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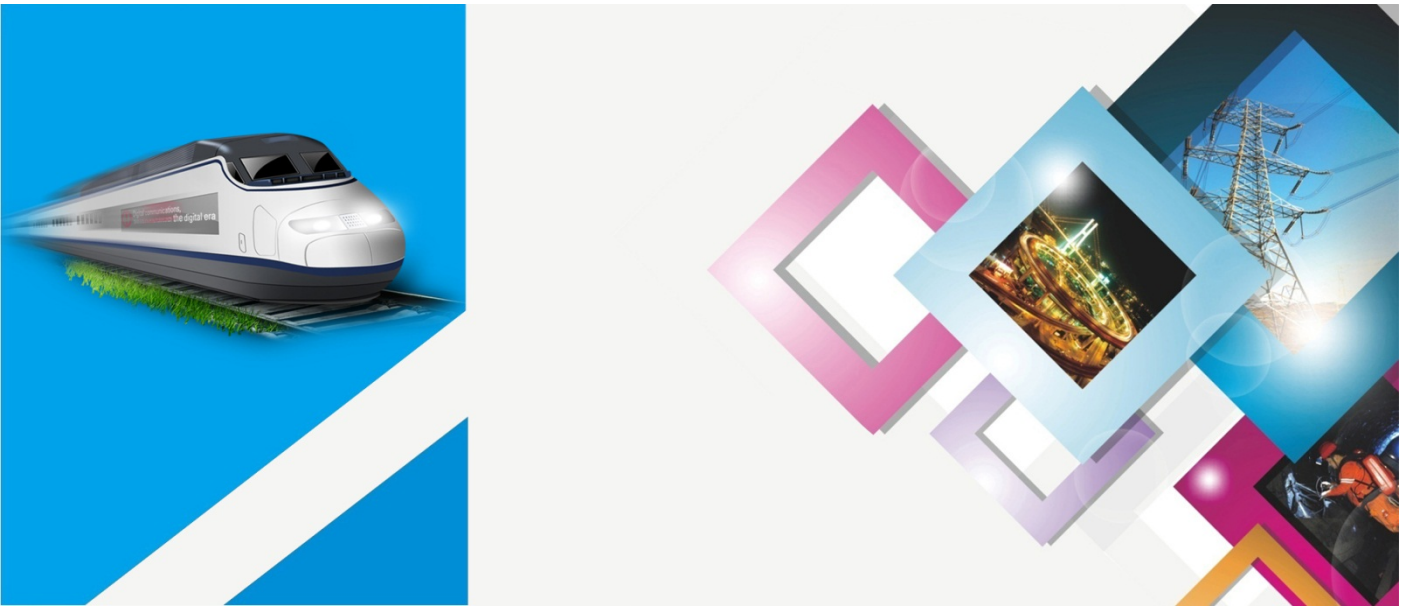

IAP2600 Series
Industrial Wireless Dual-band AP
User Manual

Document Version 01

Issue Date: 2018-09-13

Industrial Ethernet Communication Solutions Expert **3onedata Co., Ltd.**

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Preface

Industrial wireless dual-band AP user manual has introduced the wireless dual-band AP:

- Network management method

Readers

This manual mainly suits for the engineers as follows:

- Network administrator responsible for network configuration and maintenance
- On-site technical support and maintenance staff
- Hardware engineer

Text Format Convention

Format	Description
" "	Words with " " represent interface word. e.g.: "Port number".
>	Multi-level path is separated by ">".Such as open the local connection path description: Open "Control Panel > Network Connection > Local Connection".
Light blue font	It represents the words clicked to achieve hyperlink. Font color as: "Light blue".
About this chapter	The "About This Chapter" section provides links to each section and corresponding principles/operating chapters in this chapter.

Icon Convention

Format	Description
 Notice	Remind the announcements in the operation, improper operation may result in data loss or equipment damage.

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Format	Description
 Warning	Pay attention to the notes on the mark, improper operation may cause personal injury.
 Note	Conduct a necessary supplements and explanations for the description of operation content.
 Key	Configuration, operation or tips for device usage.
 Tips	Pay attention to the operation or information for ensuring success device configuration or normal working.

Revision History

Version NO.	Revision Date	Revision Description
01	2018-09-13	Product release

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1 Log in the WEB Interface

1.1 System Requirements for WEB Browsing

The system should meet following conditions for using industrial wireless AP:

Hardware and software	System Requirements
CPU	Above Pentium 586
Memory	Above 128MB
Resolution	Above 1024x768
Color	Above 256 color
Browser	Above Internet Explorer 8.0
Operating System	Windows XP Windows 7

1.2 Setting IP Address of PC

1.2.1 Wired Access Mode

The default management network address of the device as follows:

IP Setting	Default Value
IP Address	192.168.1.254
Subnet Mask	255.255.255.0

While configuring the device via Web:

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- Please confirm the computer has installed and enabled Ethernet network card.
- Before conducting remote configuration, please confirm the route between computer and device is reachable.
- Before conducting local configuration, please confirm the IP address of computer is in the same subnet to the device;

  Notes:
  While configuring the device for the first time, if it's the local configuration mode, first confirm the network segment of current PC is 1.

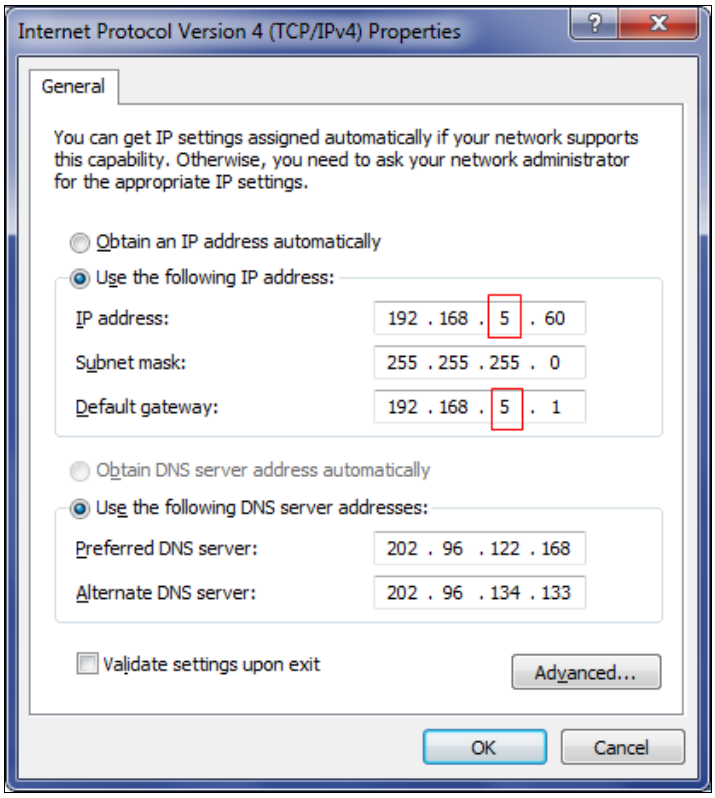
E.g.: It's assumed that the IP address of current PC is 192.168.5.60, modify the network segment of IP address from "5" to "1".

Operation Steps

Modification steps as follows:

Step 1 Open "Control Panel > Network Connection > Local Connection > Property > Internet Protocol Version 4 (TCP/IPv4) > Property".

Step 2 Change the selected "5" in red frame below to "1".



Step 3 Click "OK", modification is successful.

Step 4 End.

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1.2.2 Wireless Access Mode

The default management network address of the device as follows:

IP Setting	Default value
IP Address	192.168.1.254
Subnet Mask	255.255.255.0

While configuring the wireless AP via Web:

- Please confirm the computer has installed and enabled wireless network card.
- Place the computer on wireless network range of the device.
- Please confirm the IP address of computer is in the same subnet to the device.

Note:

If the computer accesses to the Internet via proxy server, proxy service must be cancelled.

Set the IP address of computer in the same subnet to the device IP address.

Operation Steps

Operation steps of wireless connection as follows.

Notes:

This manual takes the wireless network settings function of Windows 7 system for example.

Step 1 Click wireless icon "" on the lower right corner of the computer, pop up the wireless list box.

Step 2 Choose the device wireless network in the wireless list box, click "Connect" button.

Notes:

Default wireless network begins with "3ONE", without encryption.

Step 3 End. After successful connection, wireless network displays "Connected".

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1.3 Log in to the WEB Configuration Interface

Operation Steps

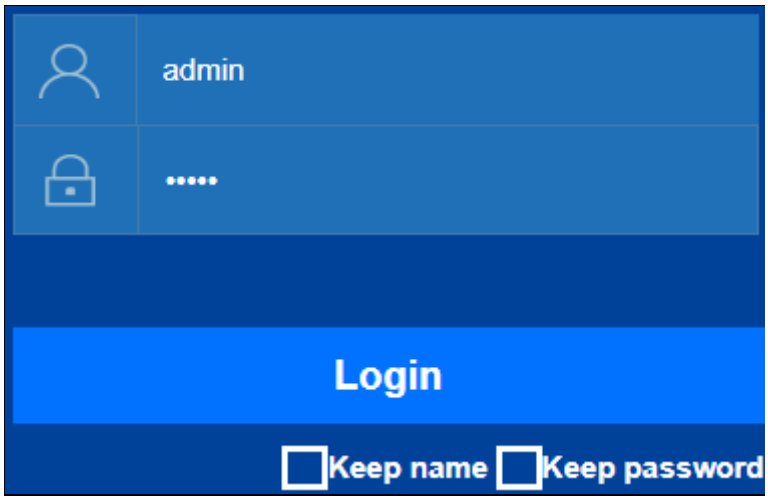
Operation steps of logging in to the WEB configuration interface as follows:

Step 1 Run the computer browser.

Step 2 In the address bar of browser, enter the device address "http://192.168.1.254".

Step 3 Click the Enter key.

Step 4 Pop up a window as the picture below; enter user name and password in the login window.



Notes:

- Both of the device default user name and password are "admin"; please strictly distinguish capital and small letter while entering.

Step 5 Click "Login".

Step 6 End.

After successful login, user can configure relative parameters and information of the WEB interface according to demands.

Notes:

After logging in to the device, user can modify the device IP address for convenient usage; if there is no interface operation within 10 minutes, user will need to log in to the device again.

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2 State Information

Function Description

On the "State info" page, user can check the following information:

- System resource utilization;
- Basic information;
- Equipment information;
- SSID;
- WAN information;
- WiFi real-time flow (KB/s).

Operation Path

On the navigation bar, select "State info".

Interface Description

State information interface as follows:

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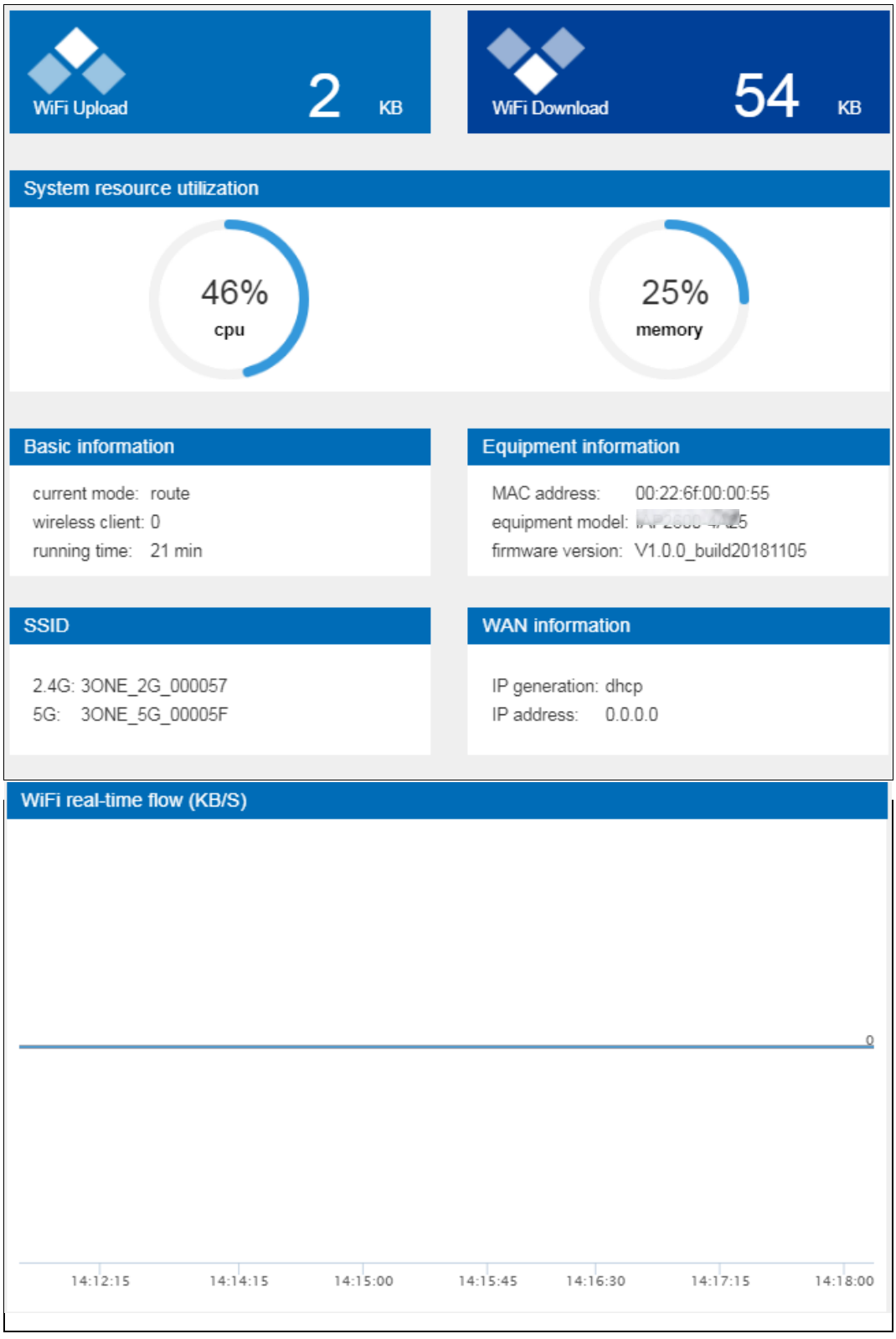

The main element configuration description of state information interface:

Interface Element	Description

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Interface Element	Description
Upload	**Total upload area.** Notes: WiFi upload traffic statistics.
Download	**Total download area.** Notes: WiFi download traffic statistics.
System resource utilization	**System resource utilization column.**
CPU (%)	Device CPU utilization.
Memory (%)	Device memory utilization. Notes: It will influence the device performance if the program takes up too much memory.
Basic information	**Basic information column.**
Current mode	Current operation mode of the device.
Wireless client	Wireless client connection number.
Running time	The device running time after power on.
Equipment information	**Equipment information column.**
MAC address	MAC address of the device.
Equipment model	Equipment model name.
Firmware version	Device firmware version.
SSID	**SSID column.**
2.4G	2.4G wireless network name.
5G	5G wireless network name.
WAN information	**WAN information column.**
IP generation	Access mode of the device WAN IP address.
IP address	IP addresses of the device WAN.
WiFi real-time flow (KB/s)	**Real time traffic (KB/s) column.**
WiFi real time traffic (KB/s)	WiFi real-time flow monitoring view. • Download: Blue line represents the rate change of device wireless download flow. • Upload: Orange line represents the rate change of device wireless upload flow.

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3 Work Mode

Function Description

On the "Work Mode" page, user can quickly configure the device operation mode:

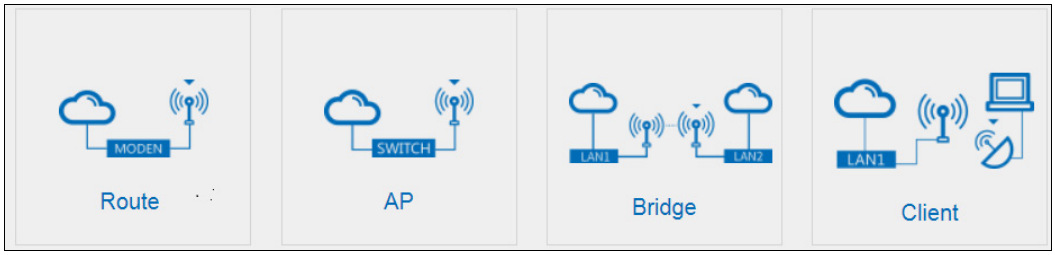
- Route;
- AP;
- Bridge;
- Client.

Operation Path

Click: "Work Mode".

Interface Description

Work mode interface as follows:



The main element configuration description of work mode interface:

Interface Element	Description
Route	Under the route mode, the device WAN port can be connected to WAN via PPPoE dial-up, static IP and dynamic acquisition; the LAN port can be connected to LAN and provides wireless access point. Notes: When the data is transmitted from one subnet to another subnet or

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Interface Element	Description
	WAN, it can be accomplished via the device route function.
AP	Under the AP mode, the device can be used as a wireless access point, the equivalent of the wireless switch.
Bridge	Under the bridge mode, the device will convert received wireless signal to cable signal and wireless signal.
Client	Under the client mode, the device will convert received wireless signal to cable signal.

