MX811-2P-T

Industrial Explosion-Proof Wireless Bridge

Catalog

📖 The Purpose of The Manual 3
📖 Noun Definitions and Abbreviations 3
📖 FCC Warning 4
1 Product Introduction 5
Default parameters 5
2 Product installation 6
2. 1 Interface/Button 6
2. 2 Line Connection 6
3 Quick configuration 7
3. 1 Login 7
3. 2 Wizard Configure Wireless Association 10
3.2.1 Configure Access Point 10
3.2.2 Configure the Client 12
3.2.3 Configure Access Point (WDS) 13
3.2.4 Configure the Client (WDS) 14
4 Status 16
4. 1 Status-System 16
4. 2 Status-Statistics 18
4. 3 Status-Network 20
5 Setting 22
5. 1 Wireless 22
5.1.1 Configure Access Point 27
5.1.2 Configure Client 28
5.1.3 Configure Access Point (WDS) 29
5.1.4 Configure Client (WDS) 30
5. 2 Network 31
5. 2. 1 Network 31
5. 2. 2 Management Interface 31
5. 2. 3 Advanced Settings 34
5. 3 QoS 37
5. 4 Service 39
5. 5 System 42
6 Tools 43
6. 1 Ping IP 43
6. 2 Link Test 44
7 Logout 45
8 Troubleshooting 46

🕮The Purpose of The Manual

For MX811-2P-T, Industrial Explosion-Proof Wireless Bridge, this manual introduces product positioning and features, product architecture, business features, application scenarios, operation and maintenance, and technical indicators. It is convenient for readers to have a comprehensive understanding of product features, installation and configuration.

🕮 Noun Definitions and Abbreviations

Table 2 Noun Definitions and Abbreviations

Serial Aumber	Definitions and Qbbreviations	Description
1	Access Point(AP)	An access point for a wireless network
2	Client	Wireless client
3	DCS	Dynamic channel selection

🕮FCC Warning

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

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

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the 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:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

1 Product Introduction

MX811-2P-T is an outdoor dual-band wireless AP product that supports 802.11a/n/ac protocol. Using 2*2 MIMO, the performance is up to 867Mbps, this device is suitable for high-density venues, squares, pedestrian streets, playgrounds and other coverage scenarios. It supports gigabit network ports and uses POE+ for power supply, making network deployment more convenient and flexible.

Default parameters

Table 4 Main parameters of default factory settings

项目	MX811-2P-T
IP Address	192.168.1.1
User	root
Password	admin
Wireless Mode	Access Point
Encryption	WPA2-PSK
Key	1234567890abc

2 Product installation

2. 1 Interface/Button

Figure 2-1 Interface/Button Diagram

Table 3 Interface/Button Description

Interface/Button	Connection and function
POE	Connect the "POE" on the POE power supply via a network cable to power and transmit data to the device

2. 2 Line Connection

installation diagram：

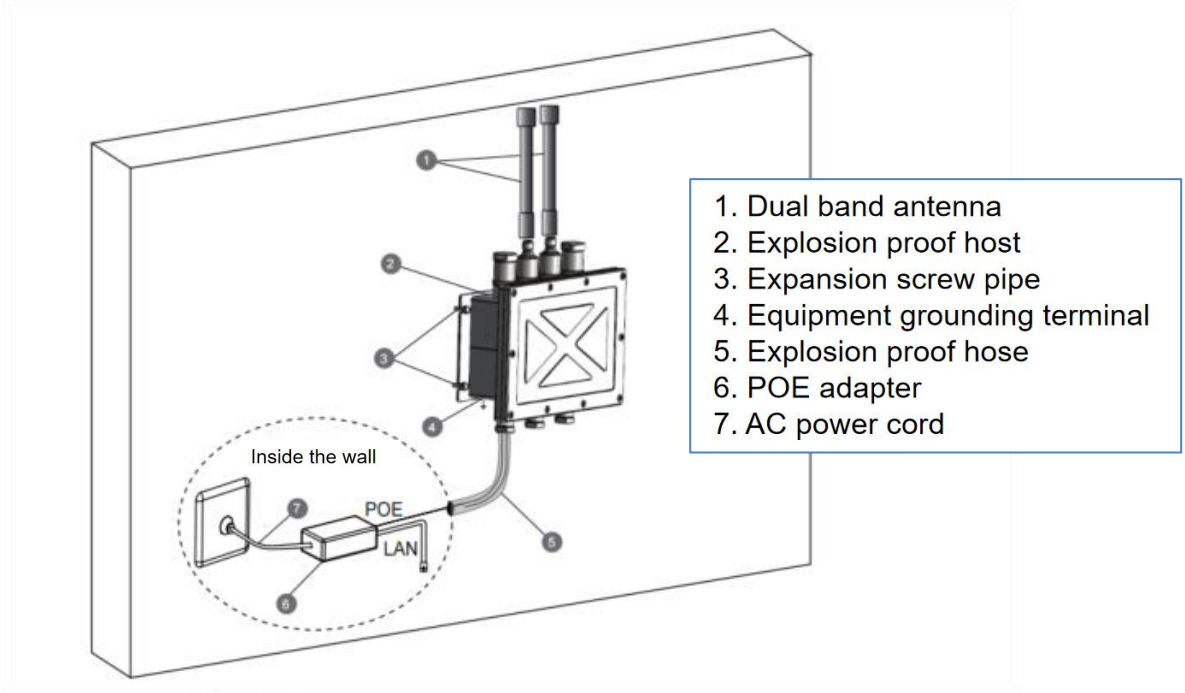


Figure 2-2 Line Connection

3 Quick configuration

This chapter describes how to quickly configure the device so that it can work normally.

3.1 Login

Before logging in, you need to simply configure the computer connecting the device so that the IP address of the computer and the device are in the same network segment. The specific operation steps are as follows (take windows10 as an example)

1. Right click the network icon in the taskbar and click open network and Internet settings to open the window as shown in the following figure:

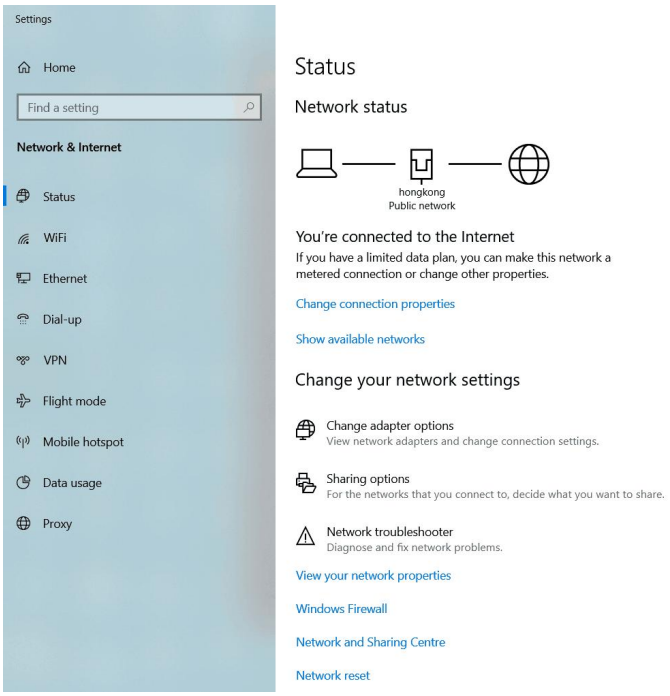


Figure3- 1 Network status

2. Click change adapter Options > local connection > properties to enter the property configuration page, as shown in the following figure:

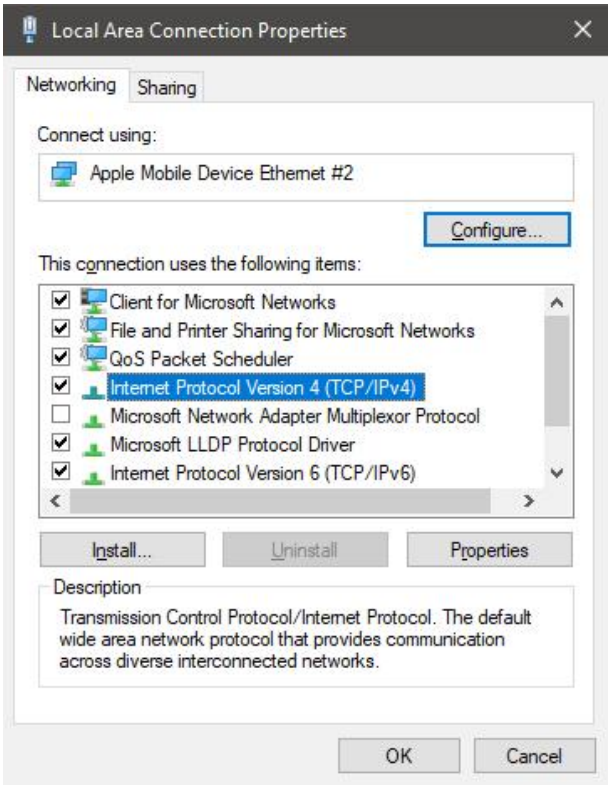


Figure3- 2 Local Connection Properties

3. Select "Internet Protocol Version 4 (TCP / IPv4)", double-click the left mouse button, a window pops up as shown below:

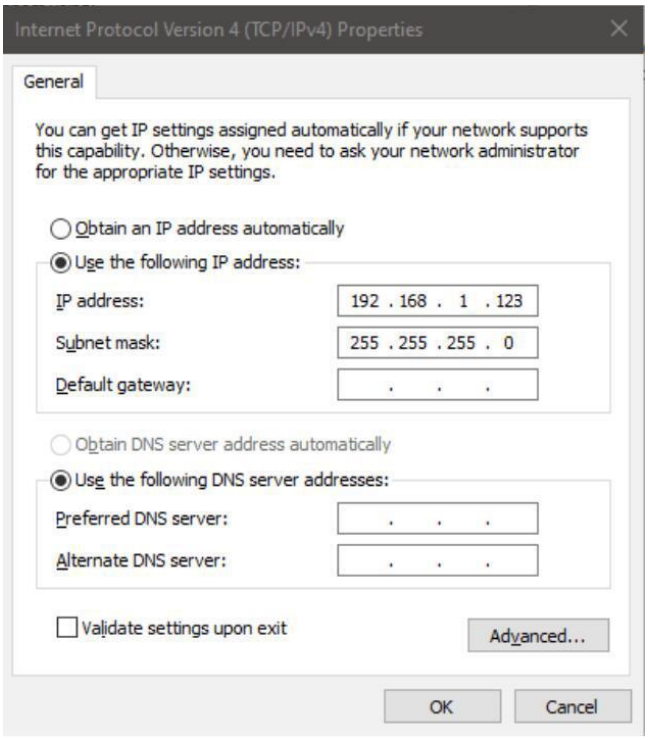


Figure3-3 IP Connection

4. The IP address is set to the same network segment as the device, and the IP cannot be the same as the device. For example, if the device's IP is 192.168.1.1, then the host can be set to 192.168.1.123.

5. Enter the default IP 192.168.1.1 of the device in the address bar of the browser, and press Enter to jump to the page shown in the figure below.

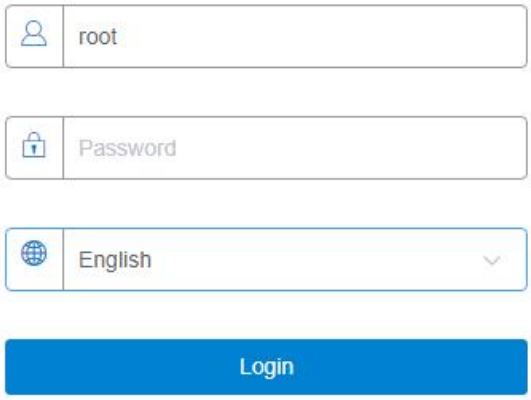


Figure3-4 Login Screen

5. Enter the default user name: admin and password: 123 in the login box. Click the login button to jump to the device page.

3. 2 Wizard Configure Wireless Association

Through the wizard page, you can quickly configure the wireless association between two devices (the wireless settings page can also be configured see Chapter 5 for details). The device supports four modes: access point mode, client mode, access point (WDS) mode and client (WDS) mode. Client mode can only be used with access point mode, and access point (WDS) mode and client (WDS) mode can be used together.

3.2.1 Configure Access Point

(1) After a successful login, the "Status Display" page is entered by default. Click "Wizard" in the upper right corner to enter the "Wizard-Network" page, as shown in the figure below. To prevent IP conflicts, please modify the IPv4 address.

Figure3-5 Wizard-Network

(2) Click "Next" to enter the "Wizard-Wireless" page, which displays the basic wireless parameter configuration and wireless encryption options for 5G, as shown in the figure below. Modify the network name of the wireless frequency band to be used, for example, modify the network name of 5Gwifi to 5Glink.

