4G/5G Wi-Fi name and password**
3. Retrieve or reset your Wi-Fi password

FAQ 2. What can I do if I forgot my login password of the web management page?

The default password of the web management page is admin (in lowercase). If the default password cannot be used, try the following: When the device is running, press and hold the reset (**WPS / RST**) button with a needle for 5s, release it, and wait for the device to restart.



FAQ 3. I cannot log into the router's web management page, what can I do?

This can happen for a variety of reasons. Please try the methods below to log in again.

1. Check physical connection

Plug the cable into the router LAN port and make sure the corresponding LAN LED is on.

Connect to the SSID corresponding to the label on the back of the router

2. Check IP information

Your device must have an IP from the ceres device to access the web management page. Most Ceres devices have DHCP turned on by default, which will assign an IP address to your device. Some devices do not have DHCP server function, in this case you need to manually set the IP address to access the management page

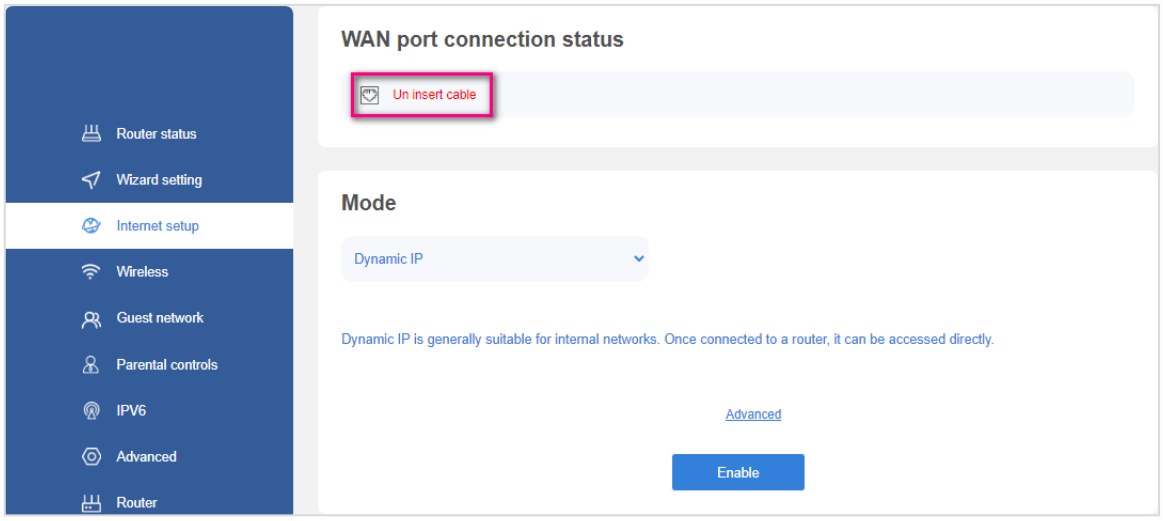
3. Firewalls and viruses

Sometimes firewalls and antivirus software on your computer can block access to the router and you need to turn them off or replace a device.

FAQ 4. I cannot access the Internet even though the configuration is finished. What can I do?

1.Check the physical connection of the WAN interface

If the Un insert cable message appears on the router's Internet setup page, it means that the network cable is not inserted correctly. Please insert and make sure the red message disappears