3.1 Route

Under the route mode, the device WAN port can be connected to the WAN via PPPoE dial-up, static IP and dynamic acquisition. Under this mode, LAN port and wireless signal are in the same VLAN, the LAN port defaults to enable DHCP server function.

PPPoE (PPP over Ethernet) transmits PPP (Point to Point Protocol) on the Ethernet; it's a protocol that provides access service for hosts on the Ethernet via a remote access device.

The quick configuration of route mode mainly includes five configuration links:

- WAN settings
- LAN settings
- 2.4G WiFi
- 5G WiFi
- Finish

Following is the explanation of the five configuration links.

3.1.1 WAN Settings

Function Description

On the "WAN Settings" page of route mode, WAN port can be connected to WAN via three methods:

- PPPoE;
- Static IP;

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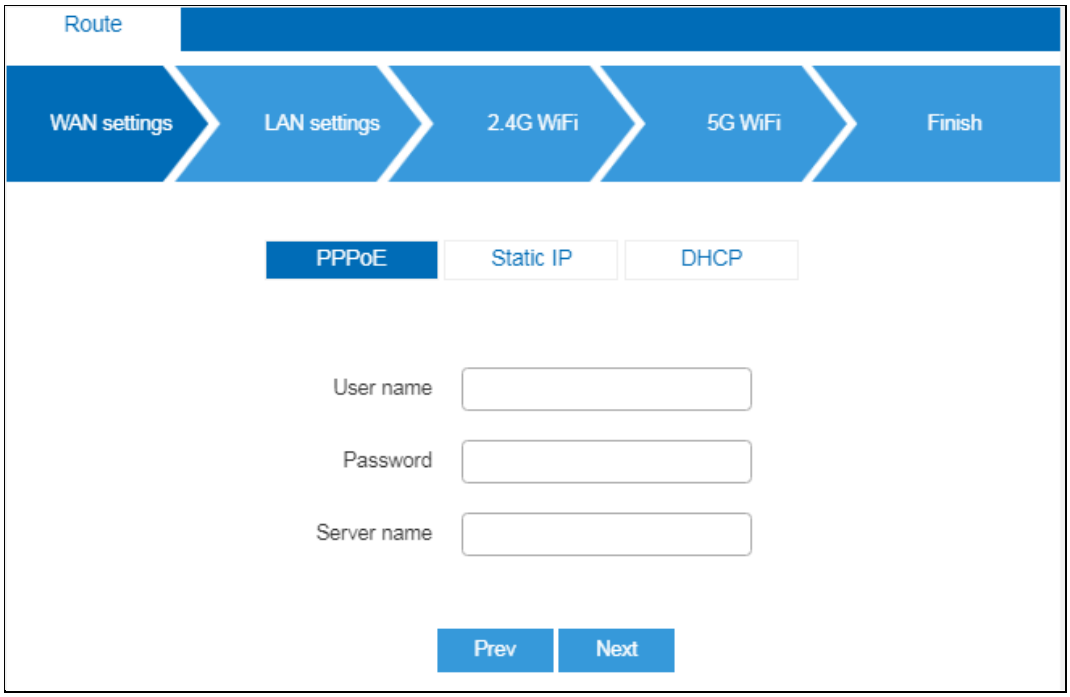
- DHCP;

Operation Path

Please open in order: "Work mode > Route".

Interface Description 1: PPPoE

PPPoE interface as follows:



The main element configuration description of PPPoE interface:

Interface Element	Description
PPPoE	PPPoE radiobox, it supports PPPoE to achieve Internet access.
User name	User name of PPPoE connection. Notes: User name, password and service name are provided by network provider.
Password	Password of PPPoE connection. Notes: User name, password and service name are provided by network provider.
Server name	Server name, not fill if network provider doesn't supply. Notes: User name, password and service name are provided by network provider.

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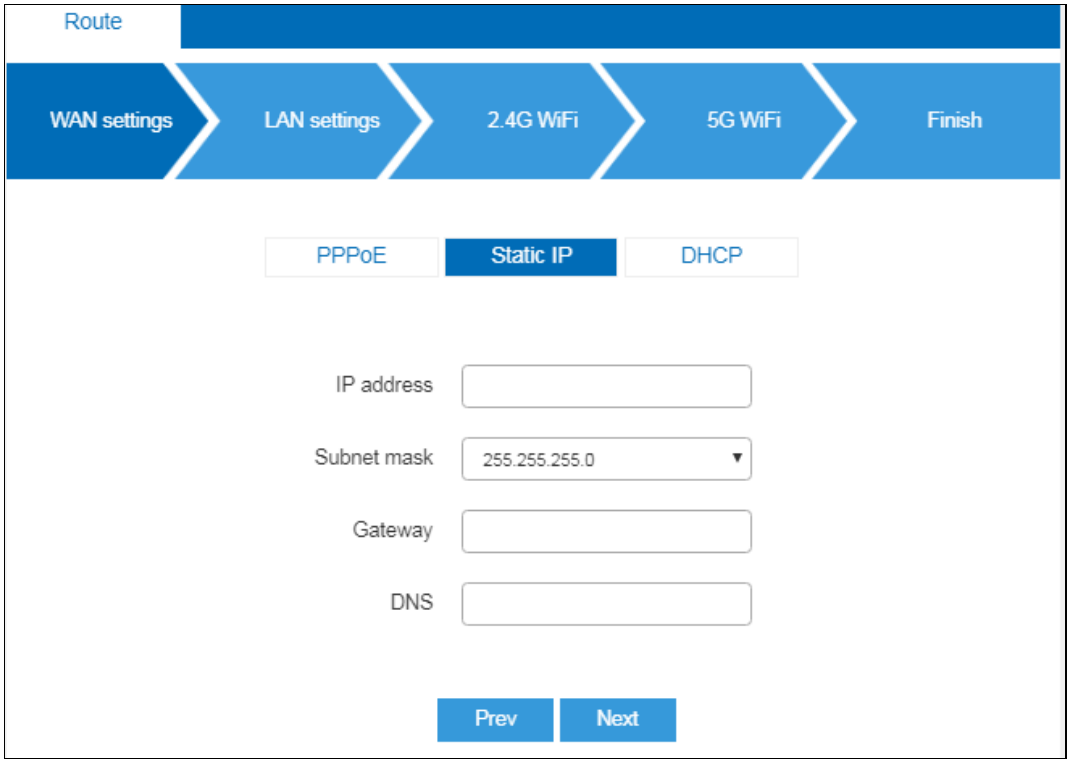
Interface Description 2: Static IP

Static IP interface as follows:



The main element configuration description of static IP interface:

Interface Element	Description
Static IP	Static IP radiobox, network information configuration of the device WAN port.
IP address	Fixed IP address provided by network provider or WAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Default gateway address provided by network provider or WAN.
DNS	DNS server address provided by network provider or WAN.

Interface Description 3: DHCP

DHCP interface as follows:

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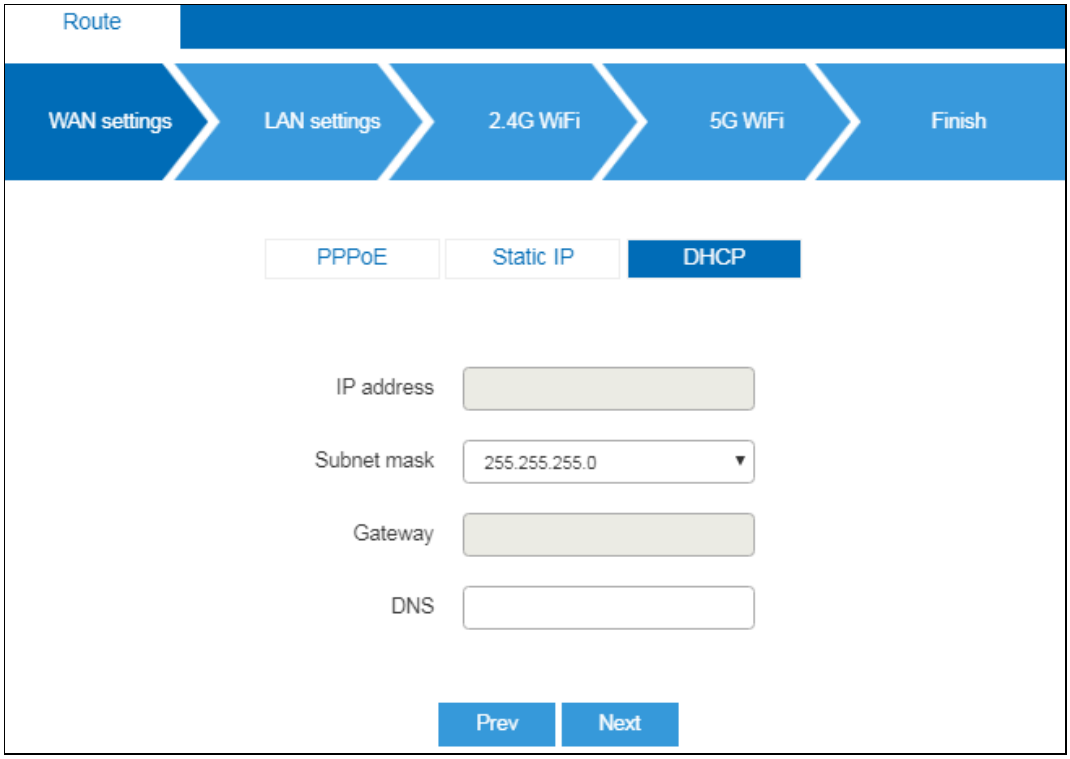

The main element configuration description of DHCP interfaces:

Interface Element	Description
DHCP	DHCP radiobox, automatic acquisition of the device WAN port network information. Notes: The device automatically acquires the network address information distributed by network provider or WAN.
IP address	IP address automatically distributed by network provider or WAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Gateway address automatically distributed by network provider or WAN.
DNS	DNS server address. Notes: The priority level of manually setting DNS server address is higher than the one of automatically acquired DNS server address.

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3.1.2 LAN Settings

Function Description

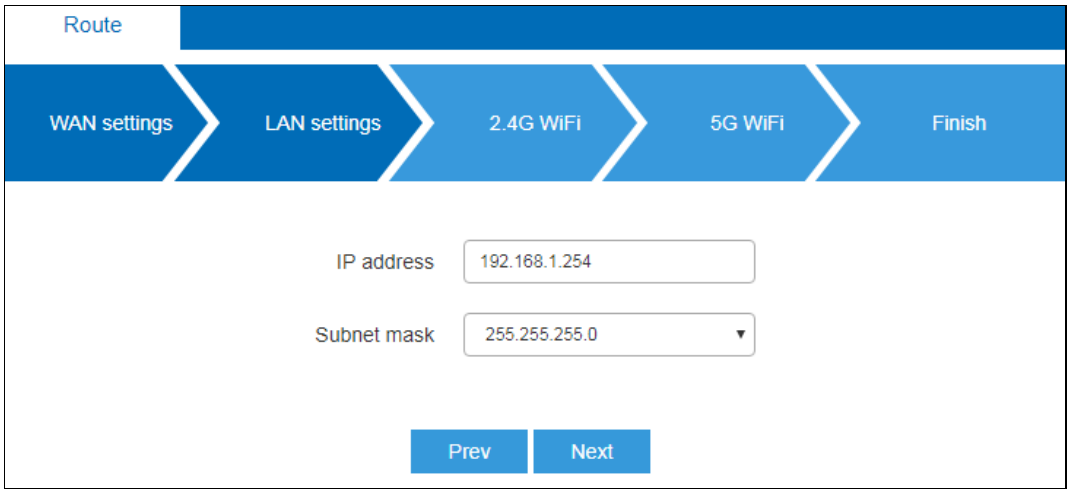
On the "LAN Settings" page of route mode, user can configure the IP address and subnet mask of LAN.

Operation Path

Please open in order: "Work mode > Route".

Interface Description

LAN settings interface as follows:



The main element configuration description of LAN settings interface:

Interface Element	Description
IP address	IP address information of LAN.
Subnet mask	Drop-down list of subnet mask.

3.1.3 2.4G WiFi

Function Description

On the "2.4G WiFi" page of route mode, user can set the wireless parameters.

Operation Path

Please open in order: "Work mode > Route".

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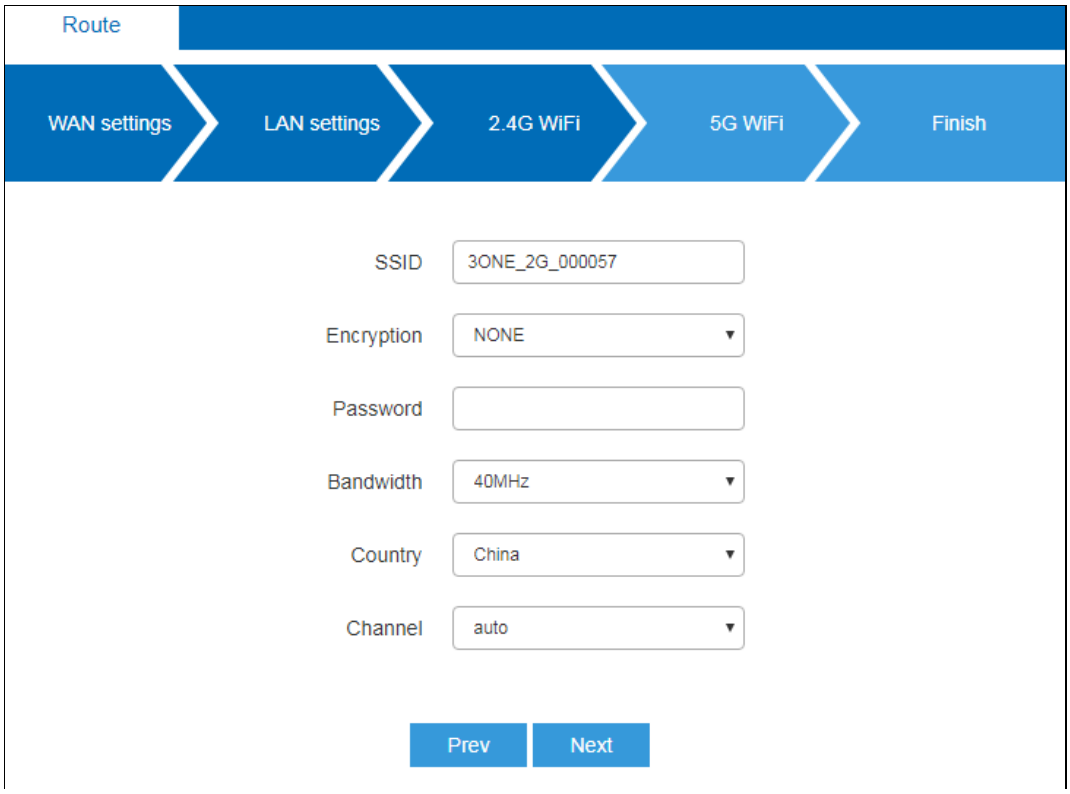
Interface Description

2.4G WiFi interface as follows:



The main element configuration description of 2.4G WiFi interface:

Interface Element	Description
SSID	SSID name of wireless network, it supports 1-32 characters.
Encryption	Encryption mode of wireless network, options as follows: • No encryption; • WPA2-PSK (recommended): Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of wireless network, it supports 5 or 8-32

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Interface Element	Description
	characters. Notes: Wireless password doesn't support space, the wireless network without encryption if not fill.
Bandwidth	Channel bandwidth of wireless network, it defaults to 40MHz, options as follows: • 20MHz; • 40MHz.
Country	Applied national region of wireless network, options as follows: • China; • USA. Notes: Open channels are different in different countries.
Channel	Working channel of wireless network, default "auto" self-adaptation, options as follows: • Auto: channel self-adaptation; • 1: main frequency band 2412Hz, frequency range 2401~2423Hz; • 2: main frequency band 2417Hz, frequency range 2406~2428Hz; • 3: main frequency band 2422Hz, frequency range 2411~2433Hz; • 4: main frequency band 2427Hz, frequency range 2416~2438Hz; • 5: main frequency band 2432Hz, frequency range 2421~2443Hz; • 6: main frequency band 2437Hz, frequency range 2426~2448Hz; • 7: main frequency band 2442Hz, frequency range 2431~2453Hz; • 8: main frequency band 2447Hz, frequency range 2436~2458Hz; • 9: main frequency band 2452Hz, frequency range 2441~2463Hz; • 10: main frequency band 2457Hz, frequency range 2446~2468Hz; • 11: main frequency band 2462Hz, frequency range

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Interface Element	Description
	2451~2473Hz; • 12: main frequency band 2467Hz, frequency range 2456~2478Hz, this frequency band is not open in USA, so it's temporarily unavailable; • 13: main frequency band 2472Hz, frequency range 2461~2483Hz, this frequency band is not open in USA, so it's temporarily unavailable; Notes: In order to improve the network performance, please choose unused channel in the device working environment.