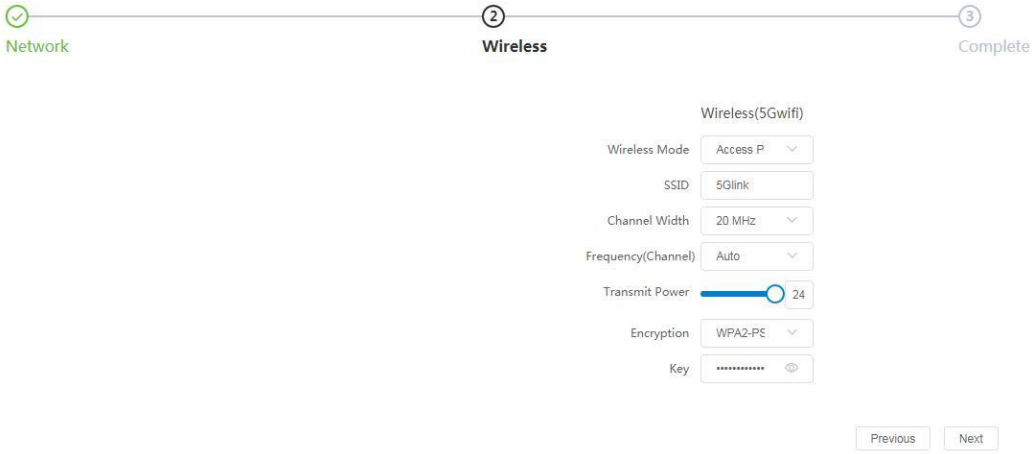


Figure3-6 Wizard-Wireless

(3) Continue to click "Next" to enter the "Wizard-Finish" page, as shown in the figure below. Click the "Finish" button to save all settings, or click "Back" to change the previous configuration.

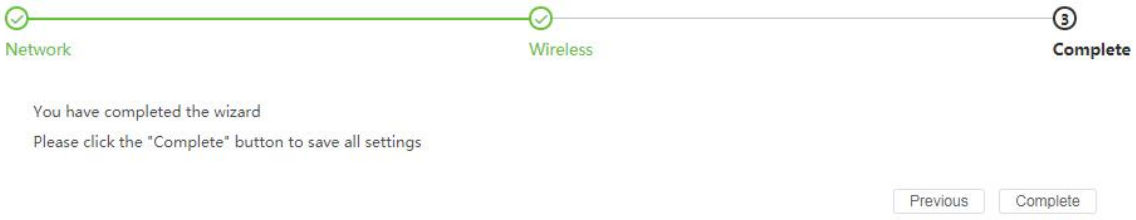


Figure3-7 Wizard-Finish

The access point configuration is complete.

3.2.2 Configure the Client

(1) After a successful login, the "Status Display" page is entered by default. Click "Wizard" in the upper right corner to enter the "Wizard-Network" page, as shown in the figure below. To prevent IP conflicts, please modify the IPv4 address.

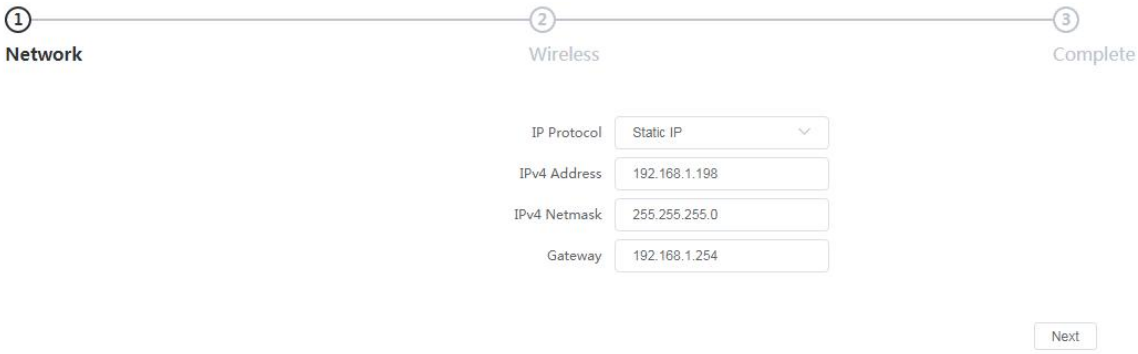


Figure3- 8 Wizard-Network

(2) Click "Next" to enter the "Wizard-Wireless" page, which displays the basic wireless parameter configuration and wireless encryption options for 5G, as shown in the figure below. Modify the wireless mode of the wireless frequency band to be used as the client and the network name corresponding to the access point. For example, modify 5Gwifi to the client mode and the network name to 5Glink.

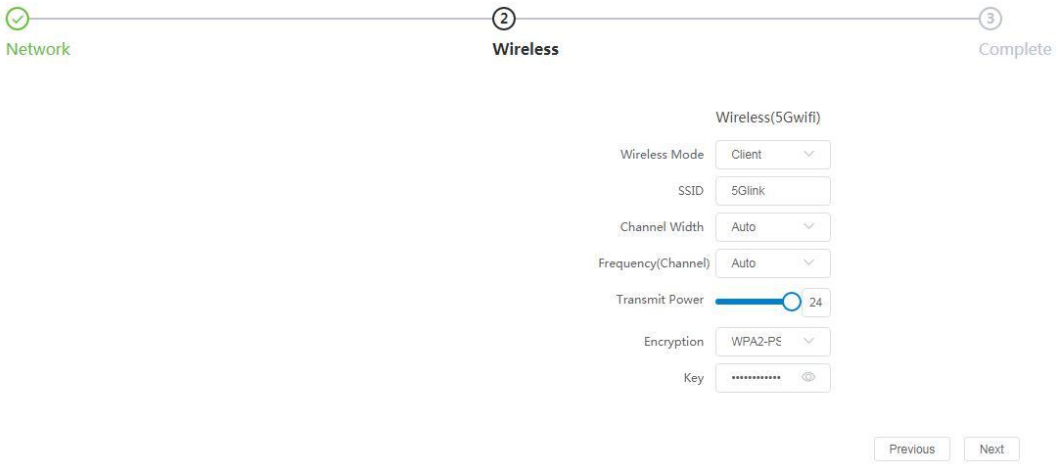


Figure3- 9 Wizard-Wireless

(3) Continue to click "Next" to enter the "Wizard-Finish" page, as shown in the figure below. Click the "Finish" button to save all settings, or click "Back" to change the previous configuration.

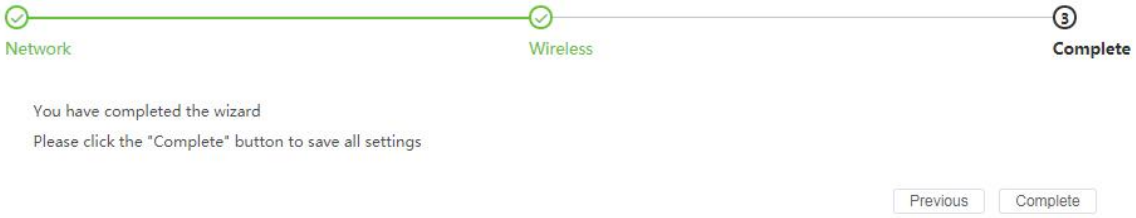


Figure3- 10 Wizard-Finish

The client configuration is complete. At this point, the client can successfully connect with the access point whose network name is 5Glink.

3.2.3 Configure Access Point (WDS)

(1) After a successful login, the "Status Display" page is entered by default. Click "Wizard" in the upper right corner to enter the "Wizard-Network" page, as shown in the figure below. To prevent IP conflicts, please modify the IPv4 address.

Figure3- 11 Wizard-Network

(2) Click "Next" to enter the "Wizard-Wireless" page, which displays the basic wireless parameter configuration and wireless encryption options for 5G, as shown in the figure below. Modify the wireless mode of the wireless frequency band to be used as the access point (WDS) and the network name. For example, modify the 5Gwifi to the access point (WDS) mode and the network name as 5GWDSlink.

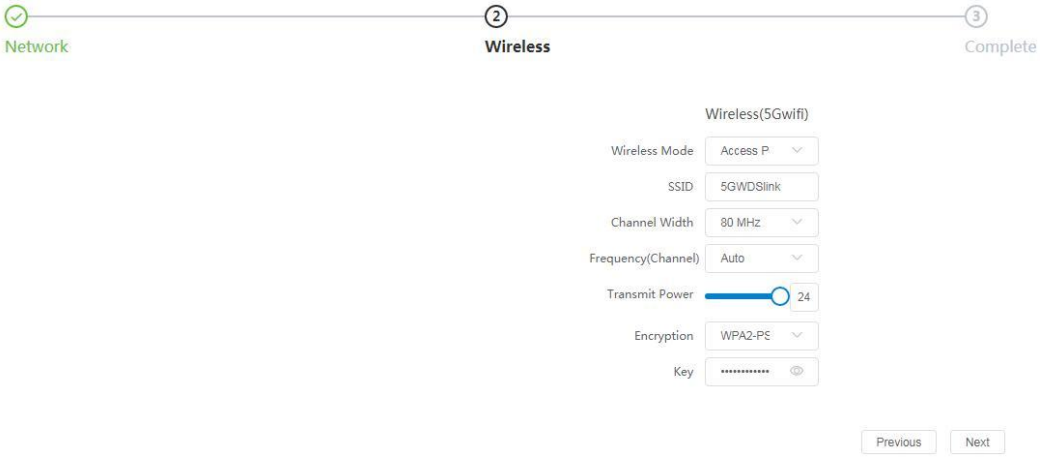


Figure3- 12 Wizard-Wireless

(3) Continue to click "Next" to enter the "Wizard-Finish" page, as shown in the figure below. Click the "Finish" button to save all settings, or click "Back" to change the previous configuration.

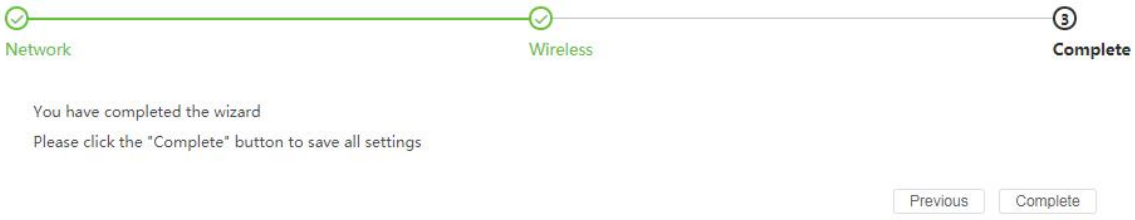


Figure3- 13 Wizard-Finish

The access point (WDS) configuration is complete.

3.2.4 Configure the Client (WDS)

(1) After a successful login, the "Status Display" page is entered by default. Click "Wizard" in the upper right corner to enter the "Wizard-Network" page, as shown in the figure below. To prevent IP conflicts, please modify the IPv4 address.

Figure3- 14 Wizard-Network

(2) Click "Next" to enter the "Wizard-Wireless" page, which displays the basic wireless parameter configuration and wireless encryption options for 5G, as shown in the figure below. Modify the wireless mode of the wireless frequency band to be used as the client (WDS) and the network name corresponding to the access point. For example, modify 5Gwifi to the client (WDS) mode, and the network name is 5GWDSlink.

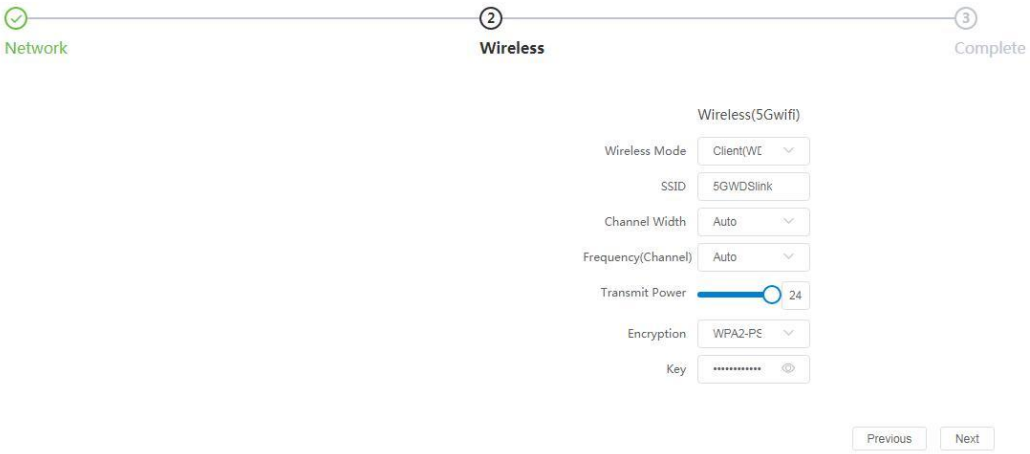


Figure3- 15 Wizard-Wireless

(3) Continue to click "Next" to enter the "Wizard-Finish" page, as shown in the figure below. Click the "Finish" button to save all settings, or click "Back" to change the previous configuration.

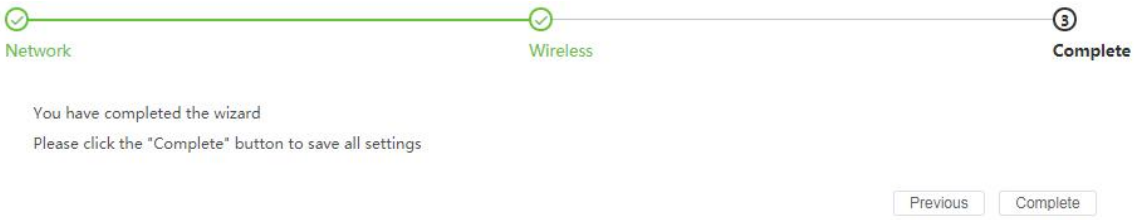


Figure3- 16 Wizard-Finish

The WDS client configuration is complete, and the client (WDS) can successfully connect with the access point (WDS) whose network name is 5GWDSlink.

Note: Client mode and access point mode are used together, client (WDS) and access point (WDS) are used together, do not mix.