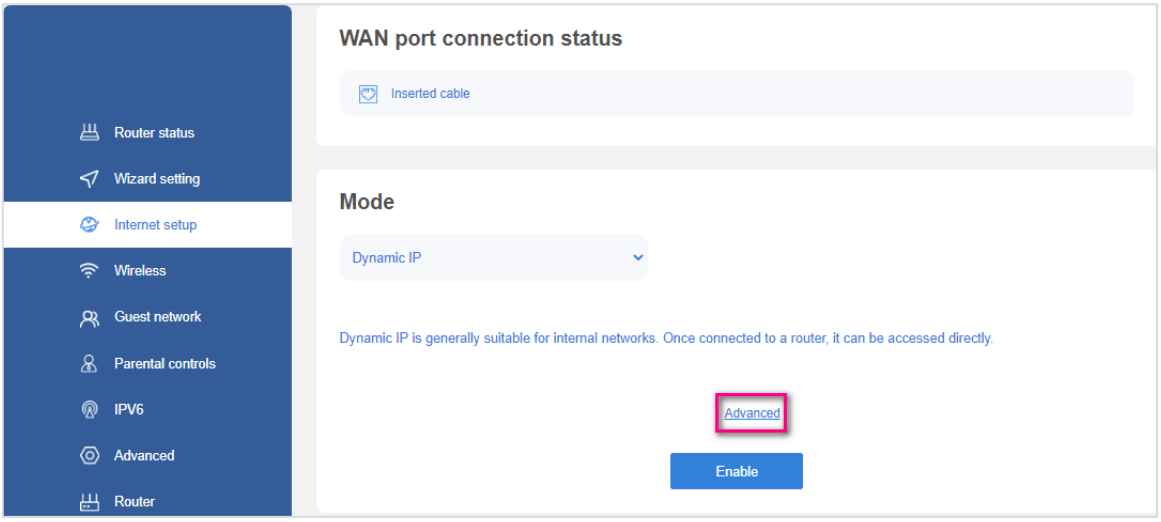


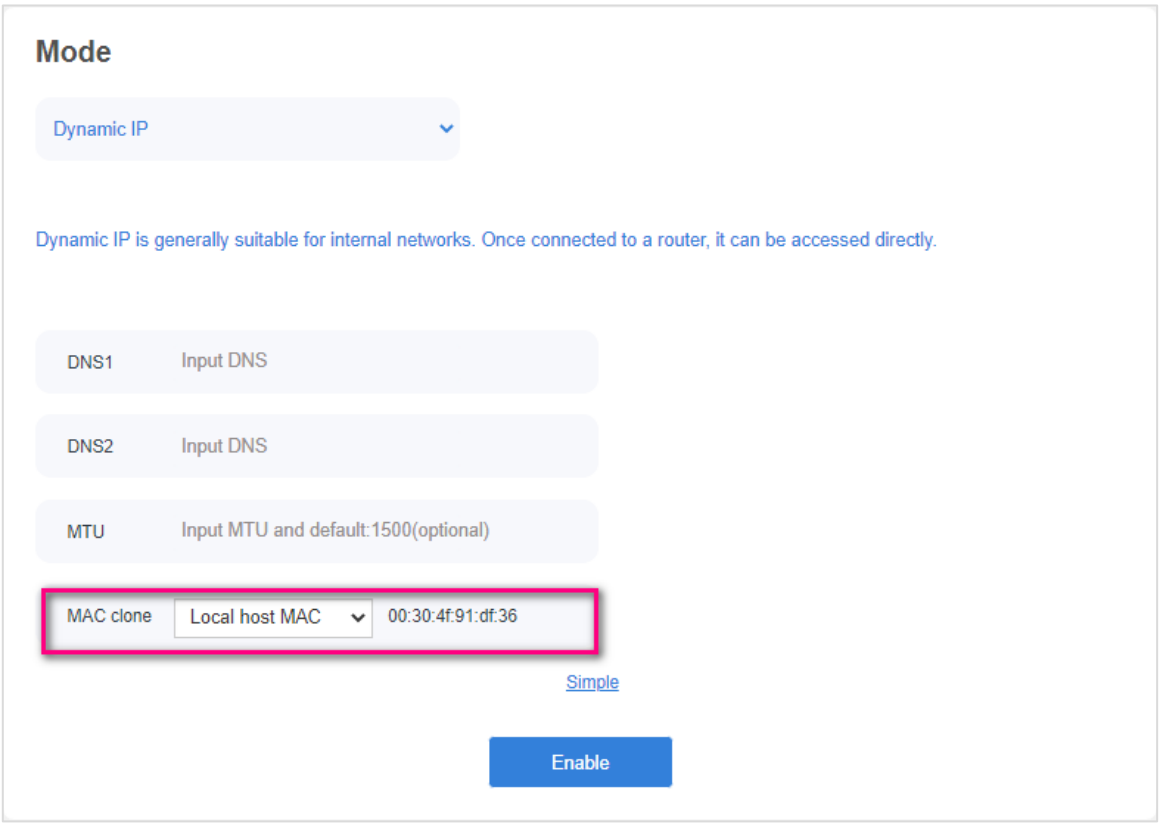
2.Restart the router or modem

3.Clone your PC's MAC address

Some operators will bind your computer's MAC address when you access the Internet through the cable modem for the first time, then we need to clone your computer's MAC address to the router

1. Visit http://192.168.1.1
2. Go to Internet setup→Advanced→MAC clone
3. Select Local host MAC, which clones your PC's MAC address to the router's WAN MAC address