3.1.45G WiFi

Function Description

On the "5G WiFi" page of route mode, user can set the wireless parameters.

Operation Path

Please open in order: "Work mode > Route".

Interface Description

5G WiFi interface as follows:

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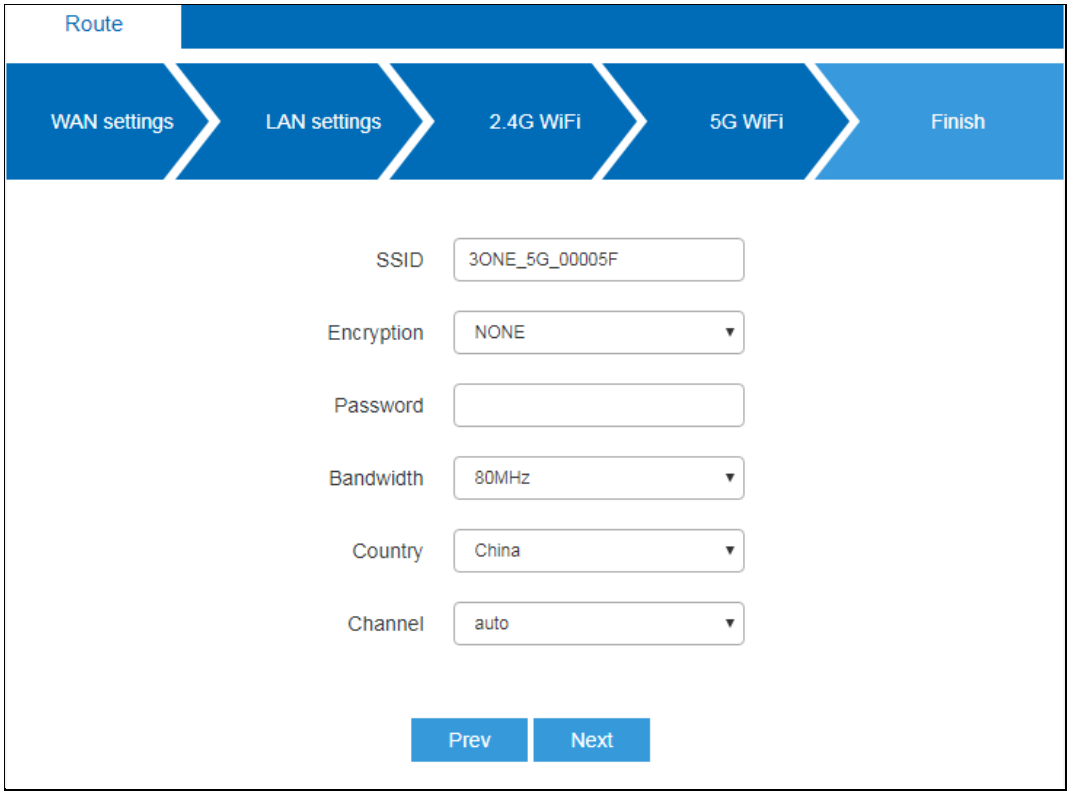

The main element configuration description of 5G WiFi interface:

Interface Element	Description
SSID	SSID name of wireless network, it supports 1-32 characters.
Encryption	Encryption mode of wireless network, options as follows: • No encryption; • WPA2-PSK (recommended): Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of wireless network, it supports 5 or 8-32 characters. Notes: Wireless password doesn't support space, the wireless network don't have encryption if not fill.

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Interface Element	Description
Bandwidth	Channel bandwidth of wireless network, it defaults to 80MHz, options as follows: • 20MHz; • 40MHz. • 80MHz
Country	Applied national region of wireless network, options as follows: • China; • USA. Notes: Open channels are different in different countries.
Channel	Working channel of wireless network, default "auto" self-adaptation, options as follows: • Auto: channel self-adaptation; • 36: main frequency band 5180Hz, frequency range 5170~5190Hz; • 40: main frequency band 5200Hz，frequency range 5190~5210Hz； • 44: main frequency band 5220Hz，frequency range 5210~5230Hz； • 48: main frequency band 5230Hz，frequency range 5210~5250Hz； • 52: main frequency band 5260Hz，frequency range 5250~5270Hz； • 56: main frequency band 5280Hz，frequency range 5270~5290Hz； • 60: main frequency band 5300Hz，frequency range 5290~5310Hz； • 64: main frequency band 5320Hz，frequency range 5310~5330Hz； • 149: main frequency band 5745Hz，frequency range 5735~5755Hz； • 153: main frequency band 5765Hz，frequency range 5755~5775Hz； • 157: main frequency band 5785Hz，frequency range 5775~5795Hz； • 161: main frequency band 5805Hz，frequency range 5795~5815Hz；

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Interface Element	Description
	• 165: main frequency band 5825Hz，frequency range 5815~5835Hz； Notes: In order to improve the network performance, please choose unused channel in the device working environment.

3.1.5 Finish

Function Description

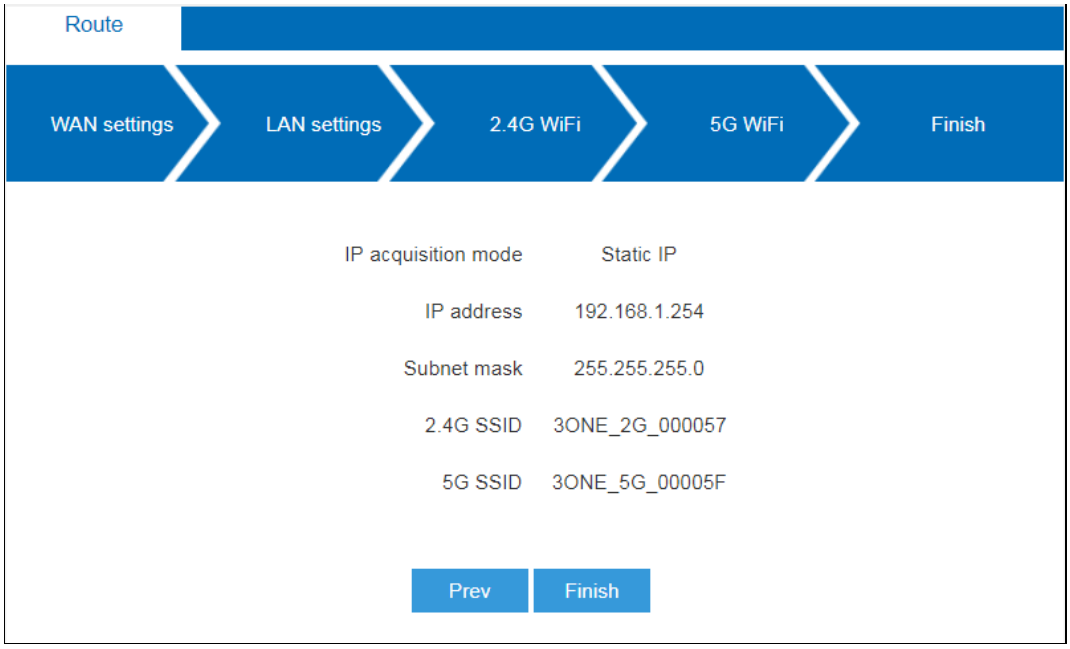
On the "Finish" page of route mode, user can check the main parameters of wireless route mode.

Operation Path

Please open in order: "Work mode > Route".

Interface Description

Finish interface as follows:



The main element configuration description of finish interface:

Interface Element	Description
IP acquisition mode	• Static IP • DHCP

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Interface Element	Description
IP address	IP address information of LAN.
Subnet mask	Subnet masks information of LAN.
2.4G SSID	Name of wireless network SSID 2.4G.
5G SSID	Name of wireless network SSID 5G.

3.2 AP

Under AP mode, the device can be used as a wireless access point, the equivalent of the wireless switch. Under the mode, WAN port, LAN port and wireless signal are all in the same VLAN; LAN port is static IP, DHCP server defaults to closed.

The rapid configuration of AP mode mainly includes three configuration links:

- LAN settings
- 2.4G WiFi
- 5G WiFi
- Finish

Following is the explanation of three configuration links.

3.2.1 LAN Settings

Function Description

On the "LAN settings" page of AP mode, user can configure the IP address and subnet mask information of LAN.

Operation Path

Please open in order: "Work mode > AP".

Interface Description 1: Static IP

Static IP interface as follows:

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The main element configuration description of static IP interface:

Interface Element	Description
Static IP	Static IP radio box.
IP address	IP address information of LAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Default gateway address of LAN.
DNS	DNS server address.

Interface Description 2: DHCP

DHCP interface as follows:

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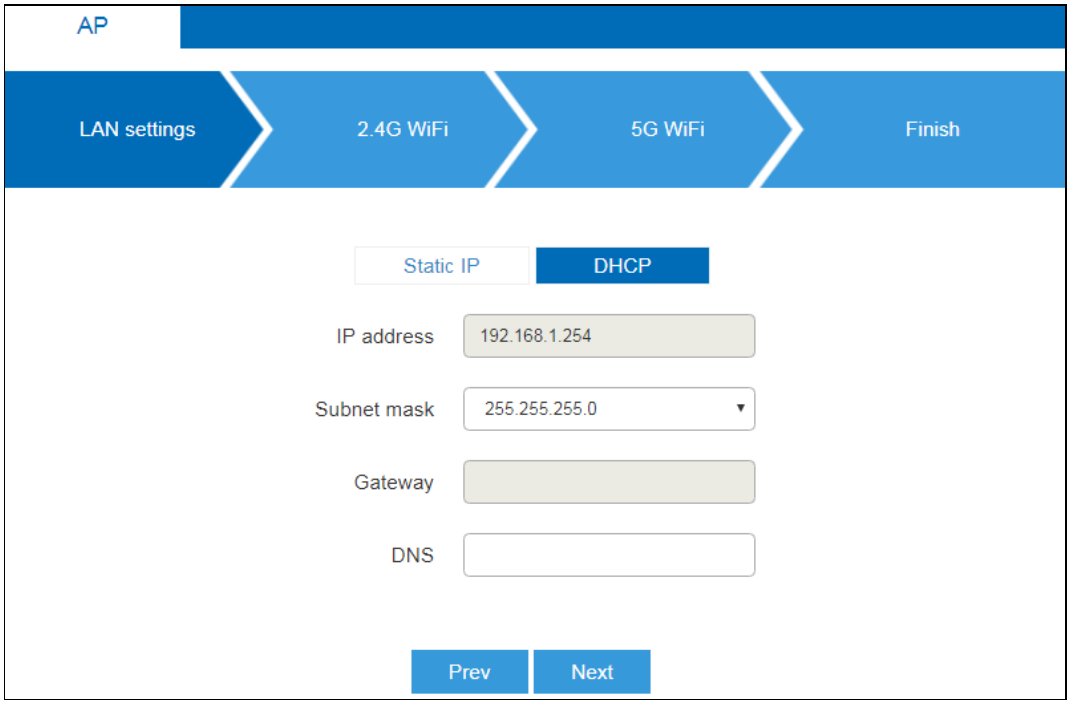

The main element configuration description of DHCP interfaces:

Interface Element	Description
DHCP	IP dynamic acquisition radiobox.
IP address	Dynamic acquisition of IP addresses information of LAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Automatically acquired default gateway address.
DNS	DNS server address. Notes: The priority level of manually setting DNS server address is higher than the one of automatically acquired DNS server address.

3.2.2 2.4G WiFi

Function Description

On the "2.4G WiFi" page of AP mode, user can configure the wireless parameters.

Operation Path

Please open in order: "Work mode > AP".

Interface Description

2.4G WiFi interface as follows:

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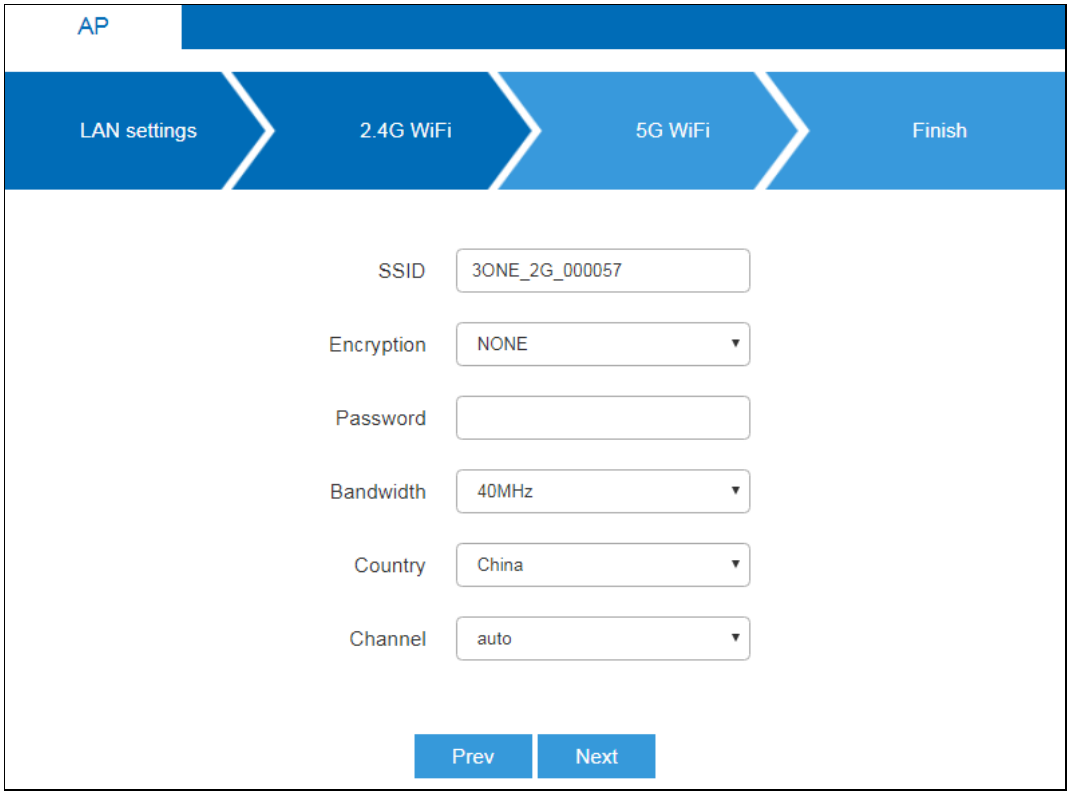

The main element configuration description of 2.4G WiFi interface:

Interface Element	Description
SSID	SSID name of wireless network, it supports 1-32 characters.
Encryption	Encryption mode of wireless network, options as follows: • No encryption; • WPA2-PSK (recommended): Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of wireless network, different encryption mode has different password requirements as follows: • Under WPA2-PSK encryption mode, wireless password supports 8-32 valid characters; • Under WEP-SHARED, wireless password supports 5, 13

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Interface Element	Description
	ASSIC characters or 10, 26 hexadecimal characters.
Bandwidth	Channel bandwidth of wireless network, it defaults to 40MHz, options as follows: • 20MHz; • 40MHz.
Country	Applied national region of wireless network, options as follows: • China; • USA. Notes: Open channels are different in different countries.
Channel	Working channel of wireless network, default "auto" self-adaptation, options as follows: • Auto: channel self-adaptation; • 1: main frequency band 2412Hz, frequency range 2401~2423Hz; • 2: main frequency band 2417Hz, frequency range 2406~2428Hz; • 3: main frequency band 2422Hz, frequency range 2411~2433Hz; • 4: main frequency band 2427Hz, frequency range 2416~2438Hz; • 5: main frequency band 2432Hz, frequency range 2421~2443Hz; • 6: main frequency band 2437Hz, frequency range 2426~2448Hz; • 7: main frequency band 2442Hz, frequency range 2431~2453Hz; • 8: main frequency band 2447Hz, frequency range 2436~2458Hz; • 9: main frequency band 2452Hz, frequency range 2441~2463Hz; • 10: main frequency band 2457Hz, frequency range 2446~2468Hz; • 11: main frequency band 2462Hz, frequency range 2451~2473Hz; • 12: main frequency band 2467Hz, frequency range 2456~2478Hz, this frequency band is not open in USA,

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Interface Element	Description
	so it's temporarily unavailable; • 13: main frequency band 2472Hz, frequency range 2461~2483Hz, this frequency band is not open in USA, so it's temporarily unavailable; Notes: In order to improve the network performance, please choose unused channel in the device working environment.