4 Status

The default display page after a successful login is the status page, which displays the current part of the device's parameter configuration and real-time monitoring of the current working status, which includes information, statistics, and network sub-pages.

4. 1 Status-System

Status-System displays part of the current configuration information of the device:

Device information: System information of the device, including device name, running time, firmware version, and device time.

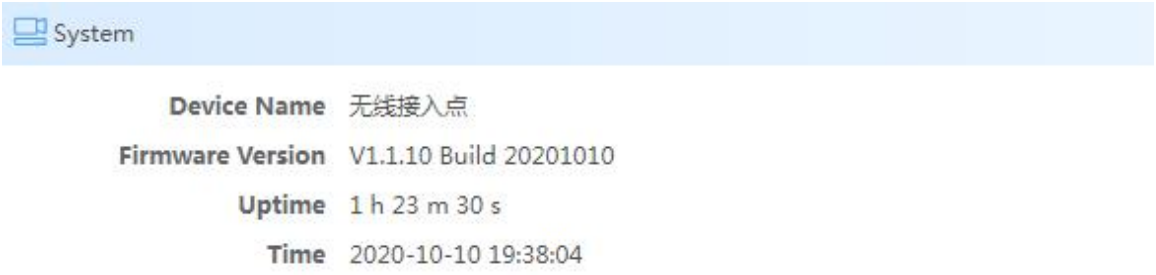


Figure4- 1 System

Network: Device network related information, including network mode, IP address and other information, can be configured in Settings-Network Settings.

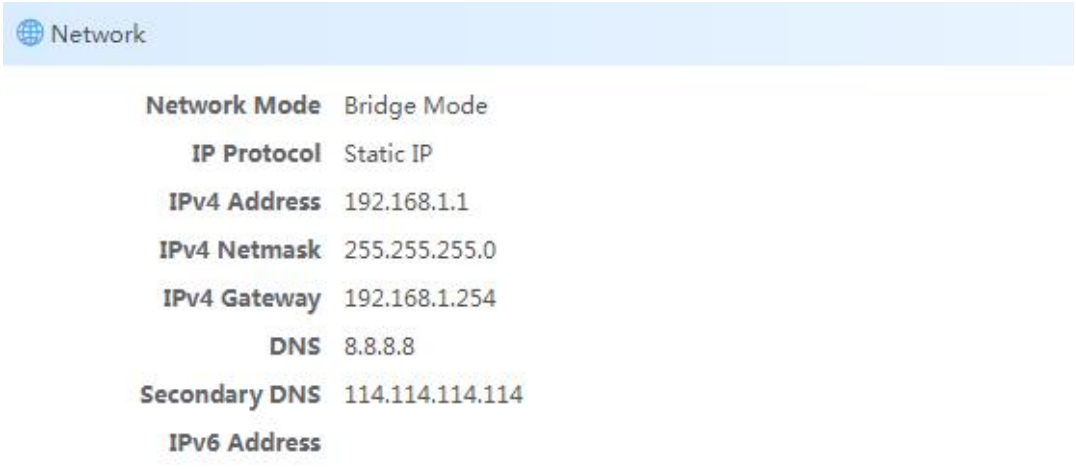


Figure4- 2 Network

Wireless: Display 5G wireless information of the device, including wireless mode, network name, frequency, security mode, etc., which can be configured in Settings-Wireless Settings.

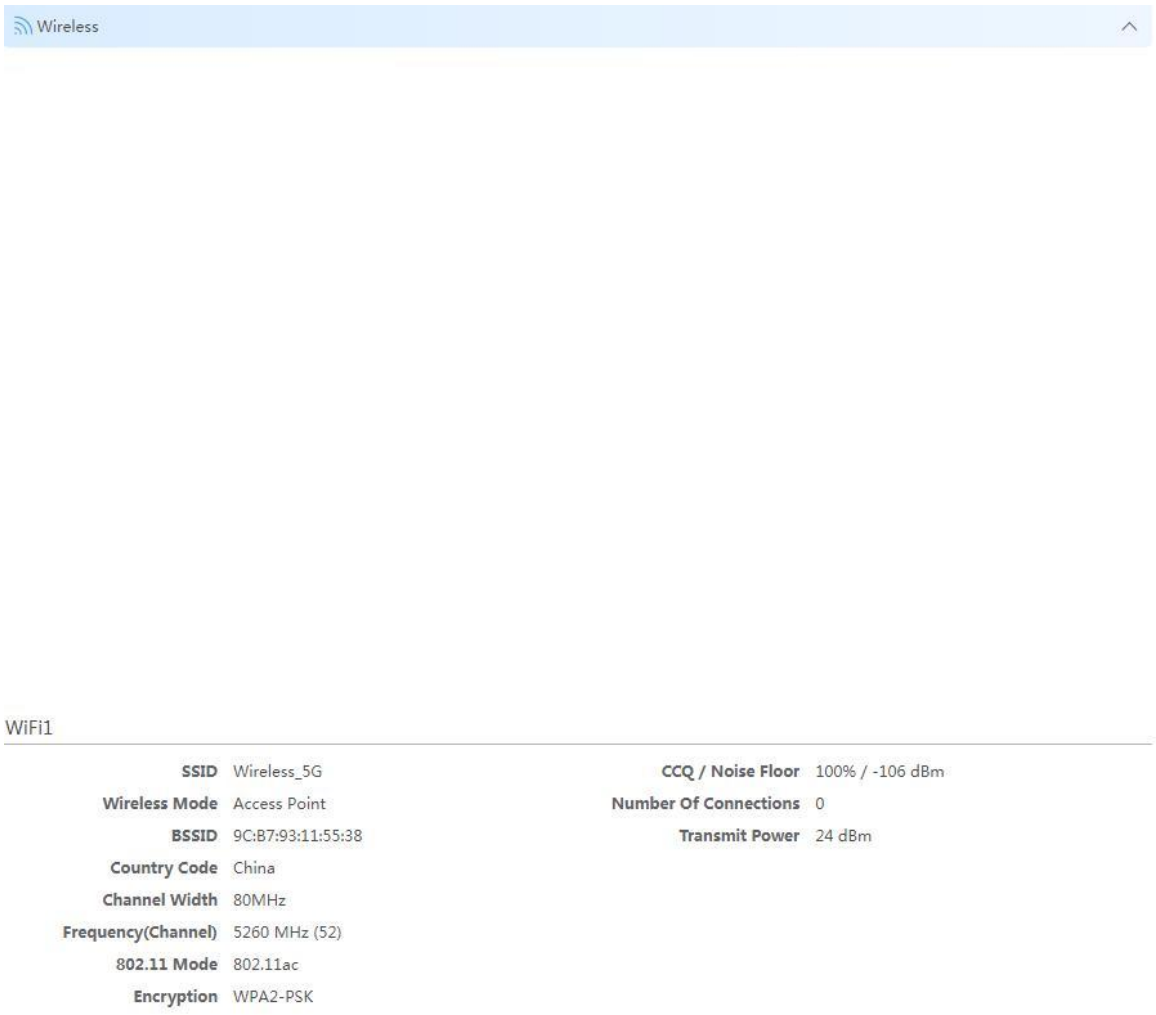


Figure4-3 Wireless

Station List: The information of the opposite device when the device is associated, including the IP address of the opposite device, TX/RX rate (that is, sending/receiving rate), connection duration, etc.

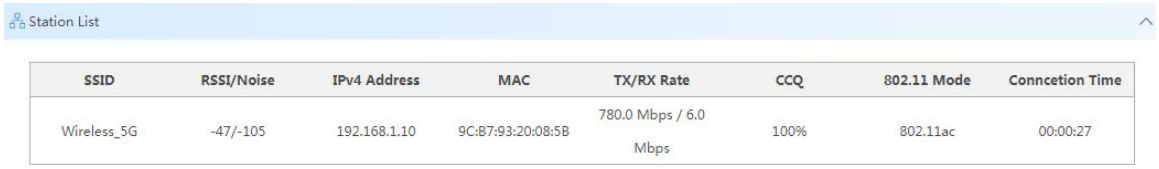
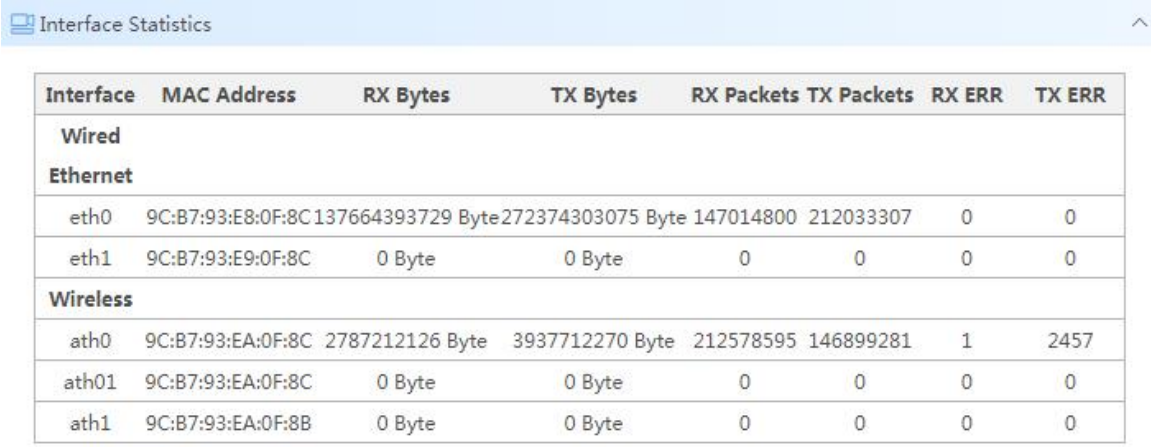


Figure4-4 Station List

4.2 Status-Statistics

This page displays the network interface statistics and traffic statistics of the device, which refers to the amount of data transmitted on the network per unit time, and is the main indicator for measuring network performance. The specific information is as follows:

Interface Statistics: Including the number of bytes received and sent by the wired port and wireless port of the device and the number of data packets.



Interface	MAC Address	RX Bytes	TX Bytes	RX Packets	TX Packets	RX ERR	TX ERR
Wired Ethernet							
eth0	9C:B7:93:E8:0F:8C	137664393729 Byte	272374303075 Byte	147014800	212033307	0	0
eth1	9C:B7:93:E9:0F:8C	0 Byte	0 Byte	0	0	0	0
Wireless							
ath0	9C:B7:93:EA:0F:8C	2787212126 Byte	3937712270 Byte	212578595	146899281	1	2457
ath01	9C:B7:93:EA:0F:8C	0 Byte	0 Byte	0	0	0	0
ath1	9C:B7:93:EA:0F:8B	0 Byte	0 Byte	0	0	0	0

Figure4- 5 Interface Statistics

Throuthput: Including wired traffic statistics and wireless traffic statistics, the real-time traffic of TX and RX (that is, sending and receiving) are displayed in the form of graphs, which is more intuitive and clear.

Figure4-6 Throughput

4.3 Status-Network

This page displays the routing table, ARP table, and bridge device list of the device. The specific information is as follows:

Routes Table: The routing table stores the path to the network where the device is located.

IPv4 Routes Table

Destination	Netmask	Gateway	Interface	Metric
0.0.0.0	0.0.0.0	192.168.1.254	br-lan	0
192.168.1.0	255.255.255.0	0.0.0.0	br-lan	0
224.0.0.0	240.0.0.0	0.0.0.0	br-lan	0

Figure4-7 IPv4 Routes Table

IPv6 Routes Table

Destination	Netmask	Gateway	Interface	Metric
fe80::	64	::	br-lan	256
fe80::	64	::	ath0	256
fe80::	64	::	ath01	256
fe80::	64	::	ath1	256
::1	128	::	lo	0
fe80::	128	::	lo	0
fe80::	128	::	lo	0
fe80::	128	::	lo	0
fe80::	128	::	lo	0
fe80::9eb7:93ff:fe0f:5539	128	::	lo	0
fe80::9eb7:93ff:fe11:5538	128	::	lo	0
fe80::9eb7:93ff:fe11:5539	128	::	lo	0
fe80::a0b7:93ff:fe11:5539	128	::	lo	0
ff00::	8	::	br-lan	256
ff00::	8	::	ath0	256
ff00::	8	::	ath01	256
ff00::	8	::	ath1	256

Figure4-8 IPv6 Routes Table

ARP Table: The correspondence between the IP address and the MAC address that the device has obtained in the most recent period of time.

ARP Table

IPv4 Address	MAC Address	Interface
192.168.1.254	00:00:00:00:00:00	br-lan
192.168.1.149	08:1F:71:04:69:C6	br-lan

Figure4-9 ARP Table

Bridge Table: The corresponding relationship between the MAC address and the aging time of other devices that have passed through it in the most recent period of time acquired by the device.