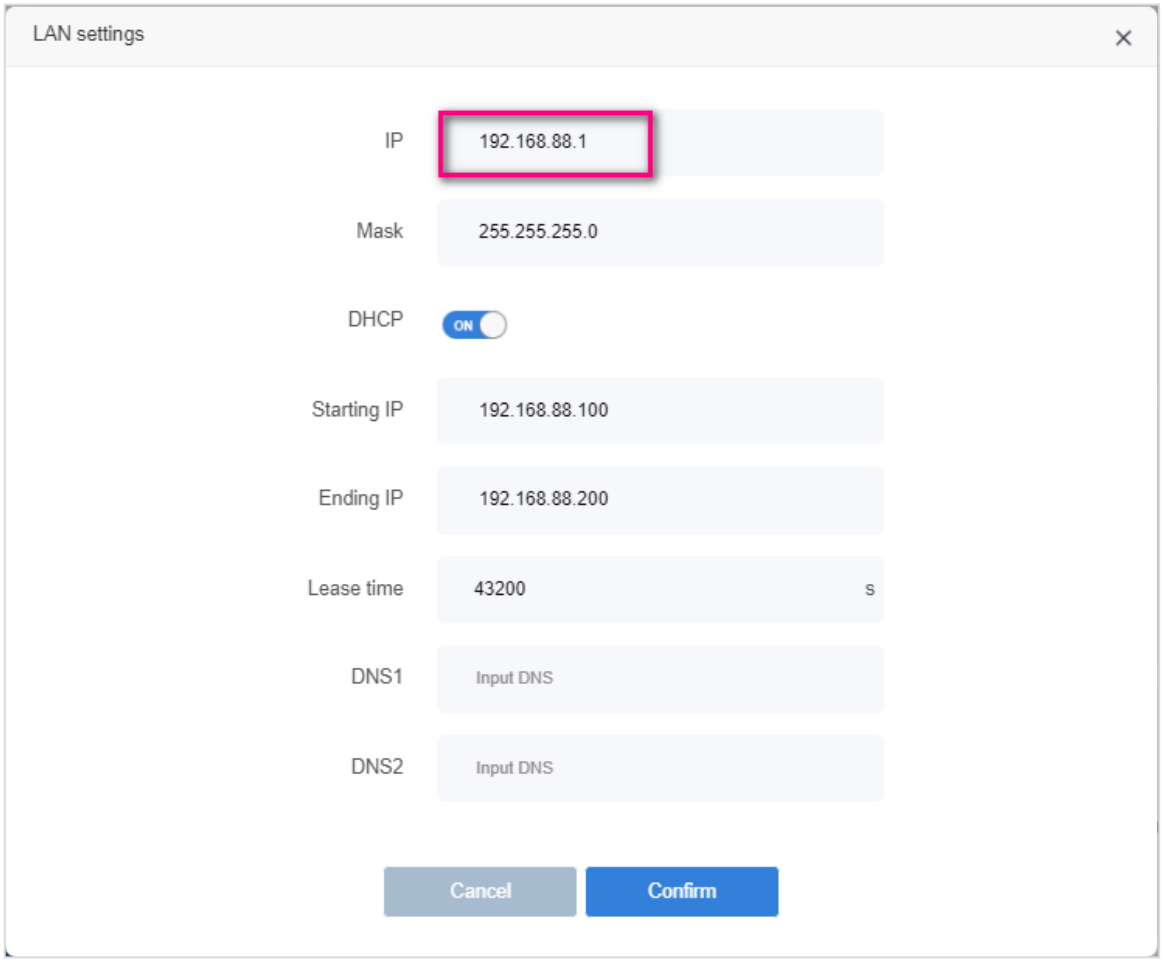




4.Change router LAN IP address

Most Ceres routers use 192.168.11.1/24 as the default LAN IP address, which may conflict with your existing modem/router IP. If so, it will cause you to not be able to access the Internet. We can change the router LAN IP to avoid IP conflict, for example 192.168.88.1

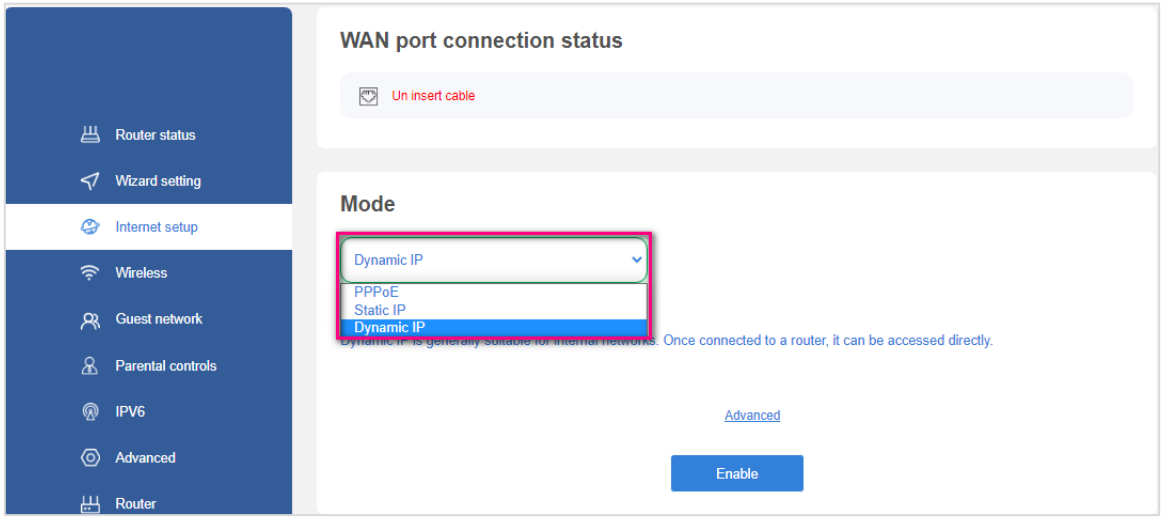
1. Visit http://192.168.1.1
2. Go to Router→LAN settings



Note: After changing the LAN IP address, you need to use the new IP to access the management interface next time.