3.2.3 5G WiFi

Function Description

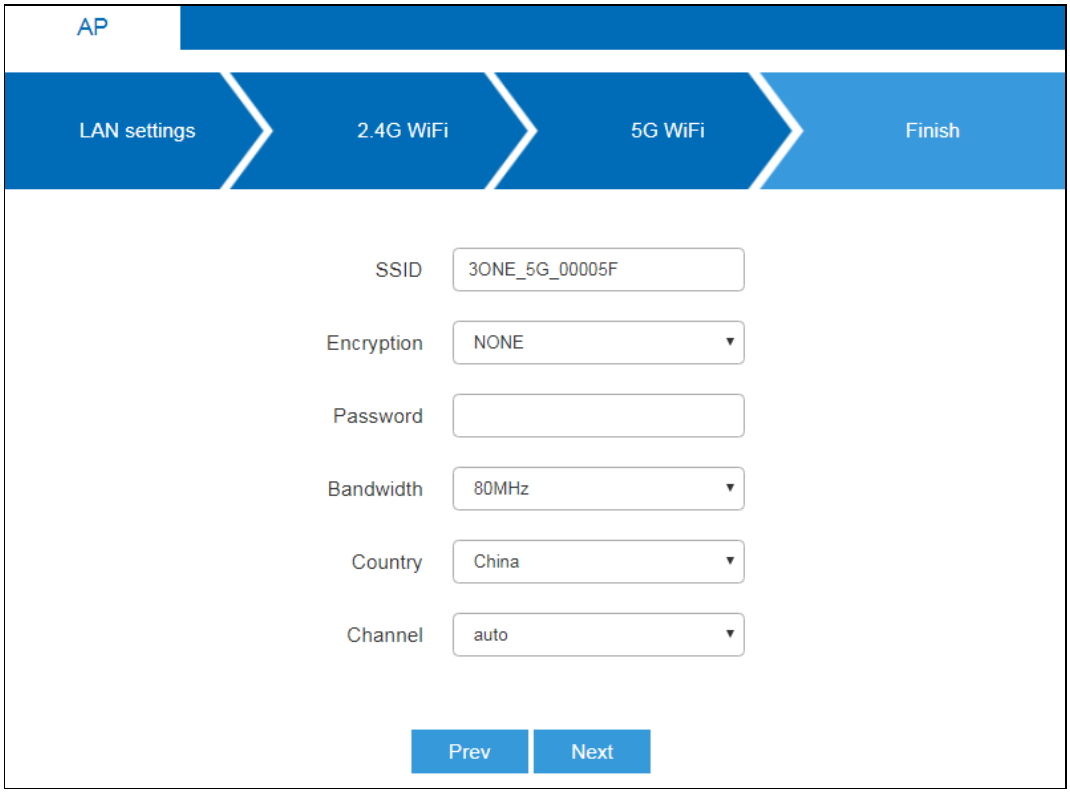
On the "5G WiFi" page of AP mode, user can set the wireless parameters.

Operation Path

Please open in order: "Work mode > AP".

Interface Description

5G WiFi interface as follows:



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The main element configuration description of 5G WiFi interface:

Interface Element	Description
SSID	SSID name of wireless network, it supports 1-32 characters.
Encryption	Encryption mode of wireless network, options as follows: • No encryption; • WPA2-PSK (recommended): Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of wireless network, different encryption mode has different password requirements as follows: • Under WPA2-PSK encryption mode, wireless password supports 8-32 valid characters; • Under WEP-SHARED, wireless password supports 5, 13 ASSIC characters or 10, 26 hexadecimal characters.
Bandwidth	Channel bandwidth of wireless network, it defaults to 80MHz, options as follows: • 20MHz; • 40MHz. • 80MHz
Country	Applied national region of wireless network, options as follows: • China; • USA. Notes: Open channels are different in different countries.
Channel	Working channel of wireless network, default "auto" self-adaptation, options as follows: • Auto: channel self-adaptation; • 36: main frequency band 5180Hz, frequency range 5170~5190Hz; • 40: main frequency band 5200Hz，frequency range 5190~5210Hz；

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Interface Element	Description
	• 44: main frequency band 5220Hz，frequency range 5210~5230Hz； • 48: main frequency band 5230Hz，frequency range 5210~5250Hz； • 52: main frequency band 5260Hz，frequency range 5250~5270Hz； • 56: main frequency band 5280Hz，frequency range 5270~5290Hz； • 60: main frequency band 5300Hz，frequency range 5290~5310Hz； • 64: main frequency band 5320Hz，frequency range 5310~5330Hz； • 149: main frequency band 5745Hz，frequency range 5735~5755Hz； • 153: main frequency band 5765Hz，frequency range 5755~5775Hz； • 157: main frequency band 5785Hz，frequency range 5775~5795Hz； • 161: main frequency band 5805Hz，frequency range 5795~5815Hz； • 165: main frequency band 5825Hz，frequency range 5815~5835Hz； Notes: In order to improve the network performance, please choose unused channel in the device working environment.

3.2.4 Finish

Function Description

On the "Finish" page of AP mode, user can check the main parameters of AP mode.

Operation Path

Please open in order: "Work mode > AP".

Interface Description

Finish interface as follows:

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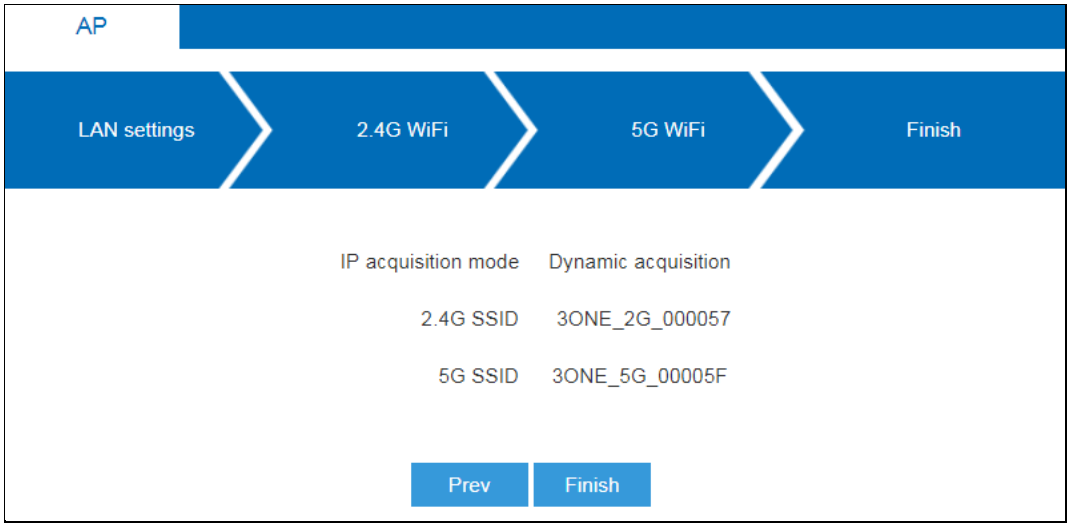

The main element configuration description of finish interface:

Interface Element	Description
IP acquisition mode	• Static IP • DHCP
IP address	IP address information of LAN.
Subnet mask	Subnet masks information of LAN.
2.4G SSID	Name of wireless network SSID 2.4G.
5G SSID	Name of wireless network SSID 5G.

3.3 Bridge

Under the bridge mode, the device will convert received wireless signal to cable signal and a wireless access point signal. Under the mode, WAN port, LAN port and wireless signal are all in the same VLAN, DHCP server defaults to closed.

Notice

- Bridge connection adopts WDS (Wireless Distribution System) wireless network bridging, so superior wireless network needs to enable WDS function under the bridge mode.
- WDS page enabling path of the device is "Network > Wireless settings > Advanced".

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3.3.1 LAN Settings

Function Description

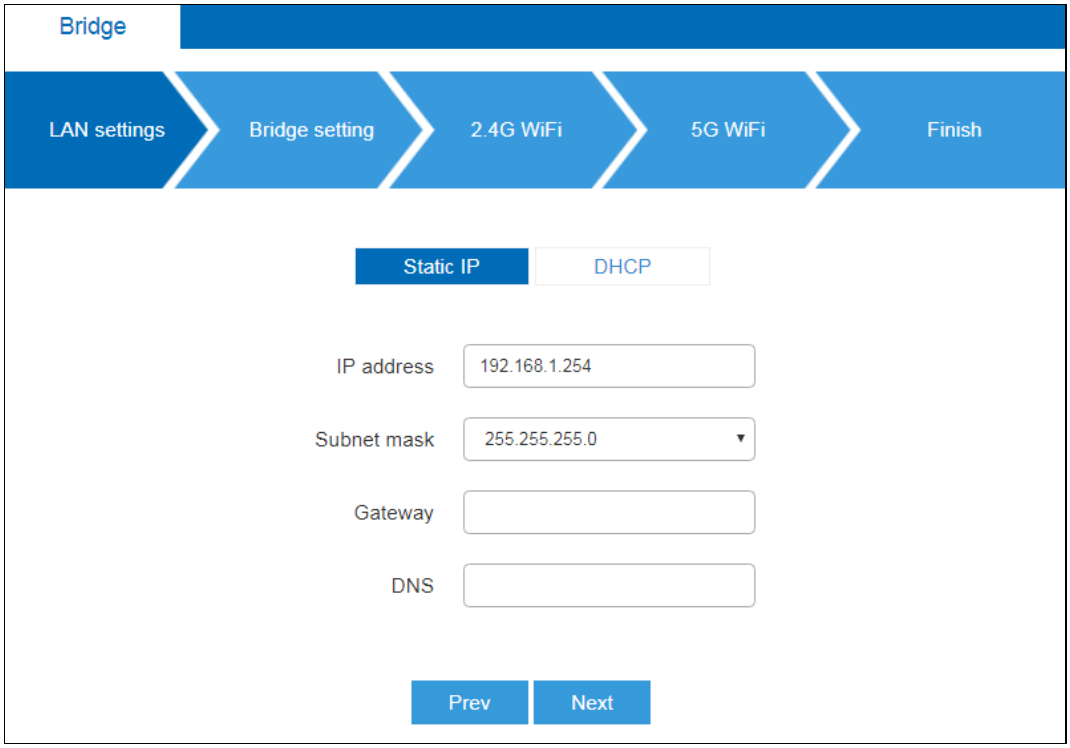
On the "LAN settings" page of bridge mode, user can configure the IP address and subnet mask of LAN.

Operation Path

Please open in order: "Work mode > Bridge".

Interface Description 1: Static IP

Static IP interface as follows:



The main element configuration description of static IP interface:

Interface Element	Description
Static IP	Static IP radio box.
IP address	IP address information of LAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Default gateway address of LAN.
DNS	DNS server address.

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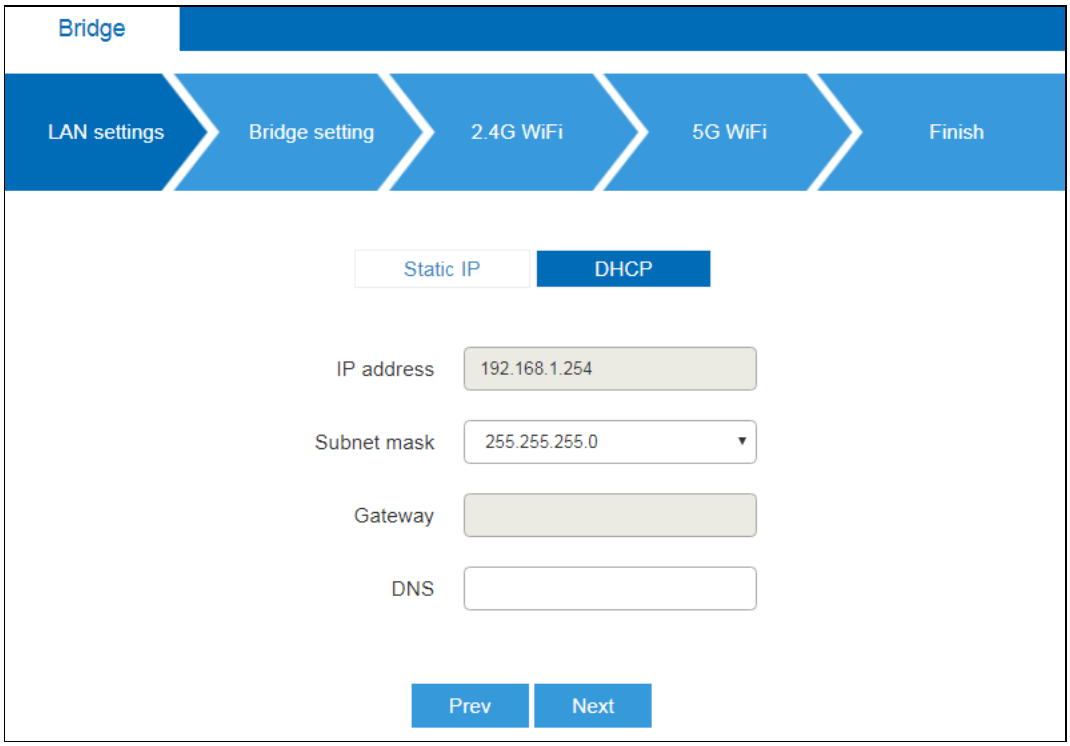
Interface Description 2: DHCP

DHCP interface as follows:



The main element configuration description of DHCP interfaces:

Interface Element	Description
DHCP	IP dynamic acquisition radiobox.
IP address	Dynamic acquisition of IP addresses information of LAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Automatically acquired default gateway address.
DNS	DNS server address. Notes: The priority level of manually setting DNS server address is higher than the one of automatically acquired DNS server address.

3.3.2 Bridge setting

Function Description

On the "Bridge setting" page of Bridge mode, user can configure the superior wireless network parameters of bridge.

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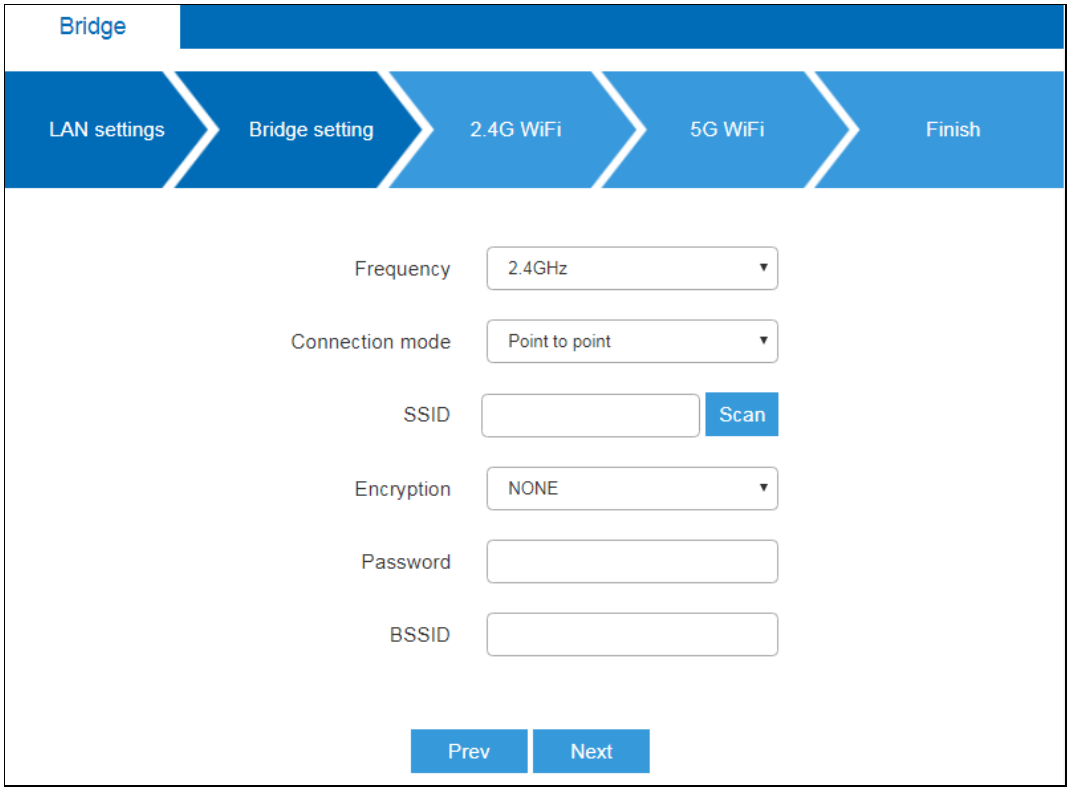
Operation Path

Please open in order: "Work mode > Bridge".

Interface Description

Bridge setting interface as follows:



The main element configuration description of Bridge setting interface:

Interface Element	Description
Frequency	Scanning frequency, options are as follow: • 2.4GHz • 5.8GHz
Connection mode	Connection mode of the device and opposite terminal wireless device, options as follows: • Point to point: it's used for connecting the appointed wireless device; • Roam: Switching among wireless devices with the same SSID.
SSID	SSID name of the opposite device wireless network. Notes:

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Interface Element	Description
	User can add the wireless device for bridge via scan button.
Encryption	Encryption mode of opposite device wireless network, options as follows: • NONE: No encryption; • WPA2-PSK: Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of opposite device wireless network.
BSSID	MAC address of opposite device wireless network. Notes: The parameter takes effect when the connection mode is "Point to point".