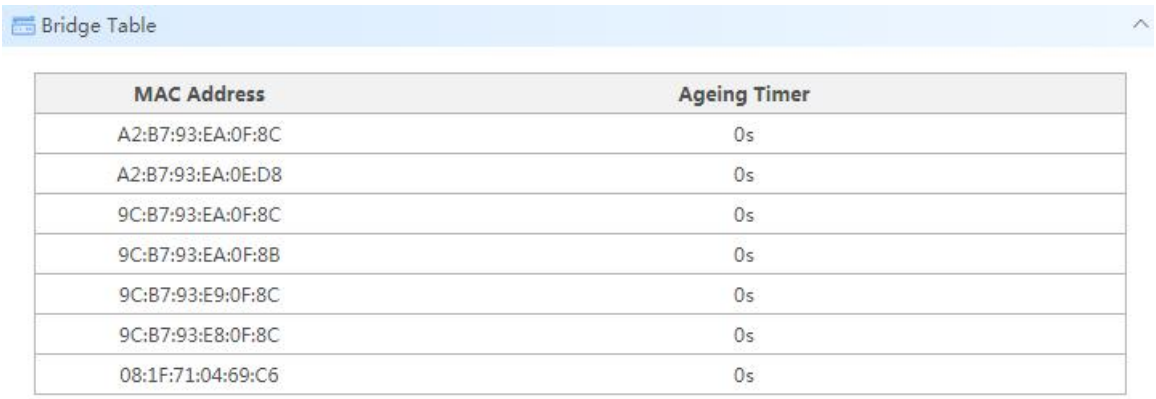


Figure4- 10 Bridge Table

5 Setting

The settings page can configure the device in detail, including wireless settings, network settings, traffic management, service settings, and system settings.

5. 1 Wireless

The wireless setting page is shown below:

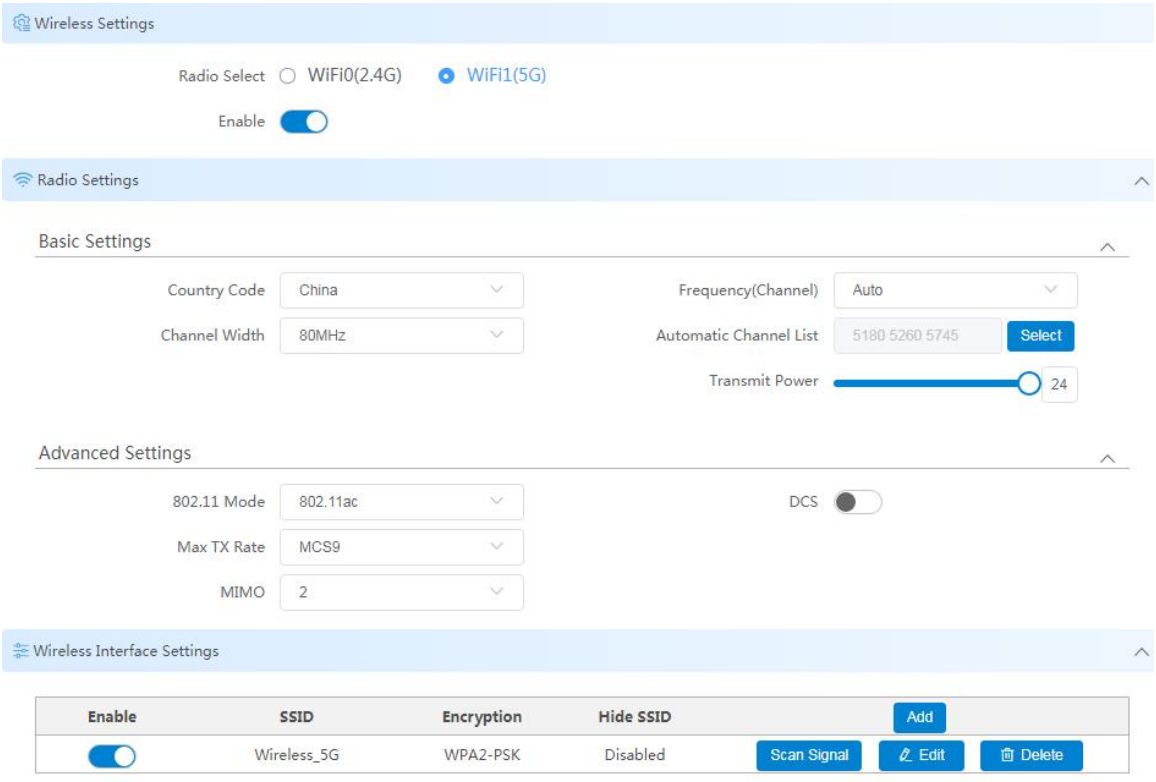


Figure5- 1 Wireless Setting- 5G

Setting: Select the wireless network, the device supports 5G frequency bands. 5G wireless can be configured in the enabled state, and the corresponding wireless function is turned off when closed.

Wireless: The wireless settings page contains Basic Settings and Advanced Settings, the following parameters can be configured:

- **Country Code:** Different countries or regions have different standard channels, and the corresponding country code should be selected according to the needs.
- **Channel Width:** Limit the upper and lower limits of the signal frequency allowed to pass through the channel.
- **Frequency (Channel):**The center frequency of the carrier. When the access point is associated with the client, the frequency should be consistent.
- **Transmit Power:** The power of the wireless signal transmitted by the device is adjusted by the user according to the distance between the devices, when the output power is increased, the signal strength will be improved, thus increasing the transmission distance of the equipment.

  802.11a/n, the default is 802.11ac.
- **MIMO:** The user can select “1 “or “2 “to adjust whether the device works in wireless mode.
- **Max TX Rate:** The maximum transmission rate of the equipment, which is set to limit the maximum transmission rate of the equipment to ensure the stability of the equipment performance.
- **Temperature:** Temperature control is turned on by default to prevent high CPU temperature and equipment damage under high throughput conditions.
- **DCS:**Dynamic channel selection is a feature of detecting and avoiding bottom noise interference. When the channel noise or interference reaches a certain level, the equipment will dynamically select a channel with less interference to re connect.

Figure5- 3 Wireless Setting-General Wireless Network

Figure5-4 Wireless Setting-MGMT Wireless Network

The following parameters can be configured on this page:

- **SSID:**Only when the SSIDs of other devices are connected to each other can they be connected to each other. Network name only supports 1-32 bits of Chinese (1 Chinese character takes 3 bits), English, numbers and special symbol '~! @ # $% ^ - * ()-_ =+.
- **Wireless Mode:**There are four wireless modes in the equipment, including access point, client, client (WDS) and access point (WDS).

Note: the client mode and access point mode are used together, and the client (WDS) and access point (WDS) are used together. Do not mix them.

- **Encryption:** To encrypt the wireless connection, users can choose the corresponding encryption method according to their own security requirements. The wireless encryption of devices to be associated with each other must be set to the same, otherwise, the association will not work.
- **Hide SSID**: Hide wireless network name.If this function is checked, other mobile phones, computers and other terminals and client devices will not be able to search the SSID of the access point device, so as to avoid being connected by others and not affect their own use.
- **Client Isolation:** This function can make the devices connected to the same access point not communicate with each other. Even if the IP of each client is repeated, it will not affect the communication. This function only exists in the access point mode.
- **BSSID:** In the networking environment with multiple identical SSIDs, the client device can specify the access point to be associated by setting the wireless MAC address of the corresponding access point (only displayed on the client page).
- **Speed Limit:** Limit the uplink speed and downlink speed of users associated with the device (only the access point page is displayed).
- **Max Users:** The access point limits the number of connected users by setting it (access point page display only).
- **Minimum Access Signal Limit:** The access point defines the minimum signal strength of the associated device by setting it. The device whose signal strength is lower than the set value will be kicked out of the access point device and cannot be associated successfully (only the access point page is displayed).
- **MAC Filtering:**Allow devices on or off the list to communicate (access point page display only).

- **802.11R:**The roaming of wireless terminal equipment is realized through fast BSS transition (only 5g access point page is displayed).

The following section will describe how to configure the wireless connection between two devices (the wizard page can also be configured quickly, see Section 3.2). The device supports four modes: access point mode, client mode, access point (WDS) mode and client (WDS) mode. The client mode can only be used with access point mode, and access point (WDS) mode and client (WDS) mode can be used together.

5.1.1Configure Access Point

In the wireless network selection, click the radio band you want to use, such as WIFI1 (5G).

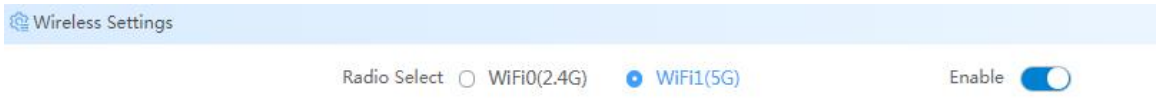


Figure5- 5 Wireless Network Selection

Click the Modify button of wireless interface settings to change the network name to Wireless_ link, click finish.

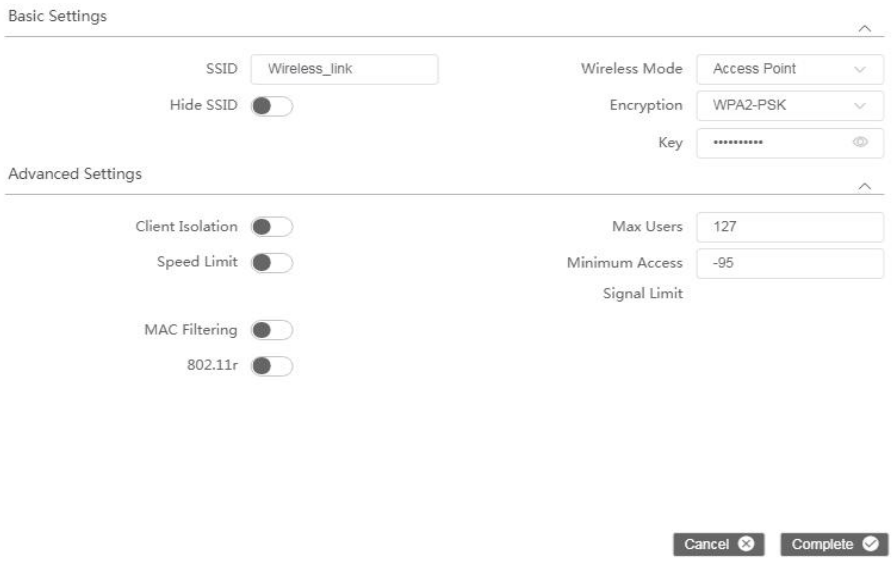


Figure5- 6 Wireless Interface Settings-Modify SSID

Click the upper right corner to save. Access point configuration is complete.

Figure5-7 Save

5.1.2Configure Client

In the wireless network selection, click the radio band you want to use, such as WIFI1 (5G).

Figure5-8 Wireless Network Selection

Click the Modify button of wireless interface settings to change the wireless mode to client and the network name to Wireless_ link, click finish.

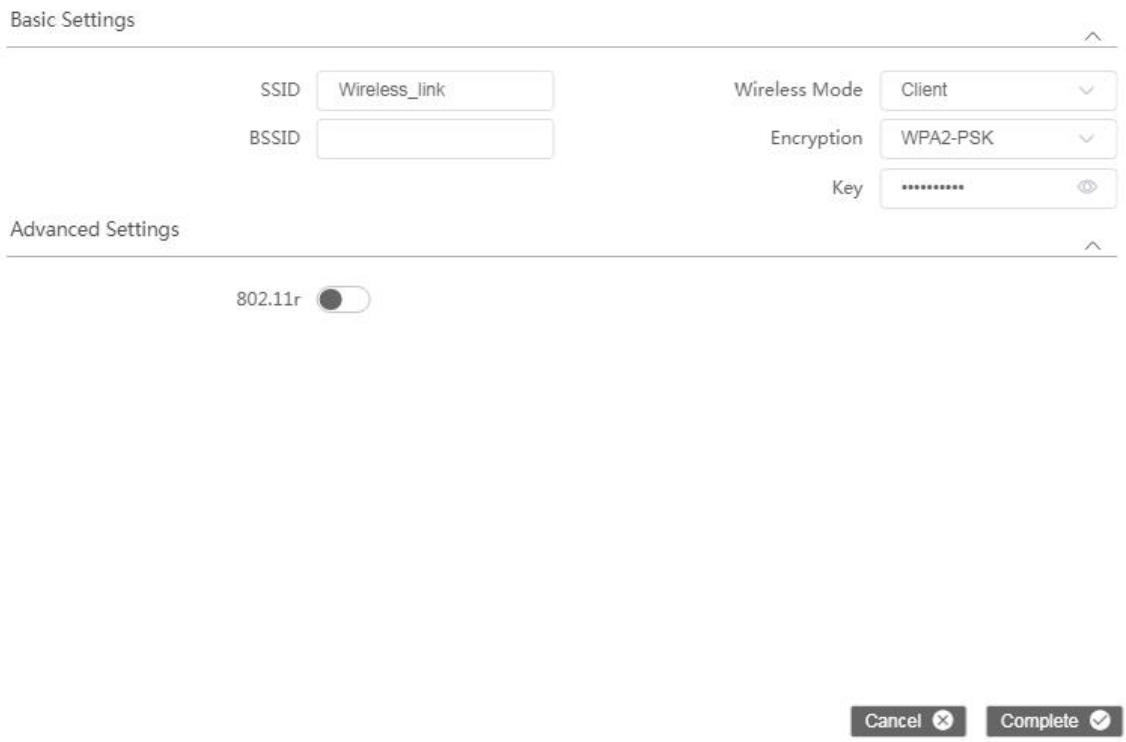


Figure5-9 Wireless Interface Settings-Modify SSID

Click the upper right corner to save. Client configuration is complete.

Figure5-10 Save

At this time, the client can successfully connect with the access point with the network name of Wireless_link.

5.1.3Configure Access Point (WDS)

In the wireless network selection, click the radio band you want to use, such as WIFI1(5G).

Figure5- 11 Wireless Network Selection

Click the Modify button of wireless interface settings, and then change the wireless mode to access point (WDS) and the network name to Wireless_ WDS, click finish.