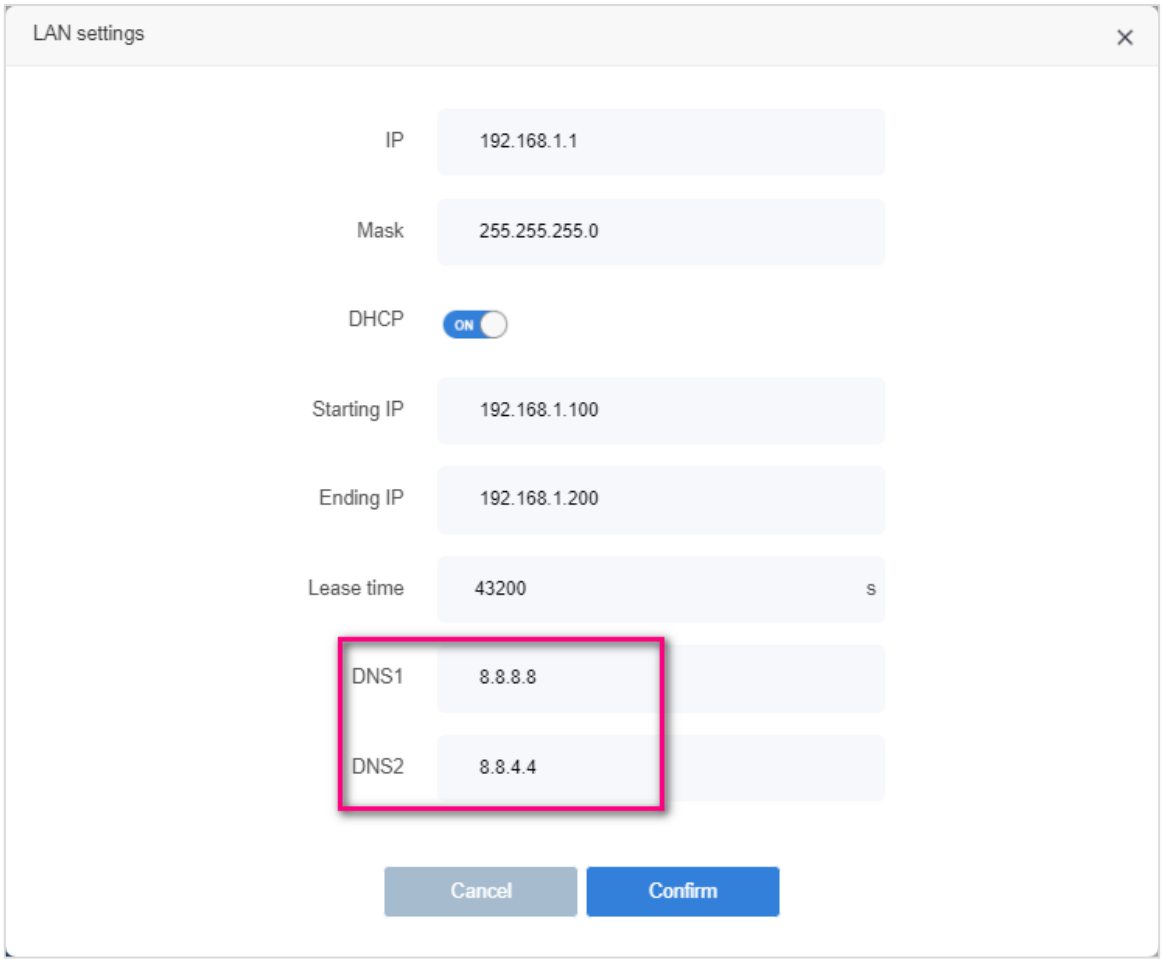
5.Double-check the Internet Connection Type.

1. Confirm your Internet Connection Type, which can be learned from the ISP.
2. Visit http://192.168.1.1
3. Go to Internet setup→Mode
4. Select your Internet Connection Type and fill in other parameters with the help of page tips.



6.Your computer might not recognize any DNS server addresses, please manually configure DNS server.

1. Visit http://192.168.1.1
2. Go to Router→LAN settings
3. Enter **8.8.8.8** as DNS1, **8.8.4.4** as DNS2



7.Reset the router to factory default settings and reconfigure the router.

8.Upgrade the firmware of the router.

9.Check the TCP/IP settings on the particular device if all other devices can get Internet from the router.

Note:If you've tried every method above but cannot access the Internet, please contact the technical support.

FAQ 5. I cannot find my wireless network or I cannot connect the wireless network

If you are using a laptop or USB wireless card with a built-in wireless adapter, make sure that your device's wireless function is enabled and the drivers are working properly.

If you can find a wireless network but can't connect, follow these steps:

1. Authentication problem/password mismatch

The default wireless password is usually on the label stuck on the back of the device. If the default password is incorrect, please try to restore the factory settings and connect again

Note:Wireless passwords are case sensitive

2. Windows cannot connect to xxx/Cannot connect to this network/Connected to this network for too long

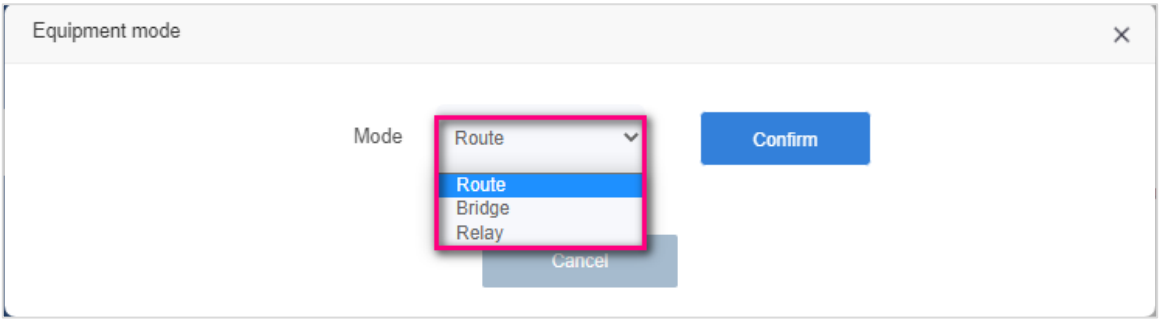
1. Check the signal strength of the network. If it is weak, move the device closer to the router.
2. Change your router's wireless channel to 1, 6, or 11 to reduce interference from other networks.
3. Reinstall or update the wireless card driver

FAQ 6. How to switch the working mode of the router?