3.3.3 2.4G WiFi

Function Description

On the "2.4G WiFi" page of bridge mode, user can configure the wireless parameters.

Operation Path

Please open in order: "Work mode > Bridge".

Interface Description

2.4G WiFi interface as follows:

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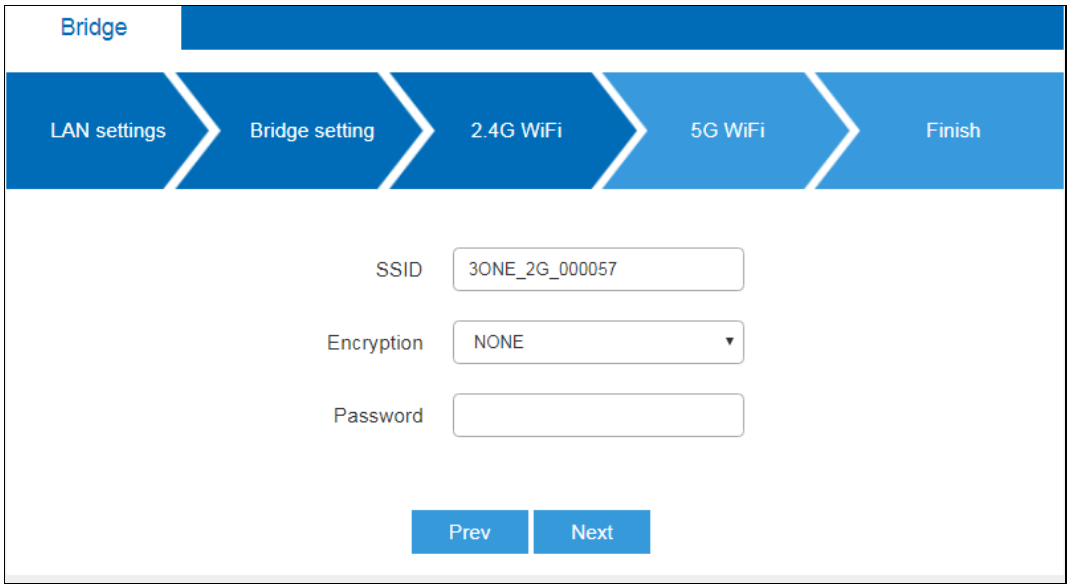

The main element configuration description of 2.4G WiFi interface:

Interface Element	Description
SSID	SSID name of wireless network, it supports 1-32 characters.
Encryption	Encryption mode of wireless network, options as follows: • NONE: No encryption; • WPA2-PSK: Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of wireless network, different encryption mode has different password requirements as follows: • Under WPA2-PSK encryption mode, wireless password supports 8-32 valid characters; • Under WEP-SHARED, wireless password supports 5, 13 ASSIC characters or 10, 26 hexadecimal characters.

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3.3.45G WiFi

Function Description

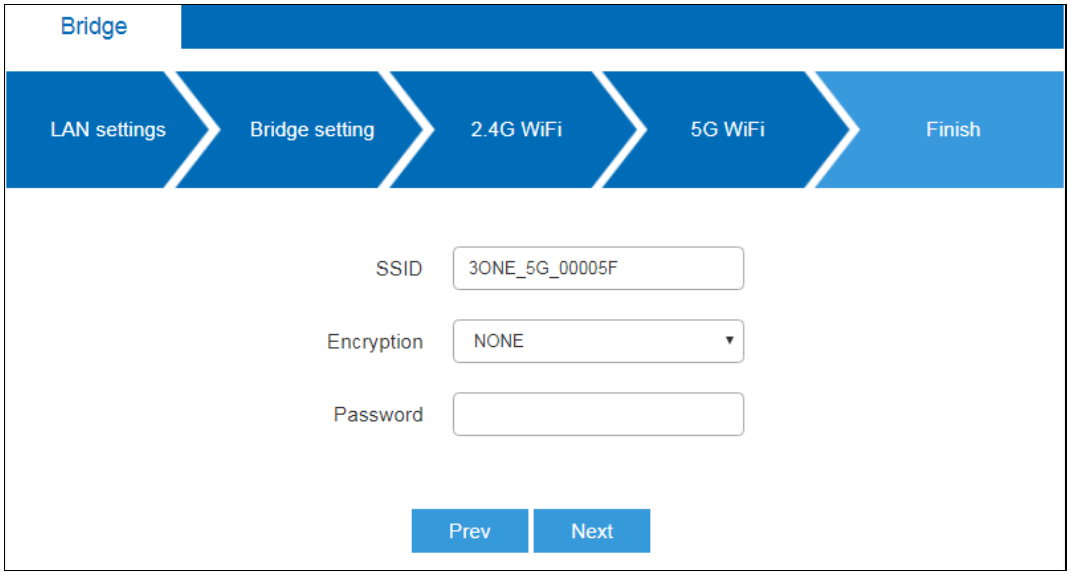
On the "5G WiFi" page of bridge mode, user can configure the wireless parameters.

Operation Path

Please open in order: "Work mode > Bridge".

Interface Description

5G WiFi interface as follows:



The main element configuration description of 2.4G WiFi interface:

Interface Element	Description
SSID	SSID name of wireless network, it supports 1-32 characters.
Encryption	Encryption mode of wireless network, options as follows: • NONE: No encryption; • WPA2-PSK: Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes:

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Interface Element	Description
	WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of wireless network, different encryption mode has different password requirements as follows: • Under WPA2-PSK encryption mode, wireless password supports 8-32 valid characters; • Under WEP-SHARED, wireless password supports 5, 13 ASSIC characters or 10, 26 hexadecimal characters.

3.3.5 Finish

Function Description

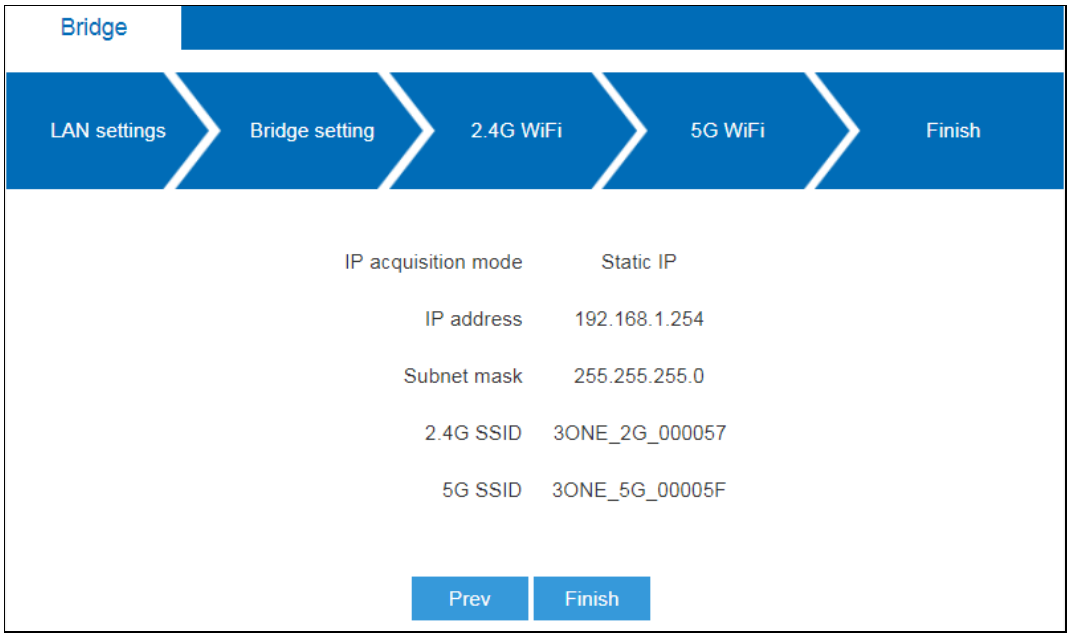
On the "Finish" page of bridge mode, user can check the main parameters of bridge mode.

Operation Path

Please open in order: "Work mode > Bridge".

Interface Description

Finish interface as follows:



The main element configuration description of finish interface:

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Interface Element	Description
IP acquisition mode	• Static IP • DHCP
IP address	IP address information of LAN.
Subnet mask	Subnet masks information of LAN.
2.4G SSID	Name of wireless network SSID 2.4G.
5G SSID	Name of wireless network SSID 5G.

3.4 Client

Under the client mode, the device will convert received wireless signal to cable signal. Under the mode, WAN port, LAN port and wireless signal are all in the same VLAN, DHCP server defaults to closed.

Notice

- The client connection mode adopts WDS (Wireless Distribution System) wireless bridging, so superior wireless network needs to enable WDS function under the client mode.
- WDS page enabling path of the device is "Network > Wireless settings > Advanced".

3.4.1 LAN Settings

Function Description

On the "LAN settings" page of client mode, user can configure the IP address and subnet mask information of LAN.

Operation Path

Please open in order: "Work mode > Client".

Interface Description 1: Static IP

Static IP interface as follows:

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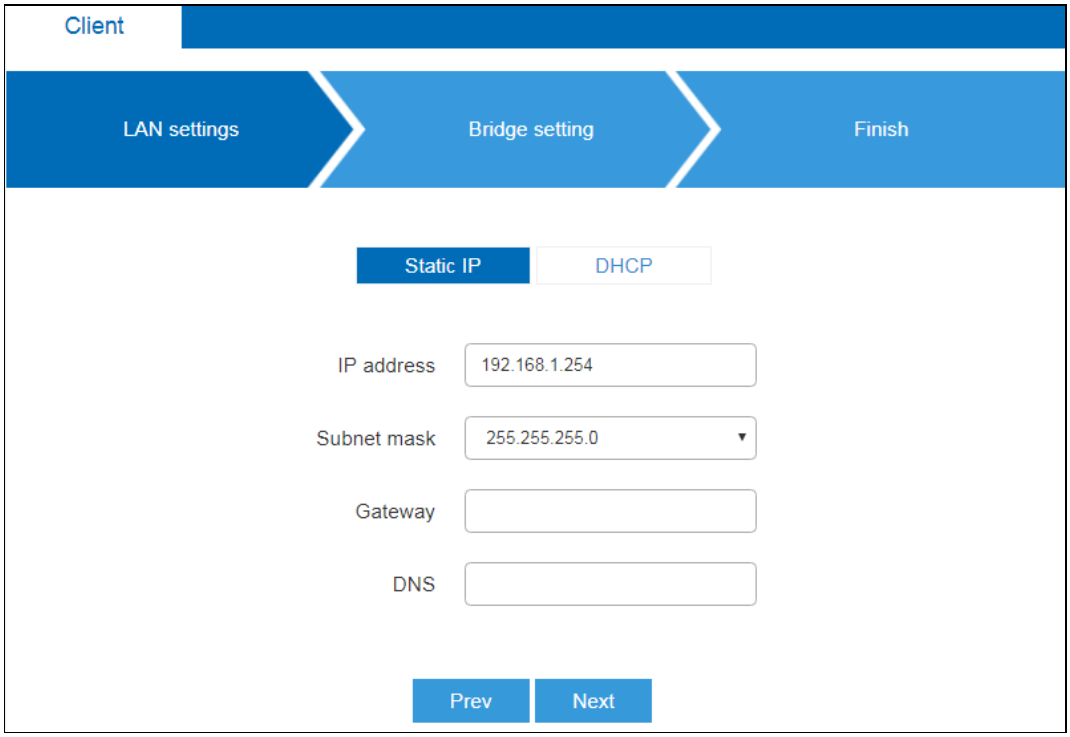

The main element configuration description of static IP interface:

Interface Element	Description
Static IP	Static IP radiobox.
IP address	IP address information of LAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Default gateway address of LAN.
DNS	DNS server address.

Interface Description 2: DHCP

DHCP interface as follows:

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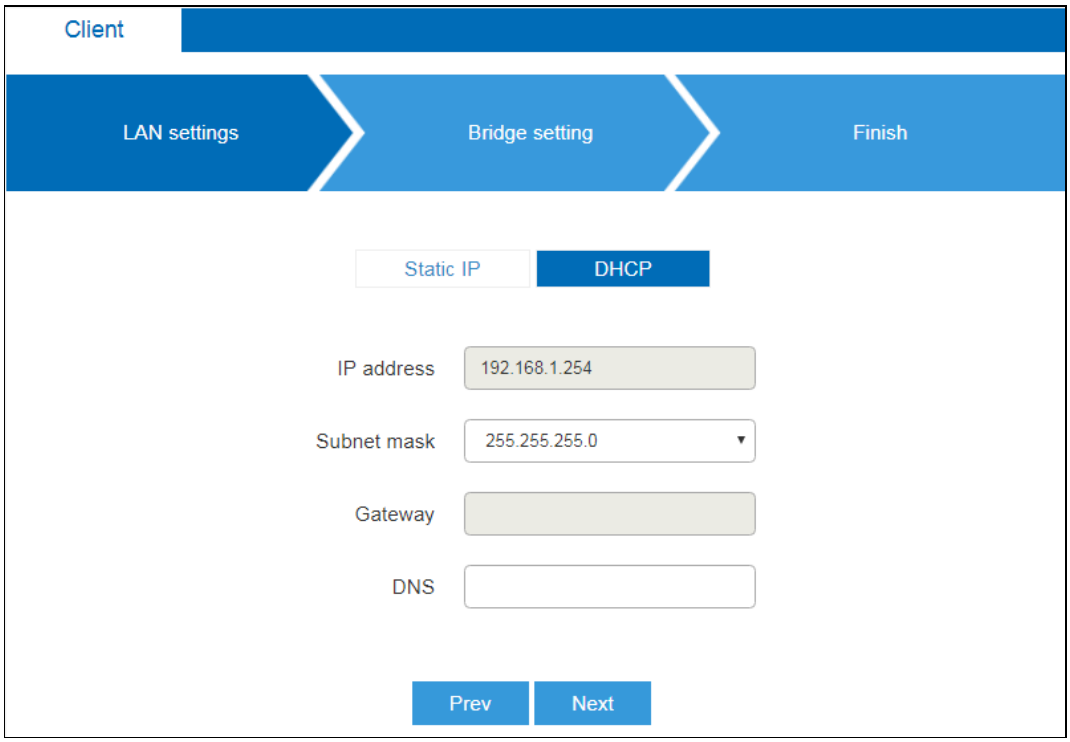

The main element configuration description of DHCP:

Interface Element	Description
DHCP	IP dynamic acquisition radiobox.
IP address	Dynamic acquisition of IP addresses information of LAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Automatically acquired default gateway address.
DNS	DNS server address. Notes: The priority level of manually setting DNS server address is higher than the one of automatically acquired DNS server address.

3.4.2 Bridge Setting

Function Description

On the "Bridge setting" page of client mode, user can configure the superior wireless network parameters of bridge.

Operation Path

Please open in order: "Work mode > Client".

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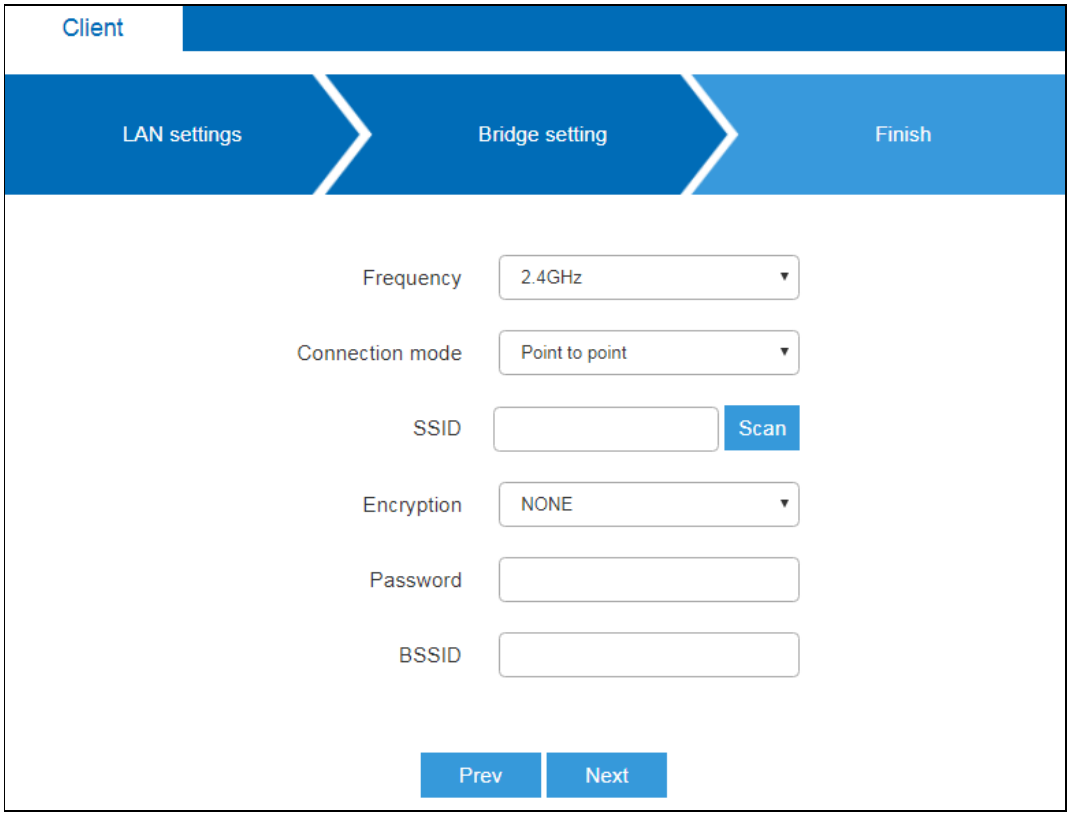
Interface Description

Bridge setting interface as follows:



The main element configuration description of bridge setting interface:

Interface Element	Description
Frequency	Scanning frequency, options are as follows: • 2.4G • 5.8G
Connection mode	Connection mode of the device and opposite terminal wireless device, options as follows: • Point to point: it's used for connecting the appointed wireless device; • Roam: Switching among wireless devices with the same SSID.
SSID	SSID name of the opposite device wireless network. Notes: User can add the wireless device for bridge via scan button.
Encryption	Encryption mode of opposite device wireless network,

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Interface Element	Description
	options as follows: • NONE: No encryption; • WPA2-PSK: Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of opposite device wireless network.
BSSID	MAC address of opposite device wireless network.