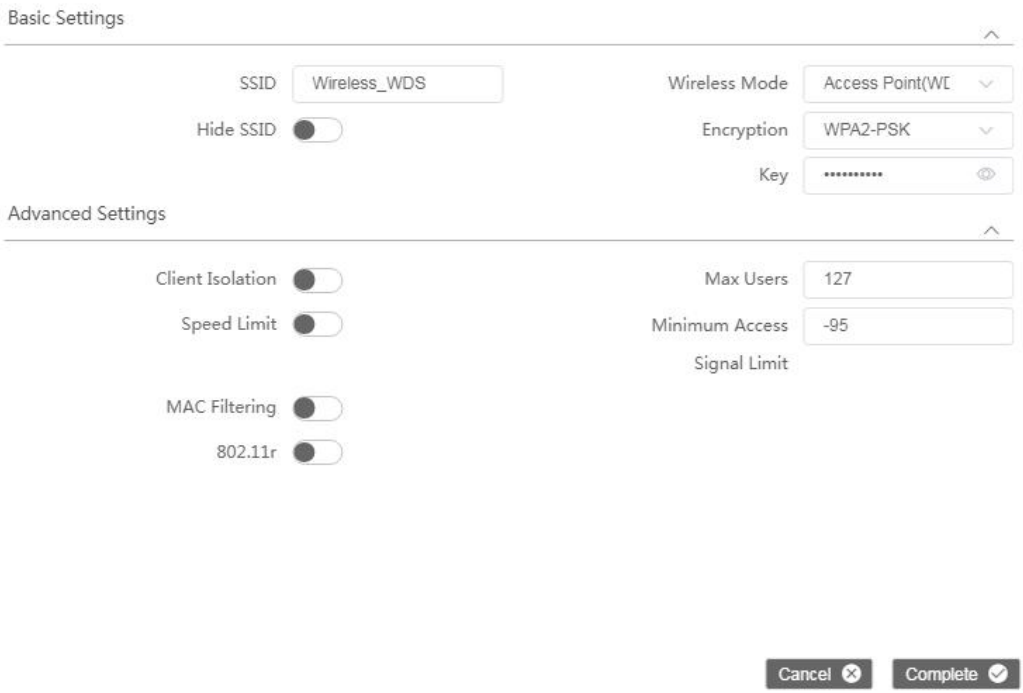


Figure5- 12 Wireless Interface Settings-Modify SSID and Wireless Mode

Click the upper right corner to save. Access point(WDS) configuration is complete.

Figure5- 13 Save

5.1.4Configure Client (WDS)

In the wireless network selection, click the radio band you want to use, such as WIFI1(5G).

Figure5- 14 Wireless Network Selection

Click the Modify button of wireless interface settings to change the wireless mode to client (WDS) and the network name to Wireless_ WDS, click finish.

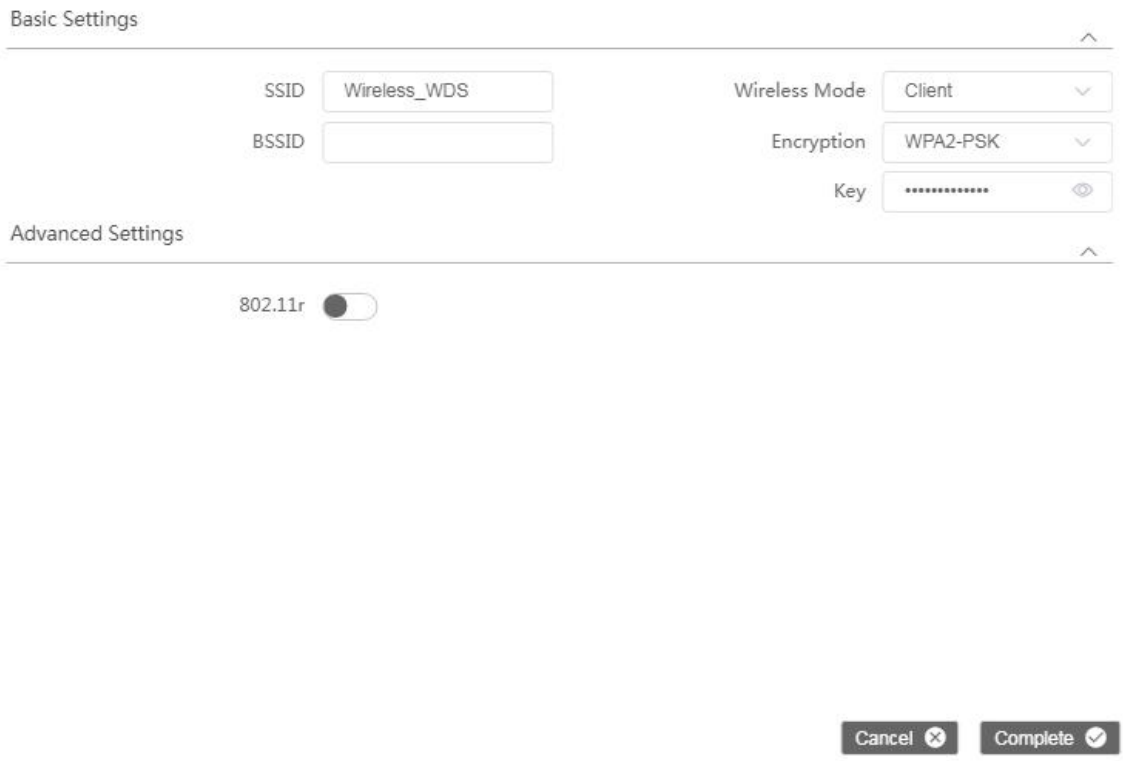


Figure5- 15 Wireless Interface Settings-Modify SSID and Wireless Mode

Click the upper right corner to save. Client(WDS) configuration is complete.

Figure5- 16 Save

At this time, the client (WDS) can successfully connect with the access point (WDS) with the network name of Wireless_WDS.

5. 2 Network

5. 2. 1 Network

Optional network mode: bridge mode and route mode, and configuration management VLAN related parameters. The management VLAN is turned off by default. For details, see the advanced settings section of 5.2.3.

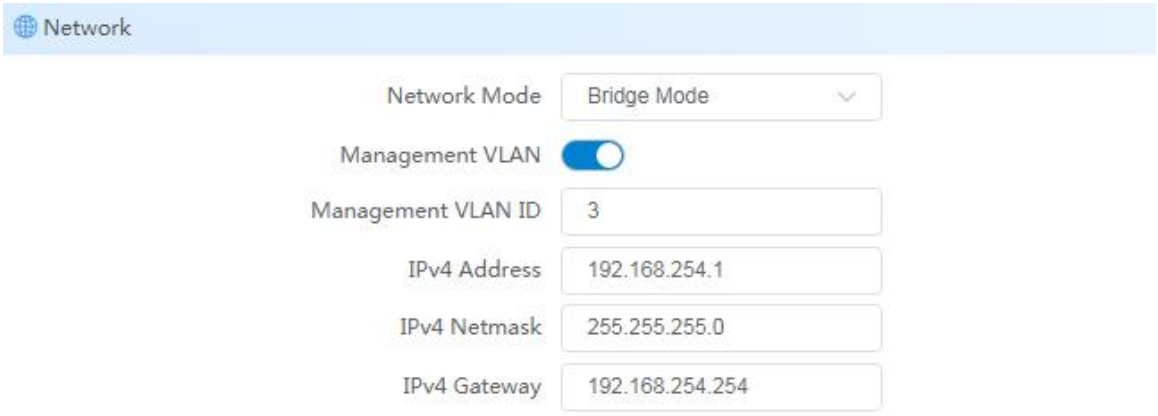


Figure5- 17 Network

5. 2. 2 Management Interface

Select bridge mode for network mode, and the interface settings are shown in the following figure:

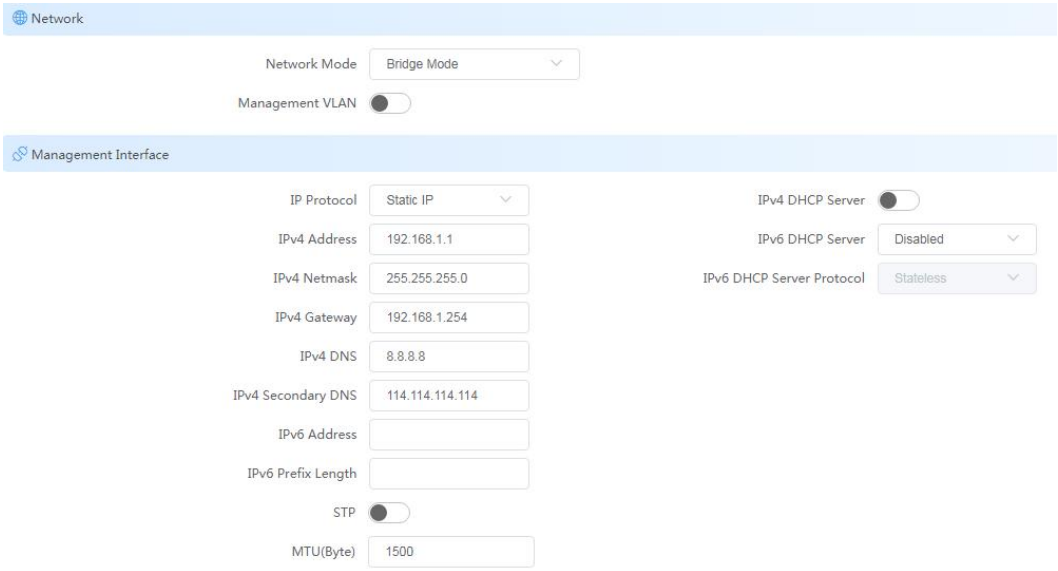


Figure5- 18 Management Interface—Bridge Mode

- When the IP type is static, users can set IP address, subnet mask, default gateway and DNS according to their own needs; ensure that IP is not the same as that of other devices in the same network, so as to avoid IP address conflict; gateway address and IP address are in the same network segment.

  To enable the equipment to access the external network, it is necessary to connect the equipment to the external network, modify the IP of the device and the IP of the Internet router in the LAN in the same network segment, the gateway is the IP address of the upper routing port connected, and the access point equipment is connected to the router through the network cable.

- When the IP type is dynamic, the device can obtain the dynamically assigned address after connecting to the Internet. The set standby IP can still enter the device page for management through the standby IP before or after the device fails to obtain the IP address.

- The IPv4 DHCP server is turned off by default. After it is enabled, parameters such as starting address, number of customers, lease time, gateway and DNS can be set. When mobile phones, computers and other terminals and client devices are wireless associated, the IP address assigned by the device can be obtained.

- The network loop can be eliminated after STP is opened.

- MTU：The largest transmission unit is used to inform the other party of the maximum size of the data service unit that can be accepted, indicating the payload size that the sender can accept.

- IPv6 Address：The IPv6 address of the device can be set.

The network mode selects the routing mode, which is divided into LAN port setting and WAN port setting. When switching the routing mode, the default binding interface between LAN and WAN will be automatically displayed in the page bridge interface setting.

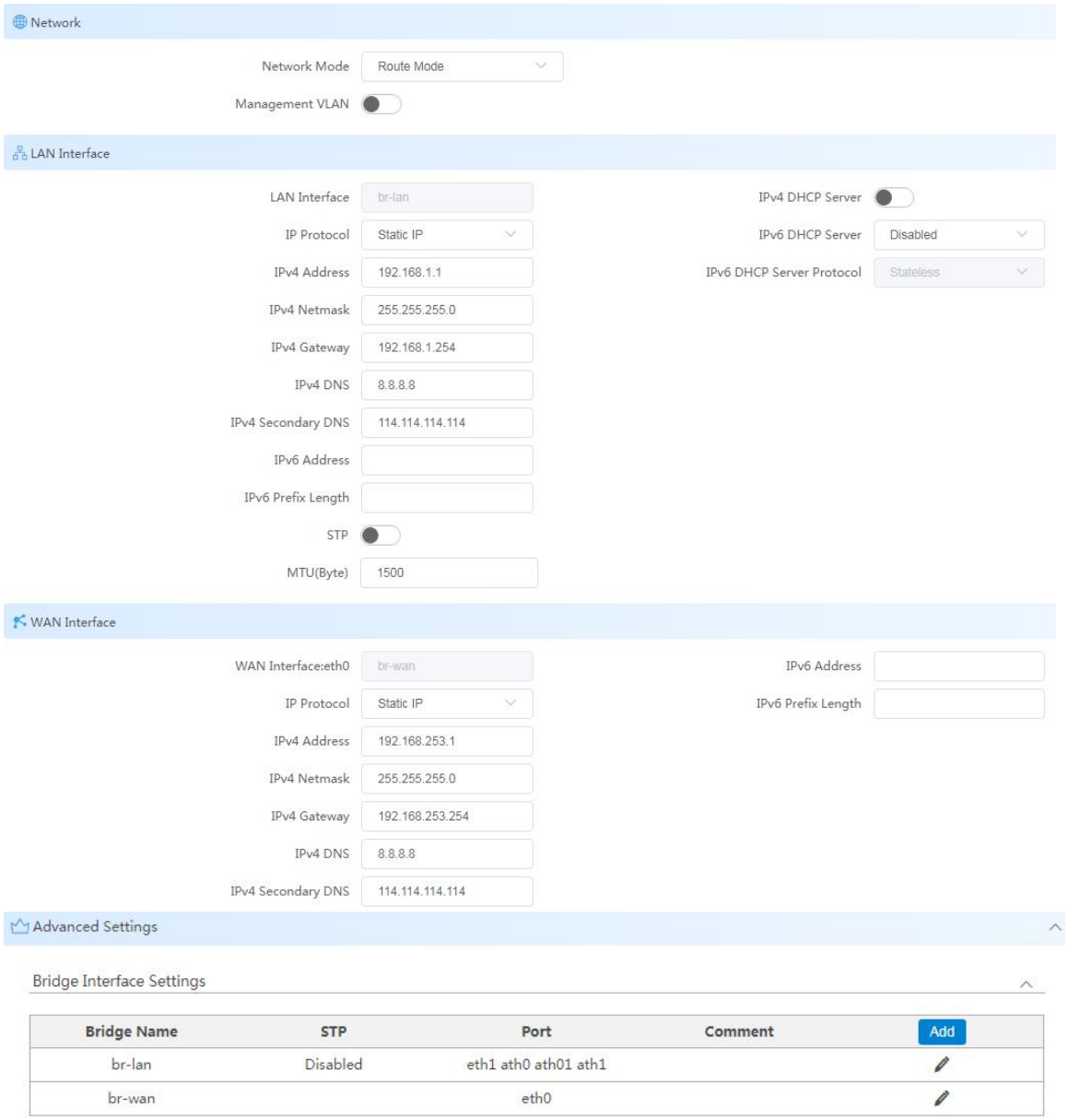


Figure5- 19 Management Interface—Route Mode

- **LAN port settings:** The configuration can refer to the interface settings in the bridge mode.
- **WAN port settings:** The WAN IP type is the way to obtain IP address by WAN port, which can be divided into static IP, DHCP (dynamic acquisition) and PPPoE. When it is set to static IP, the user needs to manually set the IP and subnet mask of the same network segment as the network to be connected to; when it is set to DHCP, the device can automatically obtain the IP address from the DHCP server; when it is set to PPPoE, the user needs to fill in the server name, internet account and password of PPPoE, and

the device obtains the IP address through the PPPoE server through dial-up authentication.