1.Visit http://192.168.1.1

2.Go to **Router→Equipment mode**

3.Choose the working mode you need

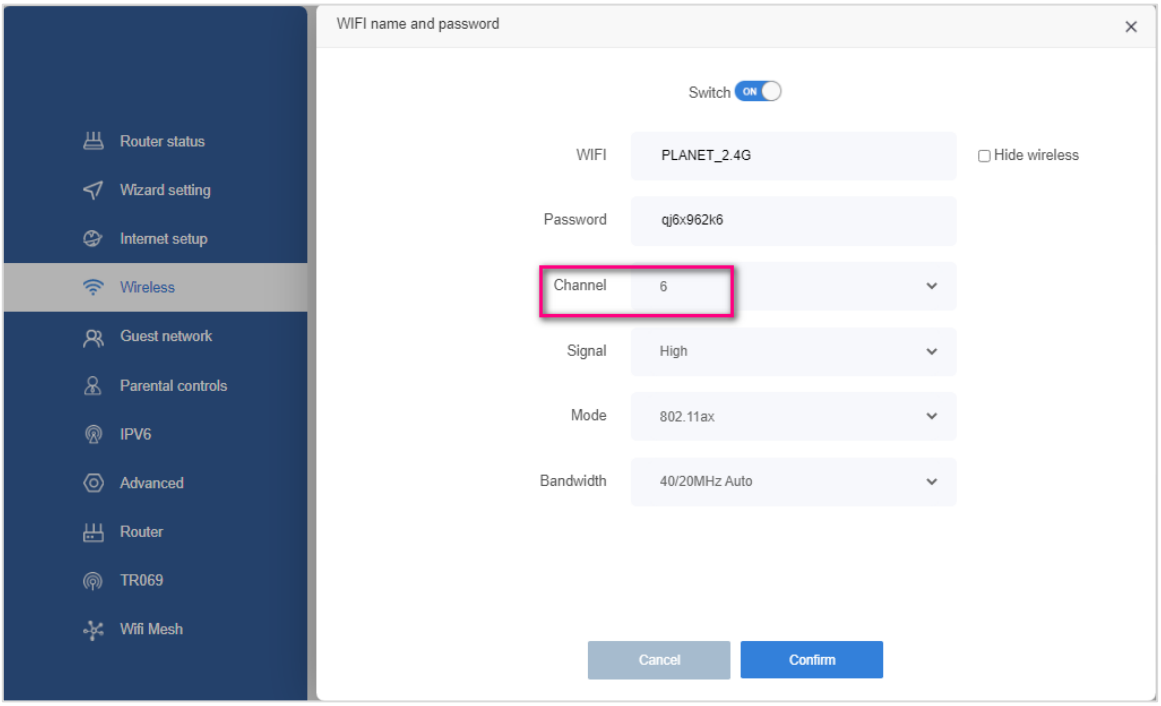


Note: In bridge and relay modes, some functions of the router cannot be used. To use the full functions, please use the routing mode

FAQ 7. How to troubleshoot wireless relay failure

Fault 1: Unable to search for Wi-Fi that needs to be relayed.

Look for channels with low channel interference. Both the main route and the sub-route are fixed to this channel.



Fault 2: Relay failed

1) Set according to **Fault 1.**
2) The main route and the sub-route are too far apart.
3) Confirm that the SSID and password for connecting to the main router are correct
4) Check whether the upper-level router has set MAC filtering. If so, please add it.
5) Factory reset or update the latest firmware

FAQ 8. How to place routers for best signal/coverage

Wi-Fi signal strength and range depend on factors such as frequency band, radio power output, receiver sensitivity, antenna gain, and antenna type. The environment also plays a very important role in the coverage and performance of the router. Floors, walls, obstacles and radio signal interference can weaken the Wi-Fi signal.

So, in many cases, the easiest and low-cost way to improve Wi-Fi coverage is to move the router to a better location. Here, we will provide some options for your reference.

1) Put the router in the middle

2) Put the router at a certain height

Home routers generally use omnidirectional antennas, which radiate around horizontally and are weaker vertically. Place your router on a table or shelf to better utilize the transmission from the antenna.

3) Stay away from high-power appliances

High-power appliances and metal products may cause signal interference. Note that electrical appliances include microwaves, refrigerators, TVs, etc.

4) Avoid obstacles

One of the materials most likely to block Wi-Fi signals is metal. Refrigerators, walls, cabinets, furniture, or other large objects will reflect and absorb Wi-Fi signals, creating Wi-Fi blind spots. Adjust the position of the router so that the Wi-Fi signal is not absorbed by metal.

5) Keep your device safe

Keep your device away from water or fire. Avoid heat and humidity to prevent device damage from affecting wireless performance.

6) Adjust the antenna

Tilt the antenna to the ground. If there are two antennas, the recommended tilt angle is between 45°-60°. If there are 3 antennas, you can place the middle antenna vertically upwards.