3.4.3 Finish

Function Description

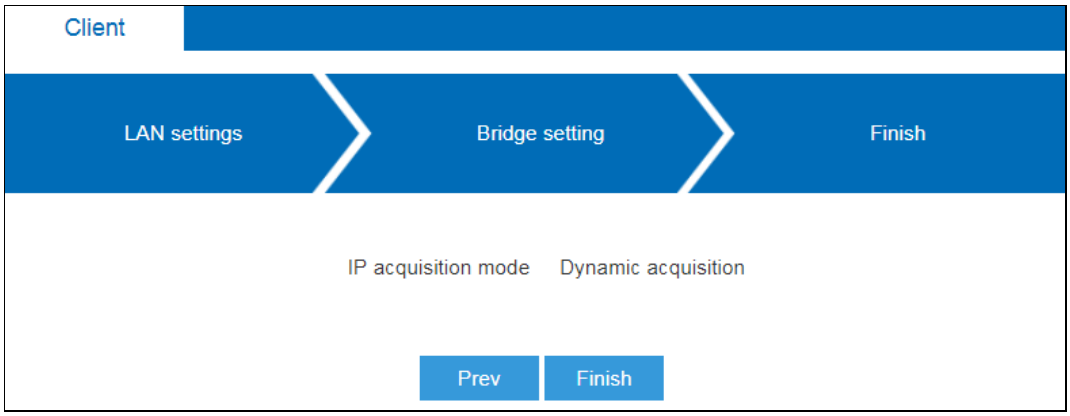
On the "Finish" page of client mode, user can check the main parameters of client.

Operation Path

Please open in order: "Work mode > Client".

Interface Description

Finish interface as follows:



The main element configuration description of finish interface:

Interface Element	Description

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Interface Element	Description
IP acquisition mode	• Static IP • DHCP
IP address	IP address information of LAN.
Subnet mask	Subnet masks information of LAN.

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4 Network

4.1 LAN Settings

4.1.1 Route

Function Description

Under the route mode, on the "LAN settings" page of network, user can configure the device network address and enable DHCP server function.

DHCP (Dynamic Host Configuration Protocol) is a network protocol of LAN; it adopts UDP protocol to automatically distribute IP address to LAN, improving the IP address utilization. The client in network environment can gain the dynamic IP address, Gateway address, DNS server address and other information from DHCP server.

Operation Path

Please open in order: "Network > LAN settings".

Interface Description

LAN settings interface as follows:

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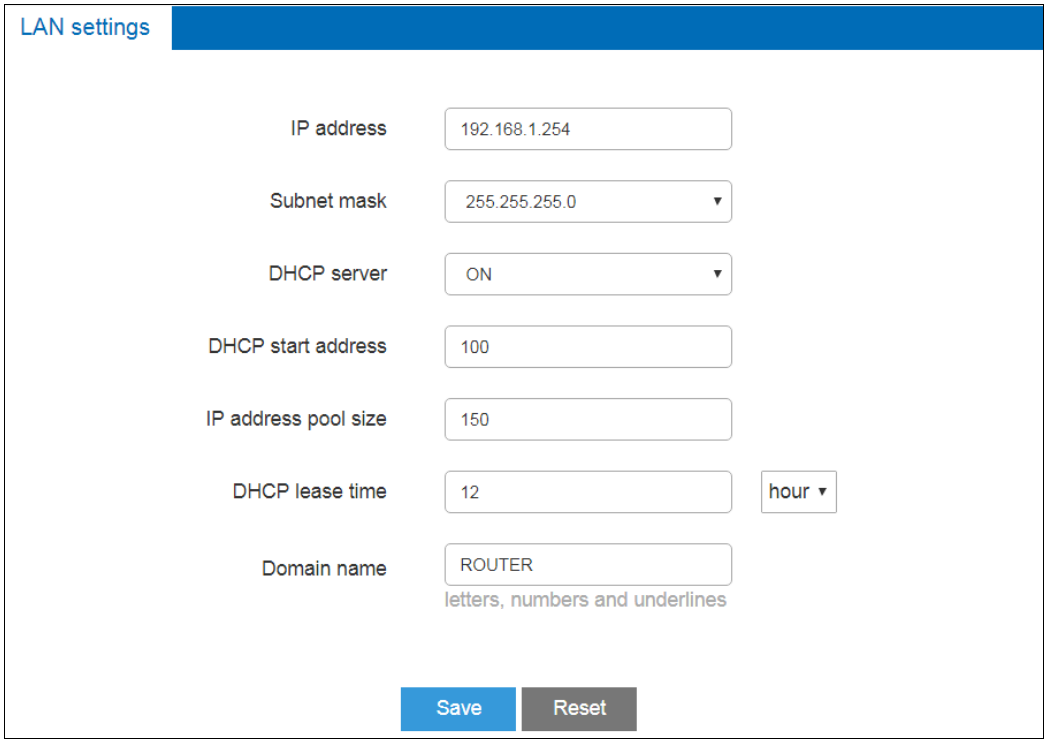

The main element configuration description of LAN settings interface:

Interface Element	Description
IP address	IP address of the device LAN port.
Subnet mask	Drop-down list of subnet mask.
DHCP server	Drop-down list of DHCP server state, options as follows: • OFF; • ON.
DHCP start address	Minimum IP address host number distributed by DHCP address pool, value range is 1-255.
IP address pool size	Maximum IP address number distributed by IP address pool, value range is 1-32768.
DHCP lease time	Valid time of IP address distributed by DHCP address pool, it defaults to 12 hours. Drop-down list of time unit, options as follows: • hour; • min; • day.
Domain name	DHCP domain name is composed of letter, number and underline; it supports 0-32 valid characters.

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4.1.2 AP, Bridge and Client

Function Description

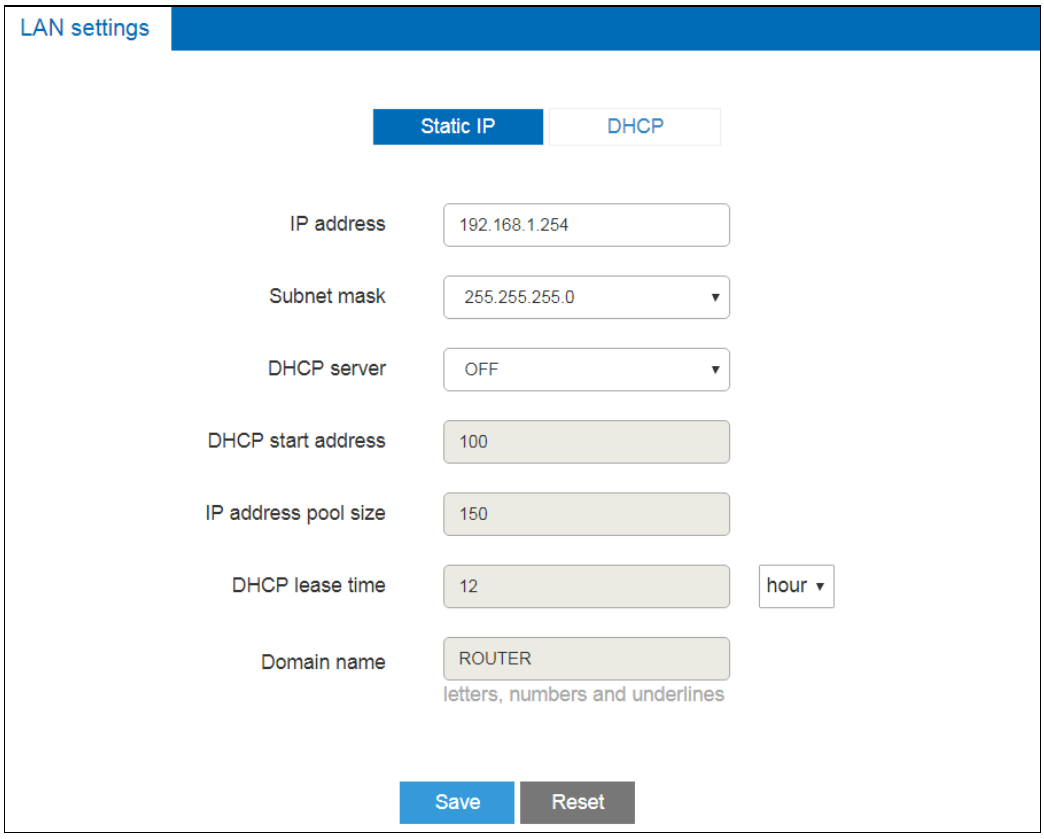
Under AP, Bridge and Client mode, on the "LAN settings" page of network, user can configure the device network address.

Operation Path

Please open in order: "Network > LAN settings".

Interface Description 1: Static IP

Static IP interface as follows:



The main element configuration description of static IP interface:

Interface Element	Description
IP address	IP address of the device LAN port.
Subnet mask	Drop-down list of subnet mask.
DHCP server	Drop-down list of DHCP server state, options as follows: • OFF;

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Interface Element	Description
	• ON. Notes: Under AP, bridge or client mode, the function of DHCP server is disabled.
DHCP start address	Minimum IP address host number distributed by DHCP address pool, value range is 1-255.
IP address pool size	Maximum IP address number distributed by IP address pool, value range is 1-32768.
DHCP lease time	Valid time of IP address distributed by DHCP address pool, it defaults to 12 hours. Drop-down list of time unit, options as follows: • hour; • min; • day.
Domain name	DHCP domain name is composed of letter, number and underline; it supports 0-32 valid characters.

Interface Description 2: DHCP

DHCP interface as follows:

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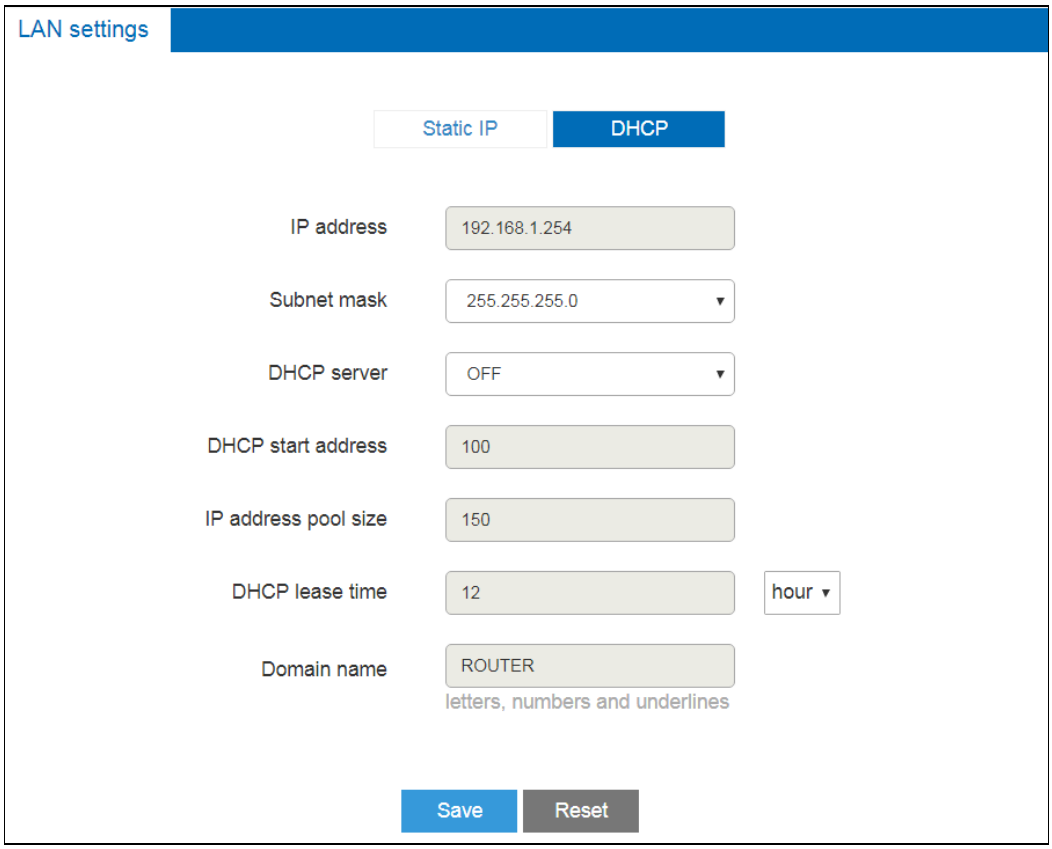

The main element configuration description of DHCP:

Interface Element	Description
IP address	Automatically acquired IP address of the device LAN port.
Subnet mask	Drop-down list of subnet mask.
DHCP server	Drop-down list of DHCP server state, options as follows: • OFF; • ON. Notes: Under AP, bridge or client mode, the function of DHCP server is disabled.
DHCP start address	Minimum IP address host number distributed by DHCP address pool, value range is 1-255.
IP address pool size	Maximum IP address number distributed by IP address pool, value range is 1-32768.
DHCP lease time	Valid time of IP address distributed by DHCP address pool, it defaults to 12 hours. Drop-down list of time unit, options as follows: • hour;

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Interface Element	Description
	• min; • day.
Domain name	DHCP domain name is composed of letter, number and underline; it supports 0-32 valid characters.

4.2 WAN Settings

Function Description

On the "WAN settings" page of network, user can configure three connection modes between WAN port and WAN:

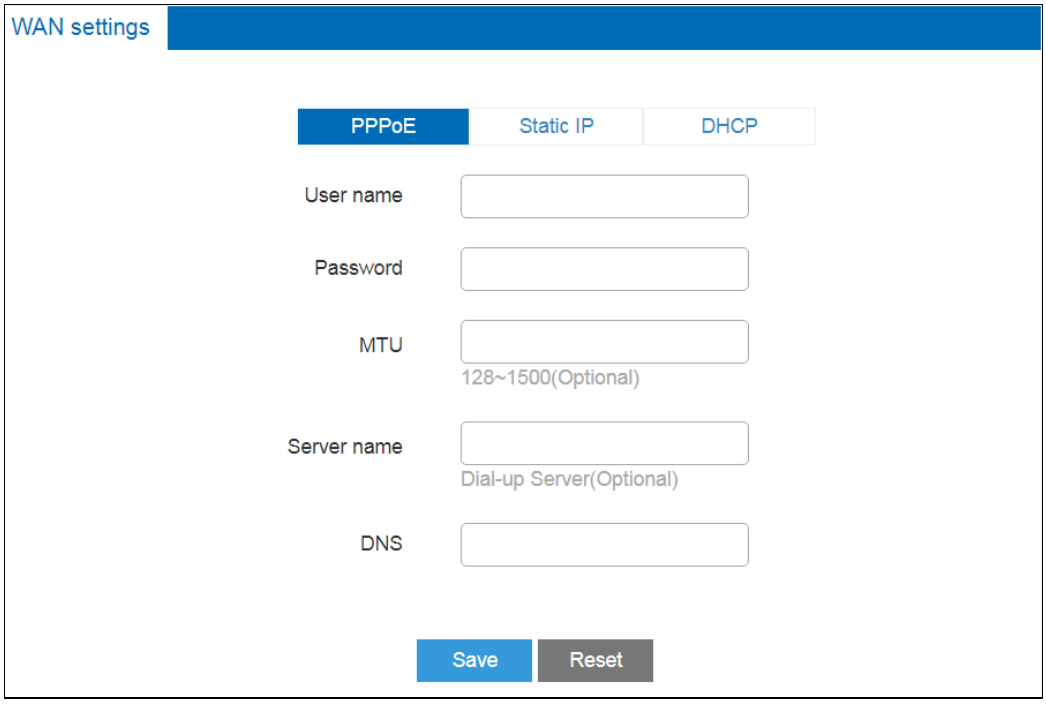
- PPPoE;
- Static IP;
- DHCP.