Note that the IP address of LAN port cannot be set to the same network segment as WAN port IP address. When WAN port is set to static IP, it cannot be set to the existing IP on the network to prevent IP conflict.

5. 2. 3 **Advanced Settings**

Advanced settings include bridge interface settings, VLAN, Ethernet interface settings, IPv4 static routing,IPv6 static routing and interface isolation.

Bridge Interface settings: You can add and delete the bridge interface and configure the port parameters. The device includes five interfaces: eth0, eth1, ath0, ath01 and ath1. Eth0 corresponds to the LAN port of POE power, eth1 is LAN1 port, and ath1 is 5G wireless interface. The following figure shows the default display of bridge interface in routing mode.

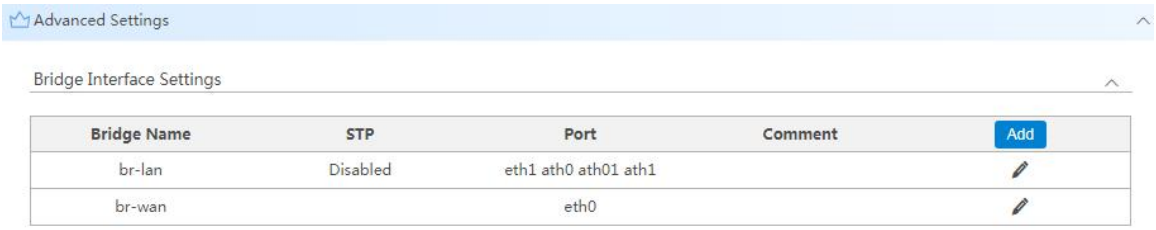


Figure5- 20Bridge Interface settings

VLAN: VLAN function allows users to add multiple VLAN interfaces to each network interface. As shown in the figure below, add VLAN with ID 10 on ath0 (wireless link). VLAN numbers range from 3 to 4094, and each ID represents a different VLAN.

Figure5- 21 VLAN

VLAN function should be used together with the bridge interface settings. As shown in the figure below, VLAN with ID of 10 is added to eth0 and ath0, and they are placed in a bridge interface. Packets coming out and coming in from ath0.10 or eth0.10 are labeled with VLAN with ID 10. This requires that the wireless associated client devices also support VLAN 10 (that is, ath0 adds VLAN 10); the wired eth0 interface needs to be connected with devices that support VLAN 10 (such as VLAN switch VLAN 10 port).

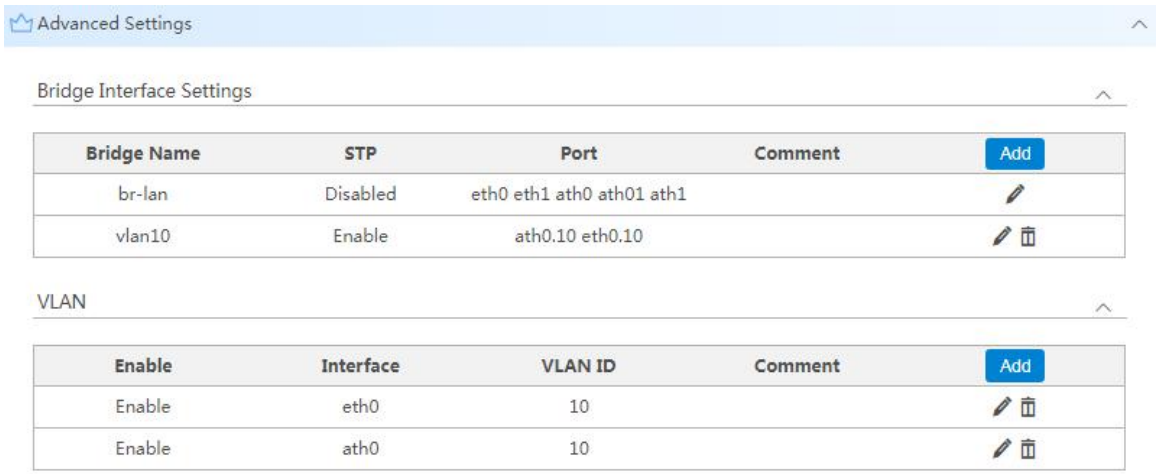


Figure5- 22 VLAN Setting

Common connection methods are shown in the following figure:

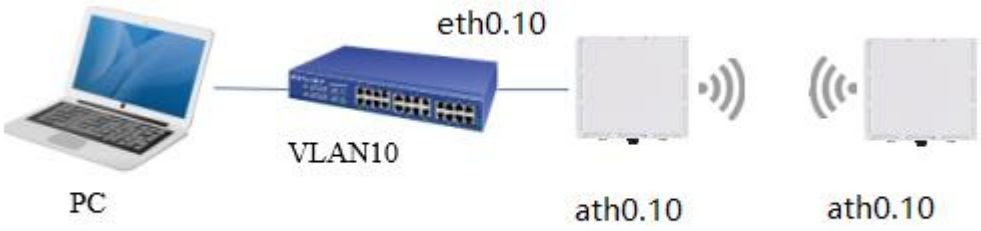


Figure5- 23 VLAN Connection

Management VLAN: After the management VLAN is saved in the network settings, the VLAN for the wired and wireless interfaces of the device will be automatically added to the VLAN settings, and a new mgmtvlan will be created in the bridge interface settings, Add the created VLAN interface to mgmtvlan. After connecting devices supporting vlan3 (such as VLAN switch and VLAN with ID of 3), you can use the IP address set by management VLAN to access the device page for management, but data service forwarding is not supported.

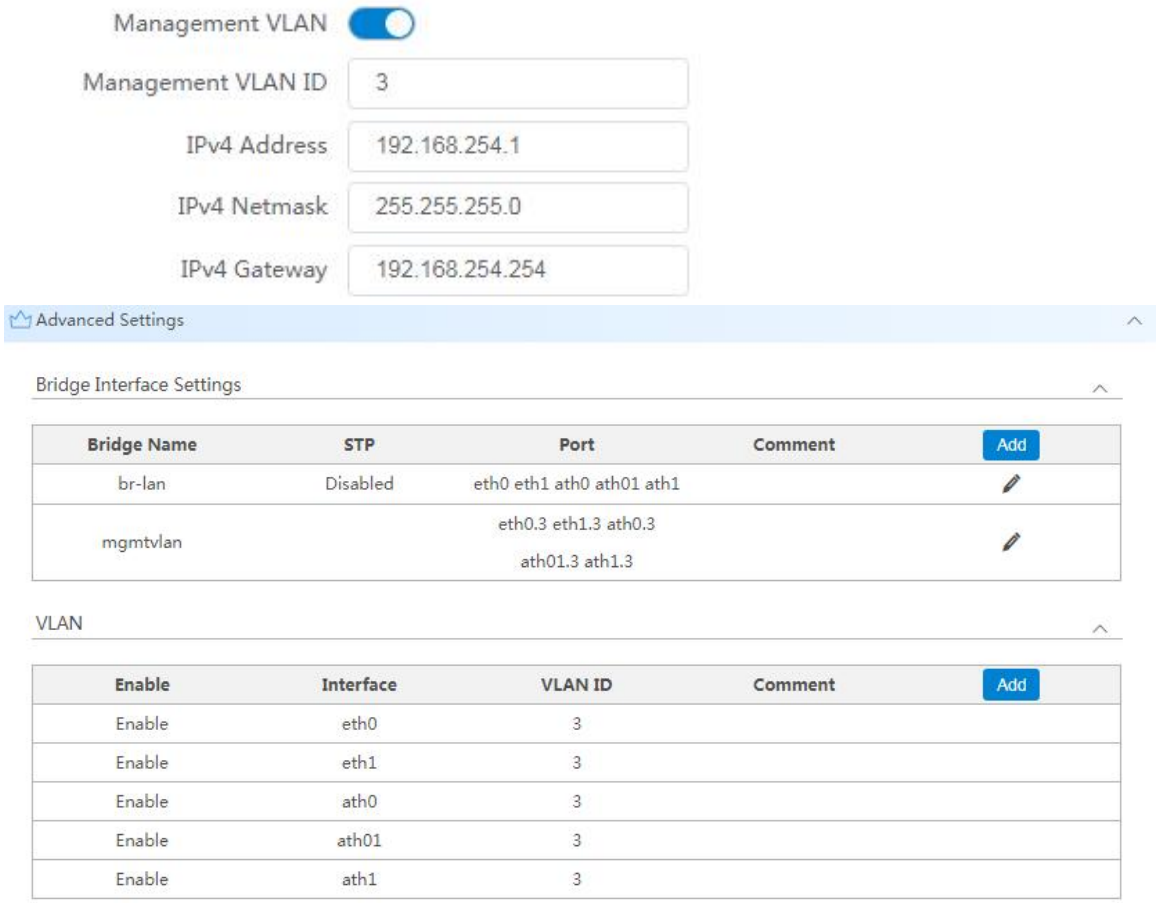


Figure5- 24 Management VLAN Setting

Ethernet Interface Settings: Users can set the Ethernet interface for eth0 (corresponding to the LAN port of POE power). If the auto negotiation mode is selected, the Ethernet port of the device will automatically negotiate to the maximum transmission rate and single duplex according to the connected equipment; if the non-auto negotiation mode is selected, the user can set the Ethernet port rate (10M / 100M / 1000M) and single duplex (full duplex / half duplex) by themselves.

Figure5- 25 Ethernet Interface Settings

IPv4 Static Routes: This function can set IPv4 static routing.

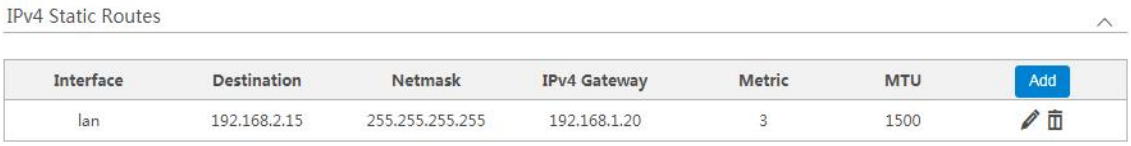


Figure5- 26 IPv4 Static Routes

IPv6 Static Routes: This function can set IPv6 static routing.

Figure5- 27 IPv6 Static Routes

Interface Isolation:

Wired Ethernet: After opening, the cable ports of the device cannot communicate.

Wireless: After the device is turned on, there is no communication between 2G associated client and 5G associated client.

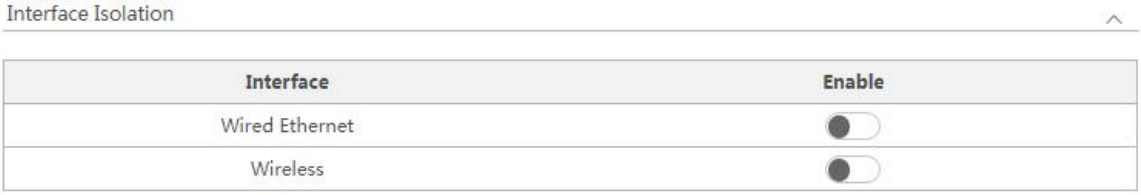


Figure5- 28Interface Isolation

5. 3 QoS

This page can be used for firewall settings and interface speed limit.

Firewall: When users want to shield some devices, firewall can be used to achieve this function.