FAQ 9. How to troubleshoot W-Fi Mesh networking failure

1. Check whether the SSIDs of 2.4G and 5G of each router is configured with password and encryption method.
2. Check the direct distance between the main router and the sub-router and keep it within 15 meters to ensure that the Wi-Fi signal between the routers is good.
3. Make sure the MESH function in the router is enabled. And the role is set to Auto. If you specify the role of each router. You can also set the corresponding Controller and Agent roles.
4. Ensure the Wi-Fi channel interference in the Mesh networking environment is avoided. If there is channel interference from other wireless devices, please select the appropriate working channel in the Wi-Fi configuration items of the main router and the sub-router and then re-establish the network.
5. Ensure that no other device initiates a WPS connection in the Mesh networking environment.

Chapter 7. Quick Connection to a Wireless Network

Windows XP (Wireless Zero Configuration)

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

Figure 6-1

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

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

(1) Select SSID (Take PLANET for example)

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

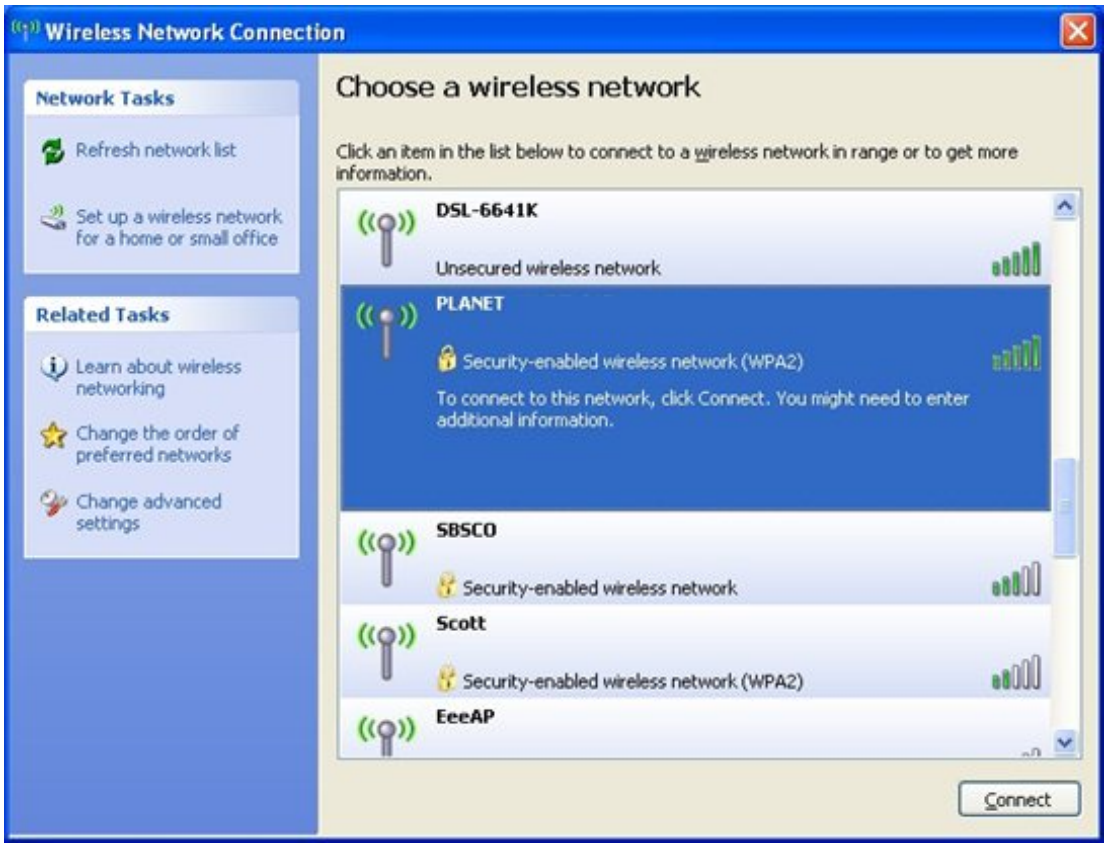


Figure 6-2 Wireless Network Connection

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

(1) The Wireless Network Connection box will appear

(2) Enter the encryption key that is configured in section 5.2.2.1

(3) Click the [Connect] button

Figure 6-3

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

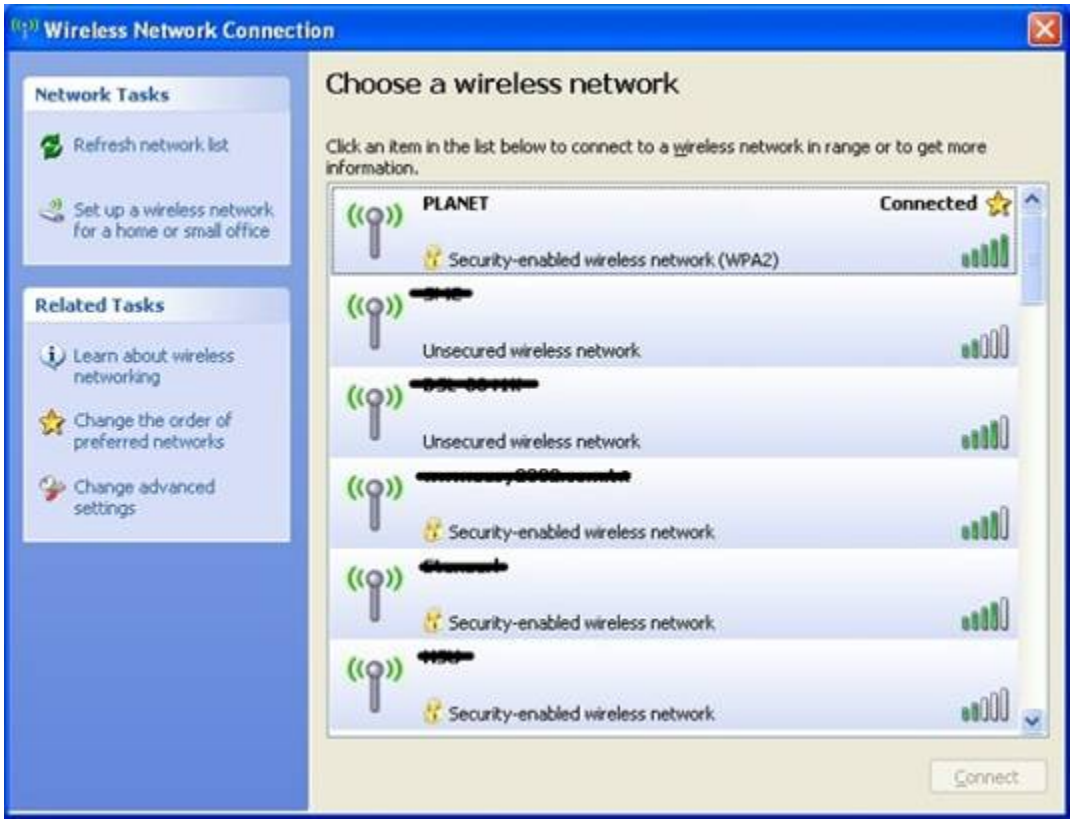


Figure 6-4

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 the "ON" position.