Operation Path

Please open in order: "Network > WAN settings".

Interface Description 1: PPPoE

PPPoE interface as follows:



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The main element configuration description of PPPoE interface:

Interface Element	Description
PPPoE	PPPoE radiobox, it supports PPPoE to achieve Internet access.
User name	User name of PPPoE connection. Notes: User name, password and service name are provided by network provider.
Password	Password of PPPoE connection. Notes: User name, password and service name are provided by network provider.
MTU	Maximum length of single message transmitted in PPPoE, value range is 128-1500 bytes. Notes: • MTU (Maximum Transmission Unit), the device will divide the data packet into multiple small packets if the maximum length of single message exceeds given MTU value; so reasonable setting can optimize network speed; • MTU value is recommended to be same to the one of superior router.
Server name	Server name, not fill if network provider doesn't supply. Notes: User name, password and service name are provided by network provider.
DNS	DNS server address. Notes: The priority level of manually setting DNS server address is higher than the one of automatically acquired DNS server address.

Interface Description 2: Static IP

Static IP interface as follows:

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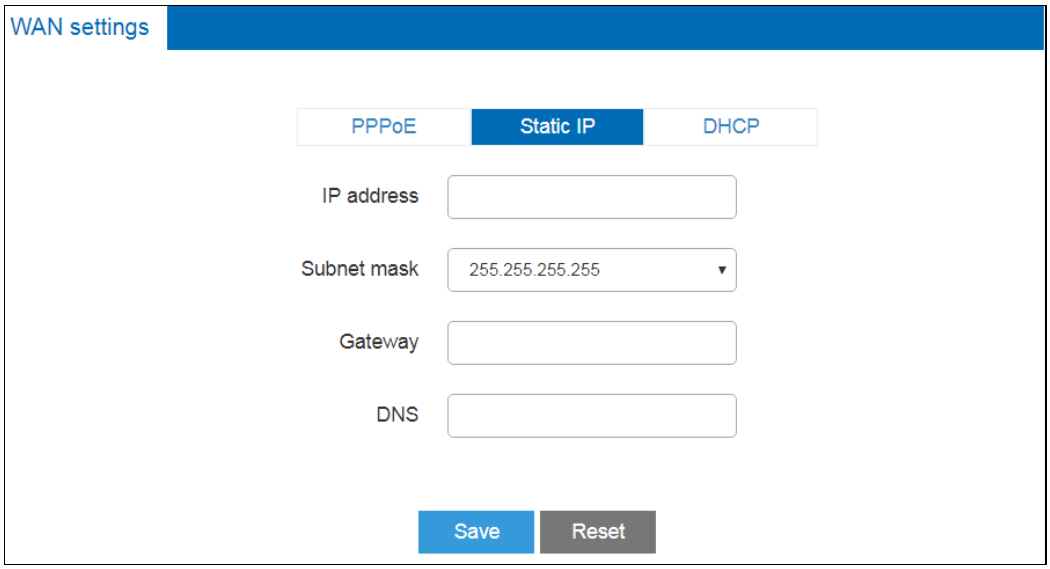

The main element configuration description of static IP interface:

Interface Element	Description
Static IP	Static IP radiobox, network information configuration of the device WAN port.
IP address	Fixed IP address provided by network provider or WAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Default gateway address provided by network provider or WAN.
DNS	DNS server address provided by network provider or WAN.

Interface Description 3: DHCP

DHCP interface as follows:

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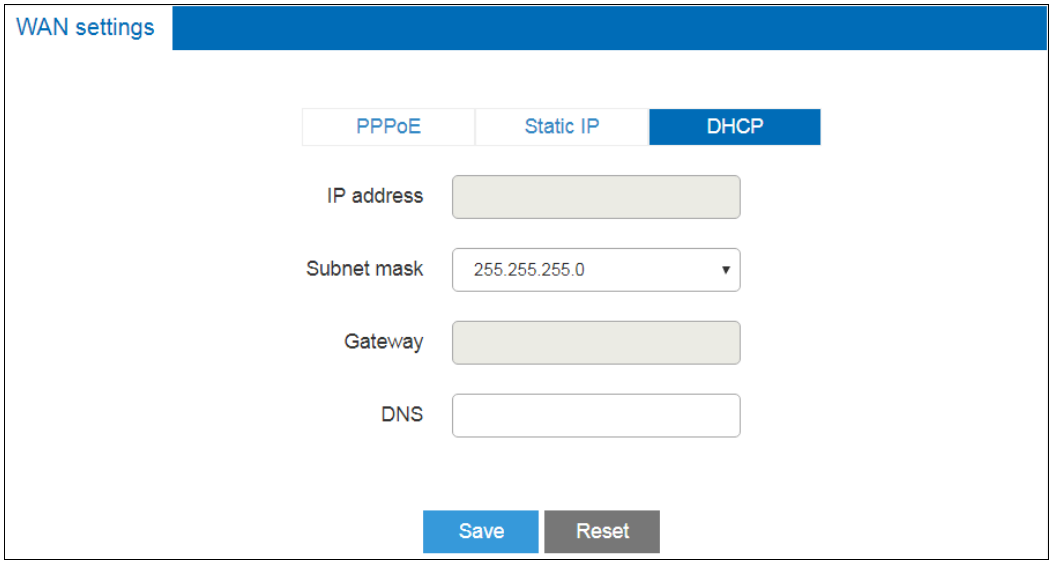

The main element configuration description of DHCP:

Interface Element	Description
DHCP	DHCP radiobox, automatic acquisition of the device WAN port network information. Notes: The device automatically acquires the network address information distributed by network provider or WAN.
IP address	IP address automatically distributed by network provider or WAN.
Subnet mask	Drop-down list of subnet mask.
Gateway	Gateway address automatically distributed by network provider or WAN.
DNS	DNS server address. Notes: The priority level of manually setting DNS server address is higher than the one of automatically acquired DNS server address.

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4.3 Wireless Settings

4.3.1 2.4G Settings

Function Description

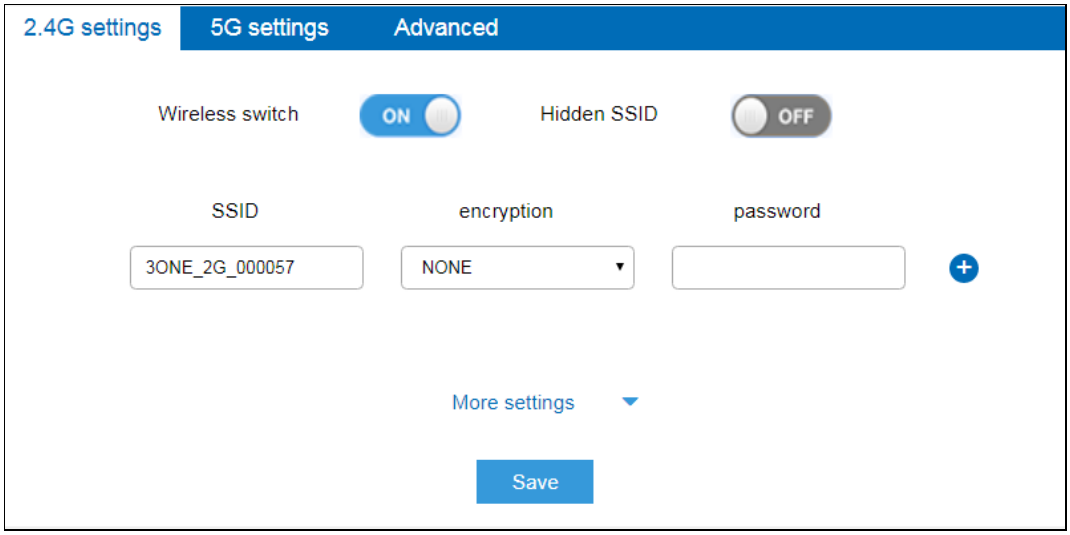
On the "2.4G Settings" page of wireless settings, user can configure relative parameters of wireless network, such as wireless switch, hidden SSID, SSID, channel, bandwidth, max client number and other wireless configuration.

Operation Path

Please open in order: "Network > Wireless settings > 2.4G settings".

Interface Description 1: 2.4G Settings

2.4G settings interface as follows:



The main element configuration description of 2.4G settings interface:

Interface Element	Description
Wireless switch	Function enabling switch of wireless network; click the right button for ON and OFF switching. • ON: enable wireless network function. • OFF: disable wireless network function. When the wireless switch is in OFF state, wireless network will be unavailable, and the wireless connection will be disconnected.

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Interface Element	Description
Hidden SSID	Function enabling switch of hidden SSID; click the right button for ON and OFF switching. • ON: enable hidden SSID function, SSID name of the device wireless signal will be hidden and displayed as unnamed network. Please enter the SSID name of wireless signal while connecting hidden wireless signal. • OFF: disable hidden SSID function.
SSID	SSID name of wireless network, it supports 1-32 characters.
Encryption	Encryption mode of wireless network, options as follows: • NONE: No encryption; • WPA2-PSK: Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of wireless network, different encryption mode has different password requirements as follows: • Under WPA2-PSK encryption mode, wireless password supports 8-32 valid characters; • Under WEP-SHARED, wireless password supports 5, 13 ASSIC characters or 10, 26 hexadecimal characters.

Interface Description 2: More Settings of 2.4G Settings

More settings interface as follows:

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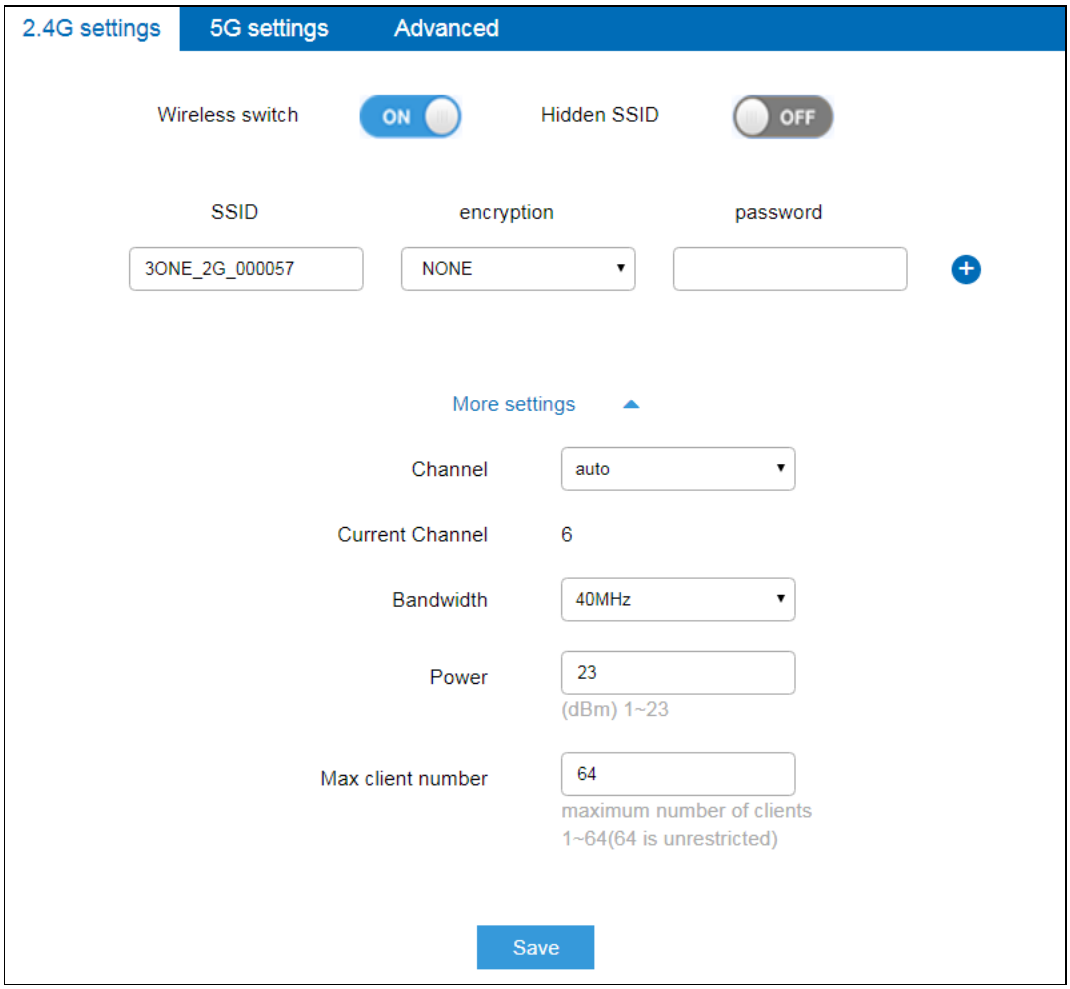

The main element configuration description of more settings interfaces:

Interface Element	Description
Channel	Working channel of wireless network, default "auto" self-adaptation, options as follows: • Auto: channel self-adaptation; • 1: main frequency band 2412Hz, frequency range 2401~2423Hz; • 2: main frequency band 2417Hz, frequency range 2406~2428Hz; • 3: main frequency band 2422Hz, frequency range 2411~2433Hz; • 4: main frequency band 2427Hz, frequency range 2416~2438Hz; • 5: main frequency band 2432Hz, frequency range 2421~2443Hz;

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Interface Element	Description
	• 6: main frequency band 2437Hz, frequency range 2426~2448Hz; • 7: main frequency band 2442Hz, frequency range 2431~2453Hz; • 8: main frequency band 2447Hz, frequency range 2436~2458Hz; • 9: main frequency band 2452Hz, frequency range 2441~2463Hz; • 10: main frequency band 2457Hz, frequency range 2446~2468Hz; • 11: main frequency band 2462Hz, frequency range 2451~2473Hz; • 12: main frequency band 2467Hz, frequency range 2456~2478Hz, this frequency band is not open in USA, so it's temporarily unavailable; • 13: main frequency band 2472Hz, frequency range 2461~2483Hz, this frequency band is not open in USA, so it's temporarily unavailable; Notes: In order to improve the network performance, please choose unused channel in the device working environment.
Current channel	The working channel of current 2.4G wireless network.
Bandwidth	Channel bandwidth of wireless network, it defaults to 40MHz, options as follows: • 20MHz; • 40MHz. Notes: 40MHz bandwidth binds two 20MHz bandwidth channels together to gain the handling capacity more than twice of the 20MHz bandwidth.
Power	Transmitted power of the device wireless signal, defaults to 23dBm, value range 1~23dBm. Notes: • Greater the transmitted power, better the transmutability, longer the transmission range; • Different device has different transmitted power range.
Max client number	Maximum client number of the device wireless signal, value range 1-64, when the value is 64, it represents the unlimited connected clients number.

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4.3.2 5G Settings

Function Description

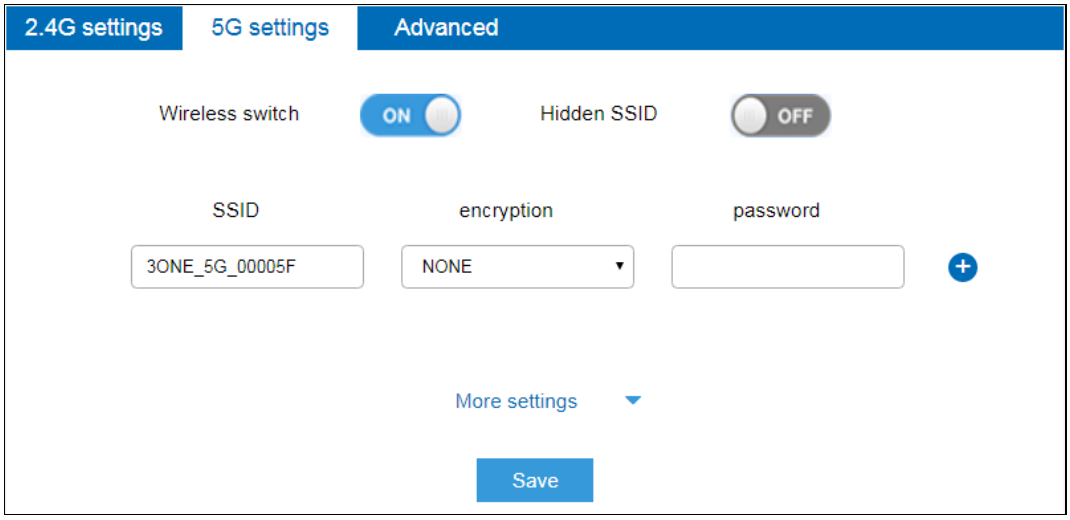
On the "5G Settings" page of wireless settings, user can configure relative parameters of wireless network, such as wireless switch, hidden SSID, SSID, channel, bandwidth, max client number and other wireless configuration.