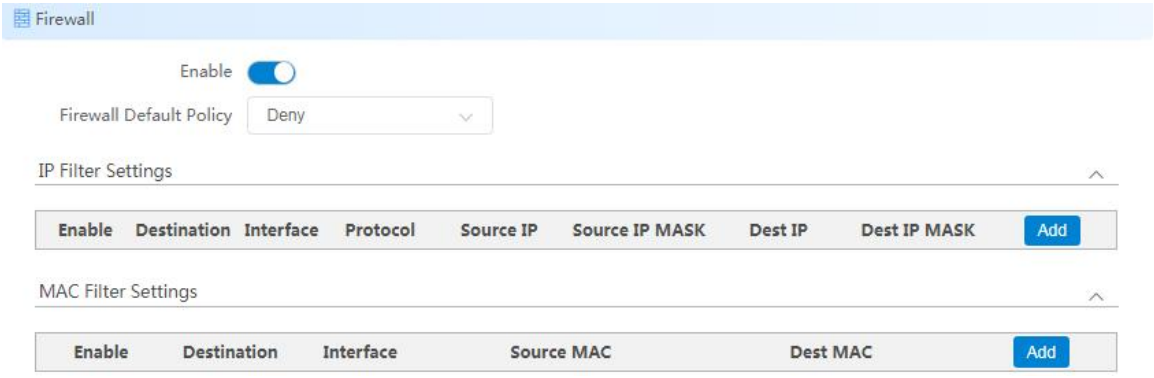


Figure5- 29 Firewall

Filter the message of eth0 port (corresponding to the LAN port of POE power) with IP address of 192.168.1.100

When the firewall is enabled, the firewall receives the default rules, and two rules are added to the IP filtering settings

(1) The target is discard, interface eth0, protocol is IP, source IP / mask is 192.168.1.100/32, destination IP / mask is 192.168.1.1 (MX811-2P-T IP address) / 32;

(2) The target is discard, interface eth0, protocol IP, source IP / mask 192.168.1.1 (MX811-2P-T IP address) / 32, destination IP / mask 192.168.1.100/32.

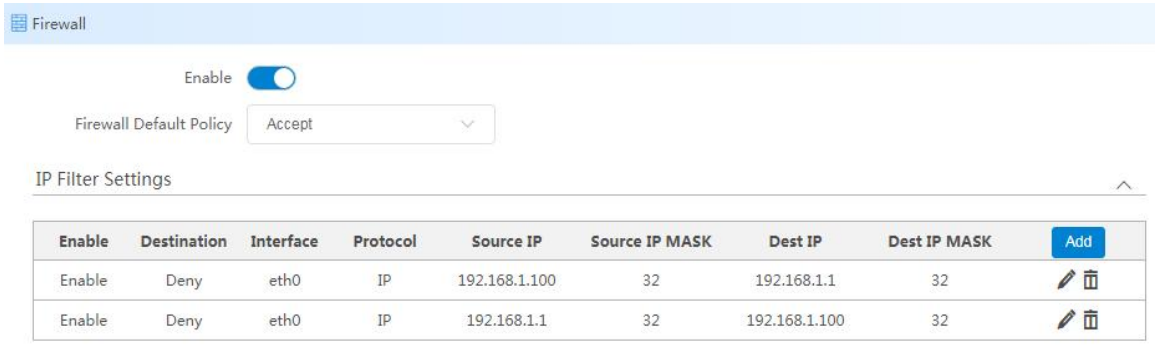


Figure5-30 IP Filter Settings

The message of eth0 (corresponding to POE port) with MAC address of 00:00:00:00:00:01 is filtered

When the firewall is enabled, the firewall receives the default rules, and two rules are added to the MAC filter settings

(1) The target is discard, interface eth0, source MAC is 00:00:00:00:01, destination MAC is the MAC address of MX811-2P-T;

(2) The target is discard, interface eth0, source MAC is the MAC address of MX811-2P-T, and the destination MAC is 00:00:00:00:00:01.

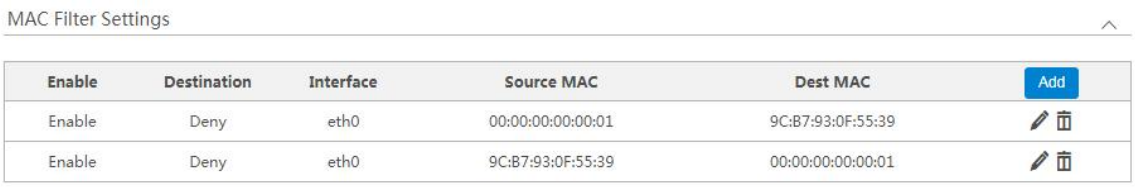


Figure5-31 MAC Filter Settings

Traffic Shaping: You can limit the upload rate and download rate of the device interface, as shown in the figure below.

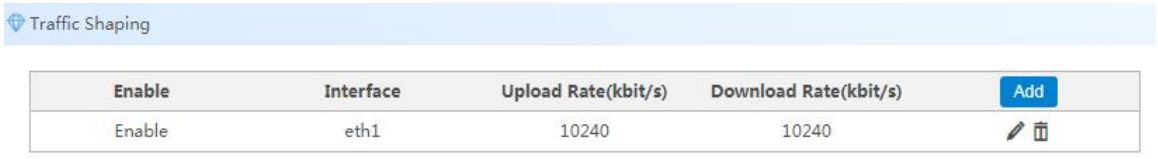


Figure 5-32Traffic Shaping

5. 4 Service

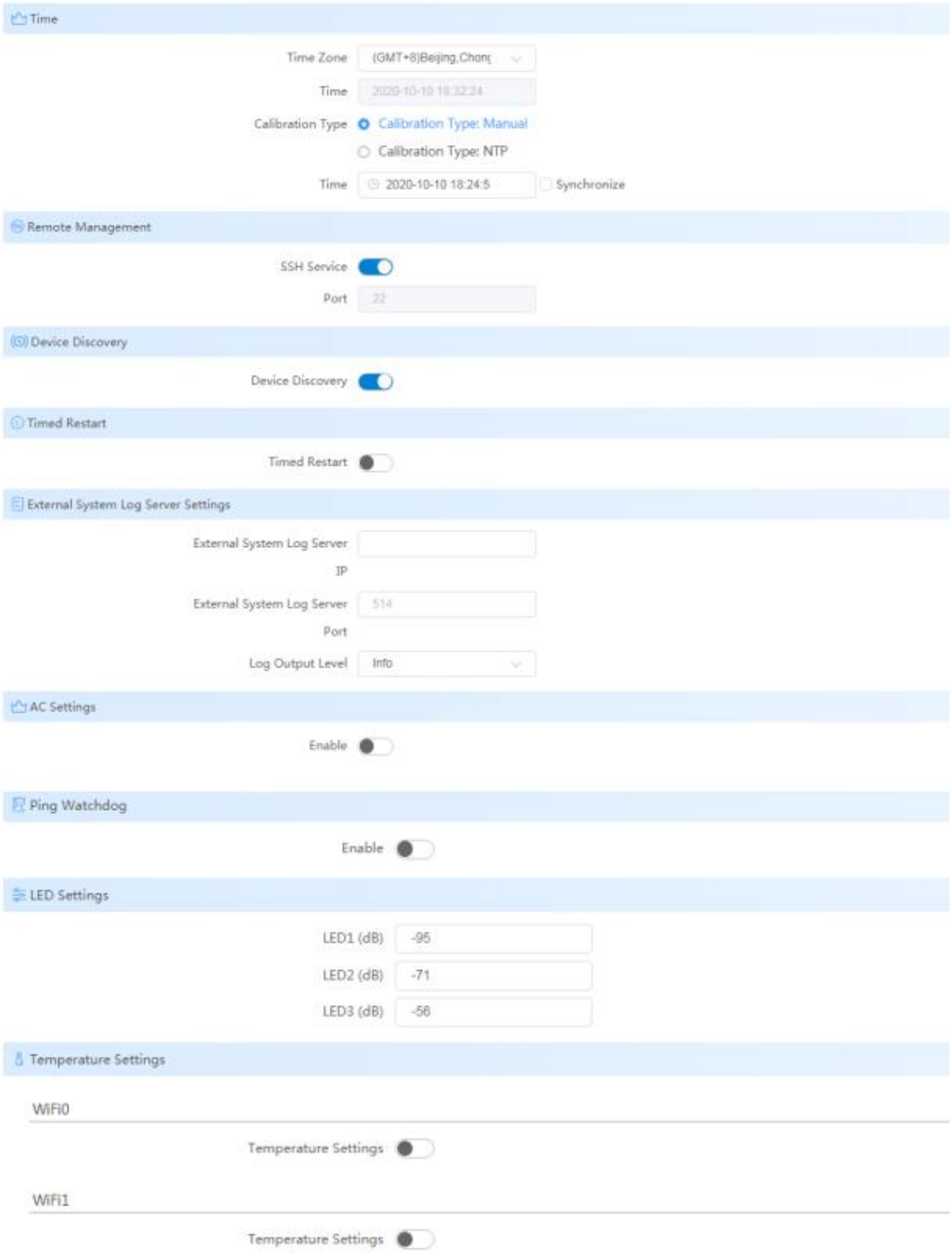


Figure5- 33 Service

Time: Set the time of the device, you can choose different time zones; time calibration methods are divided into manual time calibration and NTP time calibration, manual time calibration can be set by yourself or click to synchronize with the computer time. NTP calibration needs to fill in the server address, NTP port, timing interval, the default is 15. In this case, you need to configure the device to access the external network (refer to 5.2.2 interface settings), and it will automatically calibrate from the NTP server The time of the device is displayed on the status display page.

Remote Management: When SSH is enabled, secure CRT, xshell and other serial port printing tools can be used to log in to the device by filling in the IP and port number of the device. When SSH is disabled, the device cannot be logged in.

Device Discovery: When this function is enabled, please use it with a special toolset. The toolset window will display the MAC address, IP address, product name, firmware name, etc. of the discovered device. Note: when discovering devices wirelessly, keep multicast support enabled.

Timed Restart: Through this function, the device can be restarted regularly.

External System Log Server: Remote log: enable the remote log function, fill in the IP address of the PC where the remote log server is located, set the server port to 514, and click Save to record the log information of the device in real time on the log server.

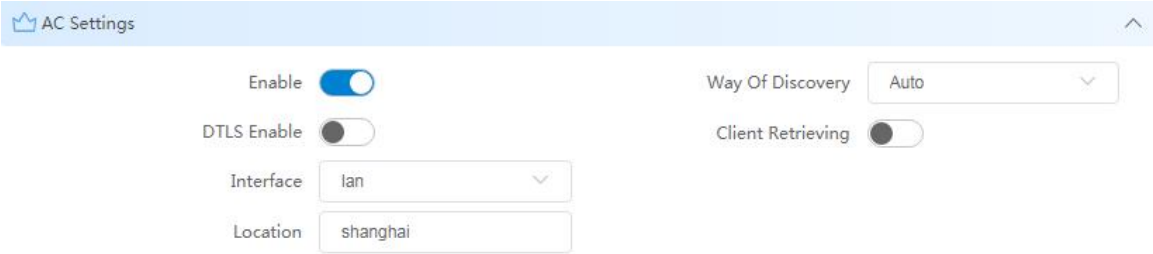


Figure5-34 AC Setting

AC Management: When this function is enabled, it needs to be used with AC management system.

Location: The deployment location of the equipment, you can fill in the location of the device that you want to display on the AC map as required.

Way Of Discovery: There are two ways for AP to discover AC, which are manually specified and automatic. When the discovery mode is manually specified, the primary ac address and the standby AC address can be added, and the added IP address is the IP of the AC management system. When layer 2 is online, the device IP and AC ip should be the same network segment. When layer 3 is online, if you select automatic discovery, you

need to fill in the IP address of AC in the option43 field of the DHCP server. It is recommended that nonprofessionals configure the manual discovery method here.

Note: only when the client device is associated with the access point device, and the access point device has enabled the AC function and joined the same AC system, can it successfully join the AC.

Ping Watchdog: This function is designed for continuous monitoring of equipment operation. The device can ping the IP address of the target host or device for a long time. If a certain number of replies are not received, the tool will restart the device. It is recommended that the user enable this function on the side where the wireless mode is "client". It is not recommended that users enable this function on the side where the wireless mode is "access point".

Ping Interval: The time interval between two pings, in seconds.

Ping IP: Generally fill in the IP address of the target host or device. When Ping dongle is enabled in "client" mode, the IP address of the access point device to which the client is connected can be filled in here.

Start Delay： When the system of the device is started, the device will start to Ping the target host after the set delay time, in seconds.

Ping Failed Times: When the number of consecutive Ping failures reaches the set value, the device will restart the device.

Note: if you want to modify the parameter configuration of Ping dongle, please disable Ping dongle first. After the disable takes effect, Ping dongle can be enabled for new parameter configuration.

LED Settings： LED1, LED2 and LED3 are set to the signal intensity value required to light up the three LED lights of the device. The signal intensity value of LED3 is the maximum （LED3>LED2>LED1）. The default settings are LED1: - 95dB, LED2: - 71db and LED3: - 56dB. When the signal strength is higher than LED1 and lower than LED2, LED1 is on; when the signal strength is higher than LED2 and lower than LED3, LED1 and LED2 are on; when the signal strength is higher than LED3, LED1, LED2 and LED3 are on.

Temperature Setting： The temperature setting range includes (- 100 ~ 110) ℃, (100 ~ 120) ℃, (110 ~ 135) ℃, (125 ~ 150) ℃. For example, fill in 10 in the (- 100 ~ 110) ℃ range, which indicates that the performance of the device chip decreases by 10% in the current temperature range.