Windows 7/Windows 10 (WLAN AutoConfig)

WLAN AutoConfig service is built in Windows 7 for detecting and connecting 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

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

(1) Select SSID (Take default_2.4G for example)

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

Figure 6-6

Note

If you want to be connected to this Wireless Router, check [**Connect automatically**].

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

(1) **Connect to a Network** box will appear

(2) Enter the encryption key that is configured in section 5.2.2.1

(3) Click the [OK] button

Figure 6-7 Connect to a Network

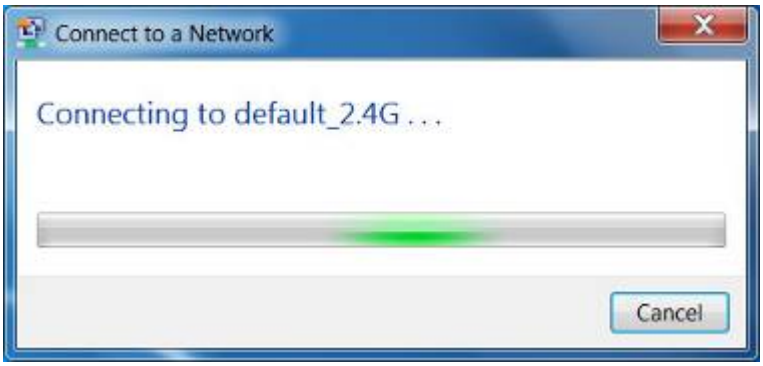


Figure 6-8 Connecting

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

Figure 6-9

Mac OS X 10.x

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

The AirPort Network Connection menu will appear

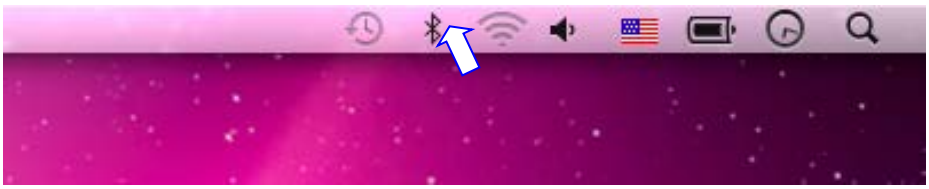


Figure 6-10

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

(1) Select and SSID (Take PLANET for example)

(2) Double-click on the selected SSID

Figure 6-11

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

(1) Enter the encryption key that is configured in section 5.2.2.1

(2) Click the [OK] button

Figure 6-12

Note

If you want to connect this Wireless Router in the future, check [**Remember this network**].

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

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

Figure 6-13

iPhone / iPod Touch / iPad

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

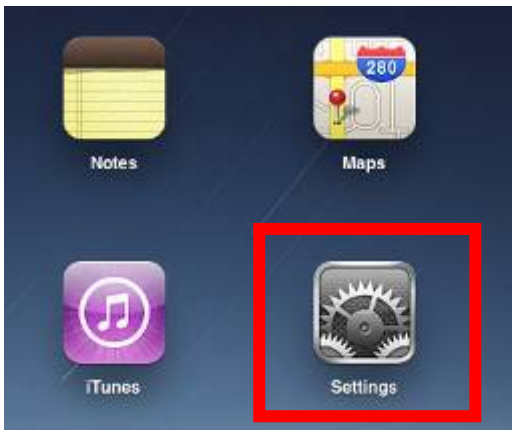


Figure 6-14

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 Router, it should show “Not Connected”.

Figure 6-15

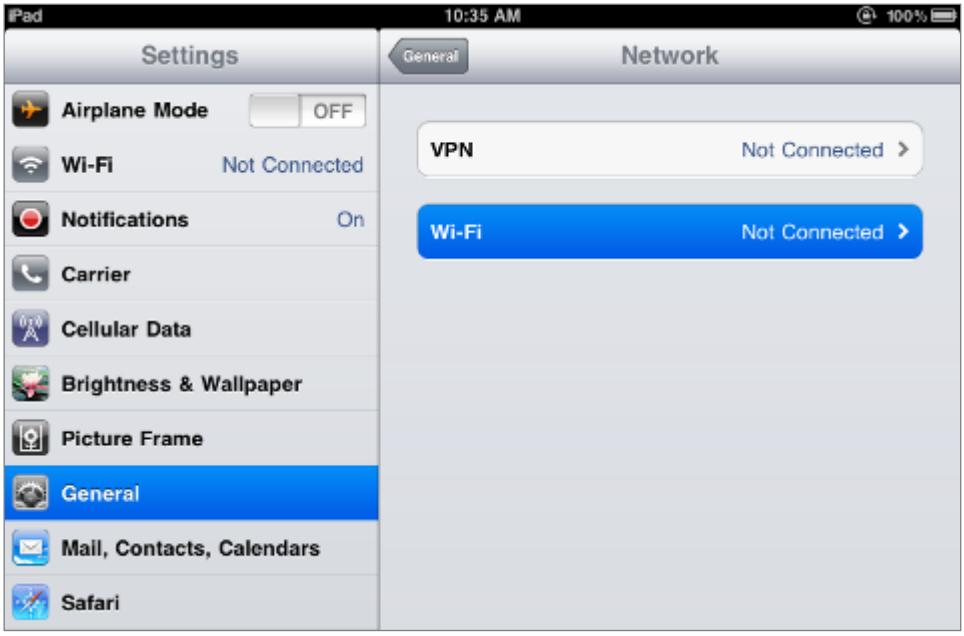


Figure 6-16

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

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

(2) Select SSID Take PLANET for example)

Figure 6-17

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

(1) The password input screen will be displayed

(2) Enter the encryption key that is configured in section 5.2.2.1

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

Figure 6-18

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 6-19

Appendix A: Specifications

EC Declaration of Conformity

English	Hereby, **PLANET Technology Corporation,** declares that this **802.11ac Dual Band Wireless Router** is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.	**Lietuviškai**	Šiuo **PLANET Technology Corporation,**, skelbia, kad **802.11ac Dual Band Wireless Router** tenkina visus svarbiausius 2014/53/EU direktyvos reikalavimus ir kitas svarbias nuostatas.
Česky	Společnost **PLANET Technology Corporation,** tímto prohlašuje, že tato **802.11ac Dual Band Wireless Router** splňuje základní požadavky a další příslušná ustanovení směrnice 2014/53/EU.	**Magyar**	A gyártó **PLANET Technology Corporation**, kijelenti, hogy ez a **802.11ac Dual Band Wireless Router** megfelel az 2014/53/EU irányelv alapkövetelményeinek és a kapcsolódó rendelkezéseknek.
Dansk	**PLANET Technology Corporation,** erklærer herved, at følgende udstyr **802.11ac Dual Band Wireless Router** overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EU	**Malti**	Hawnhekk, **PLANET Technology Corporation,** jiddikjara li dan **802.11ac Dual Band Wireless Router** 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 **802.11ac Dual Band Wireless Router** 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 **802.11ac Dual Band Wireless Router** 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 **802.11ac Dual Band Wireless Router** vastab Euroopa Nõukogu direktiivi 2014/53/EU põhinõuetele ja muudele olulistele tingimustele.	**Polski**	Niniejszym firma **PLANET Technology Corporation,** oświadcza, że **802.11ac Dual Band Wireless Router** spełnia wszystkie istotne wymogi i klauzule zawarte w dokumencie „Directive 2014/53/EU.
Ελληνικά	*ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ* , **PLANET Technology Corporation,** *ΔΗΛΩΝΕΙ ΟΤΙ ΑΥΤΟ* **802.11ac Dual Band Wireless Router** *ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ* ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/EU	**Português**	**PLANET Technology Corporation**, declara que este **802.11ac Dual Band Wireless Router** 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 **802.11ac Dual Band Wireless Router** 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 **802.11ac Dual Band Wireless Router** 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 **802.11ac Dual Band Wireless Router** 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 **802.11ac Dual Band Wireless Router** skladen/a z osnovnimi zahtevami in ustreznimi določili Direktive 2014/53/EU.
Italiano	Con la presente , **PLANET Technology Corporation,** dichiara che questo **802.11ac Dual Band Wireless Router** conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/EU.	**Suomi**	**PLANET Technology Corporation,** vakuuttaa täten että **802.11ac Dual Band Wireless Router** 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 **802.11ac Dual Band Wireless Router** atbilst Direktīvas 2014/53/EU pamatprasībām un citiem atbilstošiem noteikumiem.	**Svenska**	Härmed intygar, **PLANET Technology Corporation,** att denna **802.11ac Dual Band Wireless Router** står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EU.