5.5 System

The system setting interface is divided into system settings, firmware configuration and account management, as shown in the following figure:

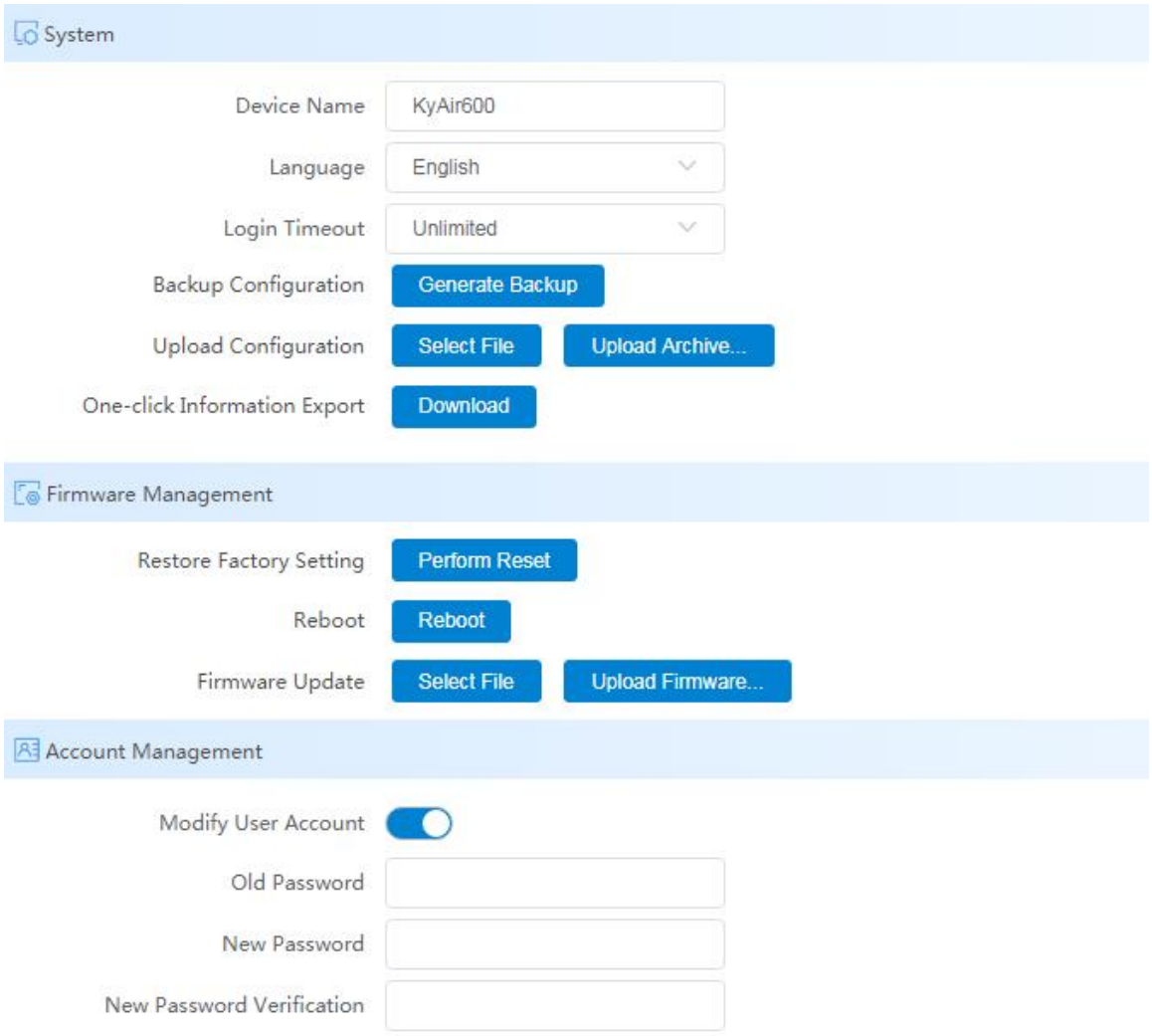


Figure5-35 System

Device Name: Users can set the setting name to the name they need according to their own needs.

Login Timeout: When the user does not operate the device for a time-out, the login timeout value will automatically jump to the login interface when operating the page again.

Language: Users can choose the page display language according to their own needs.

Backup Configuration: Click generate backup. All the current configurations on the web page will be backed up to the local file. Note that the content of the configuration file cannot be modified manually.

Upload Configuration: Click Select file, select the previously downloaded configuration file, and click upload to restore the device configuration to the device configuration when the configuration file was backed up.

One-click Information Export: Click download to export the system log file, which contains the configuration file.

Firmware Update: Click browse, select the version to be upgraded, click upgrade, and the device will start to upgrade.

Restore Factory Setting: Click execute reset on the webpage, and the page will jump to the waiting page. After the reset is completed, the page will jump to the login page, and the device configuration will return to the factory setting state.

Reboot: Click restart to restart the device system. After the restart, the configuration remains unchanged.

Modify User Account: When user password modification is enabled, users can modify the user name and password of login device management web page according to their own needs. In order to enhance information security, please change the device password regularly, try not to use too simple password, such as pure numbers, letters, birthday, etc.

6 Tools

The tool page is divided into two subpages: Ping IP and link test. The details are as follows:

6. 1 Ping IP

Fill in the IP address of a device and click Ping. Ping results will be displayed in the collected data, as shown in the following figure:

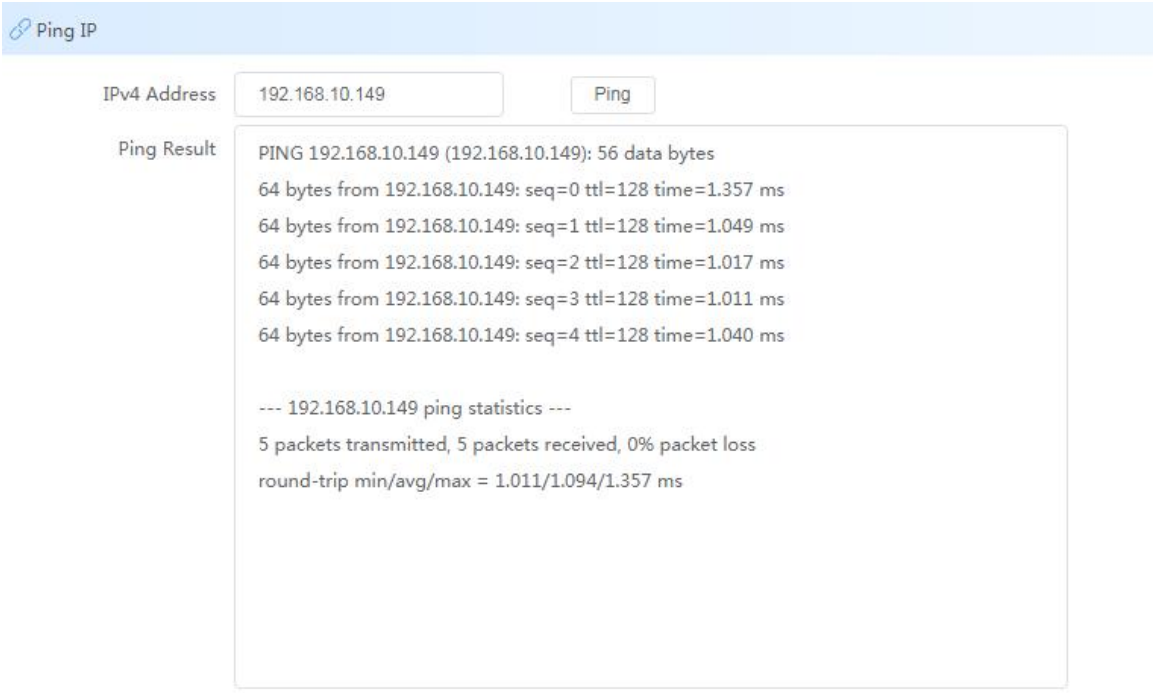


Figure6-1 Ping IP

6.2 Link Test

Iperf test can test the maximum bandwidth performance, and can report bandwidth, delay jitter and packet loss. It is divided into client mode and server mode, which is used to test the throughput of wireless terminals between devices. For device 1, select "server", and iperf interval is the interval time for displaying throughput on the web page. Select "client" for device 2, and iperf server fills in the IP address of device 1. The number of iperf threads is the number of threads running at the same time when testing throughput. It is recommended to set it to 10. Iperf test time is the number of seconds that iperf was run. Iperf interval is the interval between displaying throughput on a web page. After these parameters are filled in, click the "start" button to test.

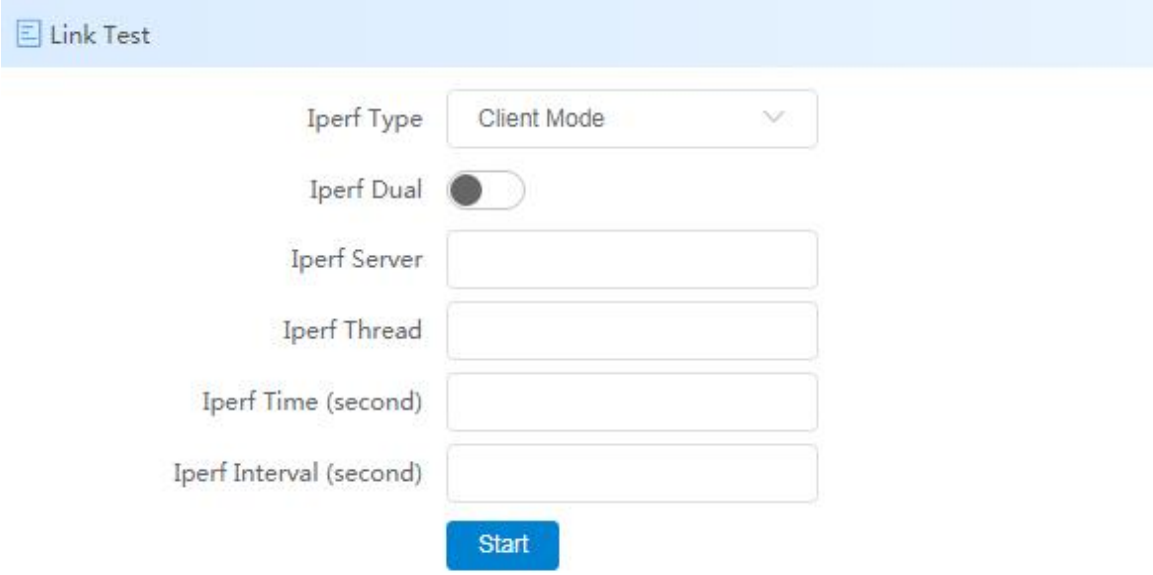


Figure6- 2 Link Test-Client Mode

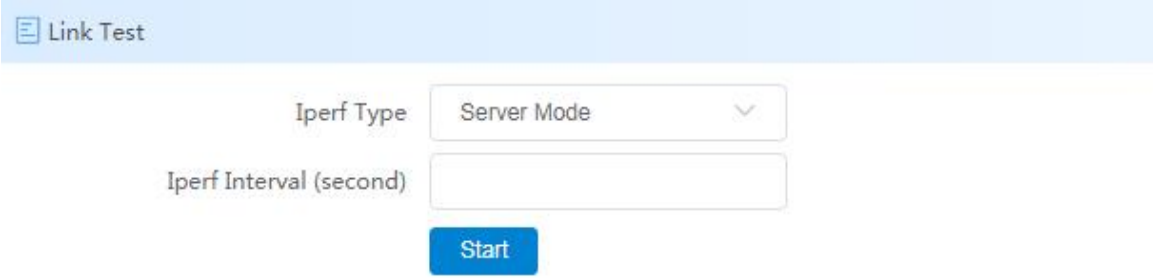


Figure6- 3 Link Test-Server Mode

7 Logout

Logout is used to log out of the device page. When the user clicks logout in the upper right corner, it will jump to the login page.

Figure 7- 1 Logout

8 Troubleshooting

1. How to forget the IP address of the device?

① Make sure that the equipment is connected correctly and the network cable is not loose.

② Confirm whether the device IP has been modified.

③ Confirm that the IP address of the computer is 192.168.10. X (x is 2 ~ 254, except for the IP address of the device).

④ Restore the device to factory settings and log in again.

2. What can I do if I can't open the device web interface?

① Open the computer CMD to run, Ping whether the IP address of the device can be pinged, and confirm whether the IP address is correct;

② Judge that the IP address of the local computer and the IP address of the bridge are in the same LAN;

③ Try clearing the browser cache, or try replacing another browser (Google, IE, etc.).

3. What should I do if the video of terminal equipment (mobile phone, computer, etc.) is dropped or stuck?

Check whether the wireless connection of the device is normal. If not, check whether the wireless configuration of the access point and terminal device (mobile phone, computer, etc.) is consistent, such as network name, channel width, encryption method, etc.

Check whether the installation position is blocked; the front of the device is the antenna position, and it is necessary to ensure that the antenna of the device is not blocked from the terminal equipment (mobile phone, computer, etc.).

Check whether the cable link is normal. The method is as follows:

① Check whether the wired connection interface is firm and in good contact, so as to avoid cable fault caused by loose or damaged interface;

② Use the computer to connect the device directly, open the CMD command line, enter the command to detect whether the delay is less than 13ms: Ping [device IP] - t - l 60000.

For example, Ping 192.168.1.1 -t - l 60000 ⩽ 13ms. When the delay is abnormal, it is recommended to replace the network cable or make the crystal head again.