Operation Path

Please open in order: "Network > Wireless settings > 5G settings".

Interface Description 1: 5G Settings

5G settings interface as follows:



The main element configuration description of 5G settings interface:

Interface Element	Description
Wireless switch	Function enabling switch of wireless network; click the right button for ON and OFF switching. • ON: enable wireless network function. • OFF: disable wireless network function. When the wireless switch is in OFF state, wireless network will be unavailable, and the wireless connection will be disconnected.
Hidden SSID	Function enabling switch of hidden SSID; click the right button for ON and OFF switching. • ON: enable hidden SSID function, SSID name of the

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Interface Element	Description
	device wireless signal will be hidden and displayed as unnamed network. Please enter the SSID name of wireless signal while connecting hidden wireless signal. • OFF: disable hidden SSID function.
SSID	SSID name of wireless network, it supports 1-32 characters.
Encryption	Encryption mode of wireless network, options as follows: • NONE: No encryption; • WPA2-PSK: Wi-Fi Protected Access II suits for the individual or average family network. It adopts pre-shared key mode and supports TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) encryption modes. • WEP-SHARED: a kind of Wired Equivalent Privacy, it adopts shared key authentication encryption mode. Notes: WPA2-PSK is recommended, because it's stronger and safer than WEP-SHARED.
Password	Password of wireless network, different encryption mode has different password requirements as follows: • Under WPA2-PSK encryption mode, wireless password supports 8-32 valid characters; • Under WEP-SHARED, wireless password supports 5, 13 ASSIC characters or 10, 26 hexadecimal characters.

Interface Description 2: More Settings of 5G Settings

More settings interface as follows:

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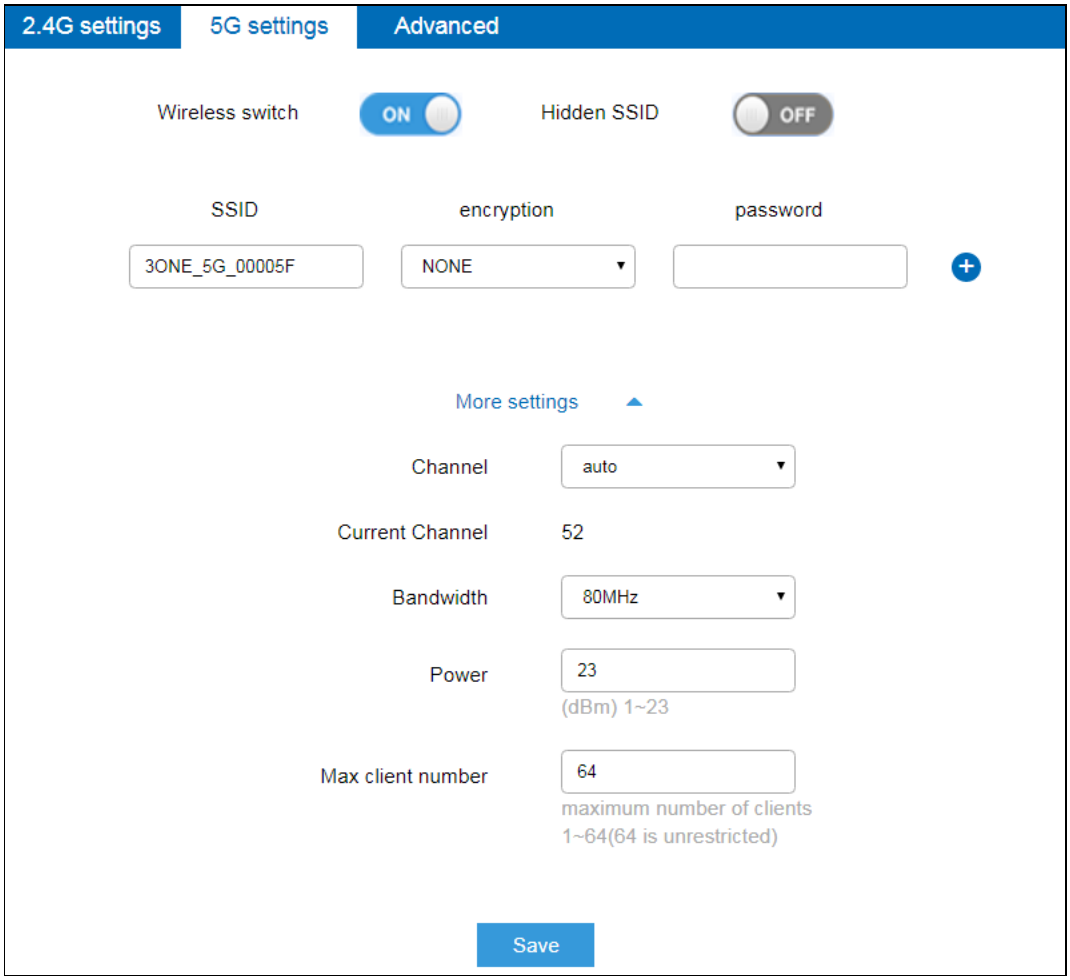

The main element configuration description of more settings interfaces:

Interface Element	Description
Channel	Working channel of wireless network, default "auto" self-adaptation, options as follows: • Auto: channel self-adaptation; • 36: main frequency band 5180Hz, frequency range 5170~5190Hz; • 40: main frequency band 5200Hz，frequency range 5190~5210Hz； • 44: main frequency band 5220Hz，frequency range 5210~5230Hz； • 48: main frequency band 5230Hz，frequency range 5210~5250Hz； • 52: main frequency band 5260Hz，frequency range 5250~5270Hz；

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Interface Element	Description
	• 56: main frequency band 5280Hz，frequency range 5270~5290Hz； • 60: main frequency band 5300Hz，frequency range 5290~5310Hz； • 64: main frequency band 5320Hz，frequency range 5310~5330Hz； • 100：main frequency band 5510Hz，frequency range 5490~5530Hz, this frequency band is not open in China, so it's temporarily unavailable; • 104：main frequency band 5520Hz，frequency range 5510~5530Hz, this frequency band is not open in China, so it's temporarily unavailable; • 108：main frequency band 5540Hz，frequency range 5530~5550Hz, this frequency band is not open in China, so it's temporarily unavailable; • 112：main frequency band 5560Hz，frequency range 5550~5570Hz, this frequency band is not open in China, so it's temporarily unavailable; • 116：main frequency band 5580Hz，frequency range 5570~5590Hz, this frequency band is not open in China, so it's temporarily unavailable; • 120：main frequency band 5600Hz，frequency range 5590~5610Hz, this frequency band is not open in China, so it's temporarily unavailable; • 124：main frequency band 5620Hz，frequency range 5610~5630Hz, this frequency band is not open in China, so it's temporarily unavailable; • 128：main frequency band 5640Hz，frequency range 5630~5650Hz, this frequency band is not open in China, so it's temporarily unavailable; • 149: main frequency band 5745Hz，frequency range 5735~5755Hz； • 153: main frequency band 5765Hz，frequency range 5755~5775Hz； • 157: main frequency band 5785Hz，frequency range 5775~5795Hz； • 161: main frequency band 5805Hz，frequency range 5795~5815Hz；

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Interface Element	Description
	• 165: main frequency band 5825Hz，frequency range 5815~5835Hz； Notes: In order to improve the network performance, please choose unused channel in the device working environment.
Current channel	The working channel of current 5G wireless network.
Bandwidth	Channel bandwidth of wireless network, it defaults to 80MHz, options as follows: • 20MHz; • 40MHz; • 80MHz.
Power	Transmitted power of the device wireless signal, defaults to 23dBm, value range 1~23dBm. Notes: • Greater the transmitted power, better the transmutability, longer the transmission range; • Different device has different transmitted power range.
Max client number	Maximum client number of the device wireless signal, value range 1-64, when the value is 64, it represents the unlimited connected clients number.

4.3.3 Advanced

Function Description

On the "Advanced" page of wireless settings, user can enable short GI, wireless isolate, WMM, WDS and other functions.

Operation Path

Please open in order: "Network > Wireless settings > Advanced".

Interface Description

Advanced interface as follows:

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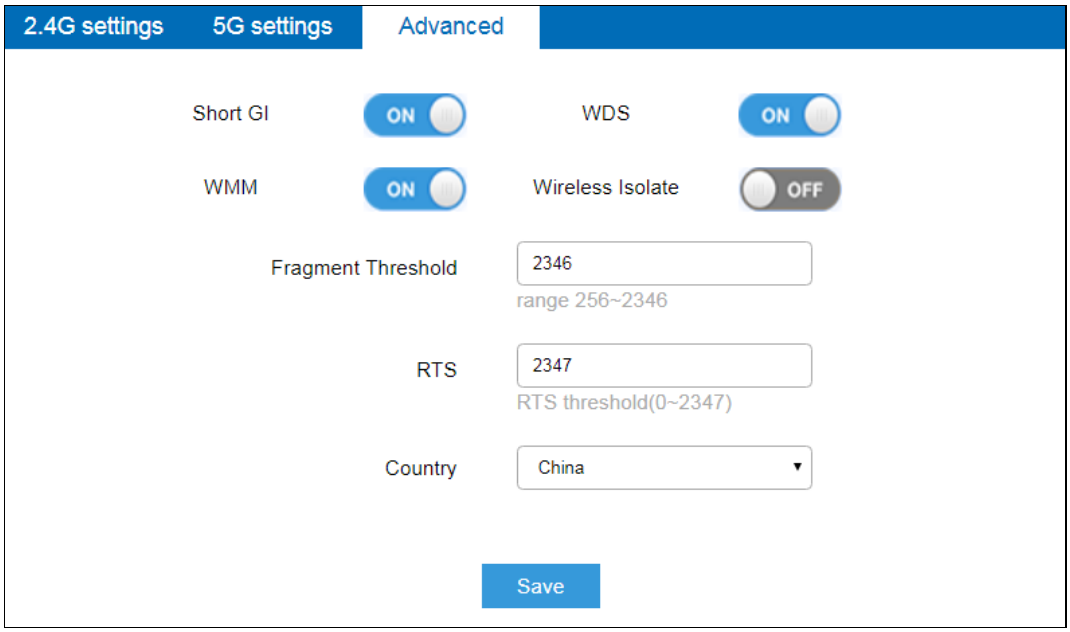

The main element configuration description of advanced interface:

Interface Element	Description
Short GI	Short GI (Short Guard Interval) enabling switch, click the right button for ON and OFF switching. • ON: enabling the function can reduce the gap between two data packets to 400ns, and improve the data transmission speed. • OFF: after disabling the function, the transmission interval of data packet defaults to 800ns. Notes: Under high signal strength and low latency, this function can be enabled to improve nearly 10% handling capacity.
WDS	WDS (Wireless Distribution System), this function is used for bridging multiple WLAN. Notes: Please enable WDS function while bridging the device and other wireless devices.
WMM	WMM (WiFi Multimedia) function, defaults to enabled. Notes: After enabling WMM function, the device can process the data packet with priority level, improving the data transmission performance of WMM and ensuring the service quality of voice, video and other services with high real-time requirements.
Wireless isolate	Wireless user isolation, it's used for isolating the wireless clients connected to the device wireless network with same

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Interface Element	Description
	SSID, defaults to disabled. Notes: After enabling the wireless isolation function, two wireless clients connected to the same SSID can't mutually access, and this function can further enhance the wireless network security.
Fragment threshold	Fragment threshold of data packet, value range 256-2346, defaults to 2346. Notes: • The data frame will be segmented when its length surpasses fragment threshold. • With large interference or high utilization ratio of wireless network, user can adopt smaller fragmentation threshold to increase the transmission reliability; but it is low efficiency. • The wireless network is easy to be interfered while adopting large fragment threshold; but it is high efficiency.
RTS	Data packet RTS (Request to Send) threshold, value range 0-2347, defaults to 2347. • RTS threshold = 0: it needs to detect whether there exists collision only if the data packet is sent out; AP will send RTS signal; • 0 < RTS threshold < 2347: when the length of data packet surpasses RTS threshold, the device wireless terminal will send RTS signal to avoid signal conflict; • RTS threshold = 2347: the device wireless terminal won't send RTS signal. Notes: • As for the wireless nodes in different wireless detection range of AP range, collision will occur when the nodes send out signals; RTS function can avoid the collision. • The device will send RTS to destination station for negotiation when the length of data packet surpasses RTS threshold. After receiving RTS frame, the wireless station will send a CTS (Clear to Send) frame to response the device, which represents the two stations can conduct wireless communication.
Country	Applied national region of wireless network, options as follows: • China • USA

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Interface Element	Description
	Notes: Open channels are different in different countries.

4.4 Roaming Settings

Function Description

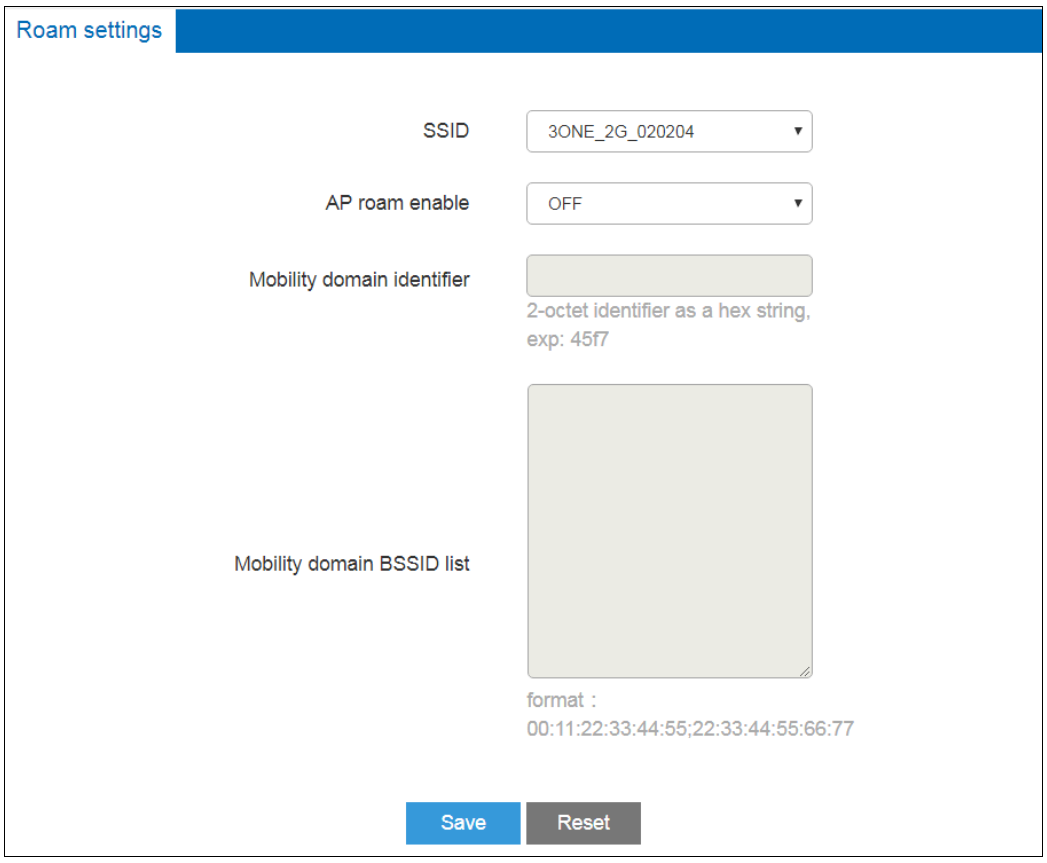
On the "Roam settings" page of network, user can configure relative parameters of wireless roaming.

Operation Path

Please open in order: "Network > Roam settings".

Interface Description

Roam settings interface as follows:



The main element configuration description of roam settings interface:

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Interface Element	Description
SSID	Drop-down list of wireless network name, select corresponding roaming settings of SSID settings.
AP roam enable	AP (Wireless Access Point) roaming function, options as follows: • OFF; • ON. Notes: After enabling wireless roaming function, the wireless client can access the AP access point in the same ESS (Extended Service Set) via the same channel or different channel. The wireless client can move freely in the wireless network while ensuring that the existing service is not interrupted and user identity remains unchanged.
Mobility domain identifier	Mobility domain identifier, it's a roaming domain composed of multiple wireless AP; it supports 4 hexadecimal numbers, such as 4f57.
Mobility domain BSSID list	Mobility domain BSSID (Basic Service Set Identifier) list, that is the MAC address of wireless AP device, MAC address is filled in the form of "00:11:22:33:44:55; 22:33:44:55:66:77;". Notes: • After enabling the wireless roaming function, user can add the MAC address of AP device in the wireless network to mobility domain BSSID list, and then the wireless client can achieve seamless roaming among multiple AP in the same subnet. • SSID, password and mobility domain identifier of each wireless AP should be consistent.

4.5 Wireless Probe

Function Description

On the "Wireless probe" page of network, user can send detected information of wireless terminal device to appointed server.

Operation Path

Please open in order: "Network > Wireless probe".

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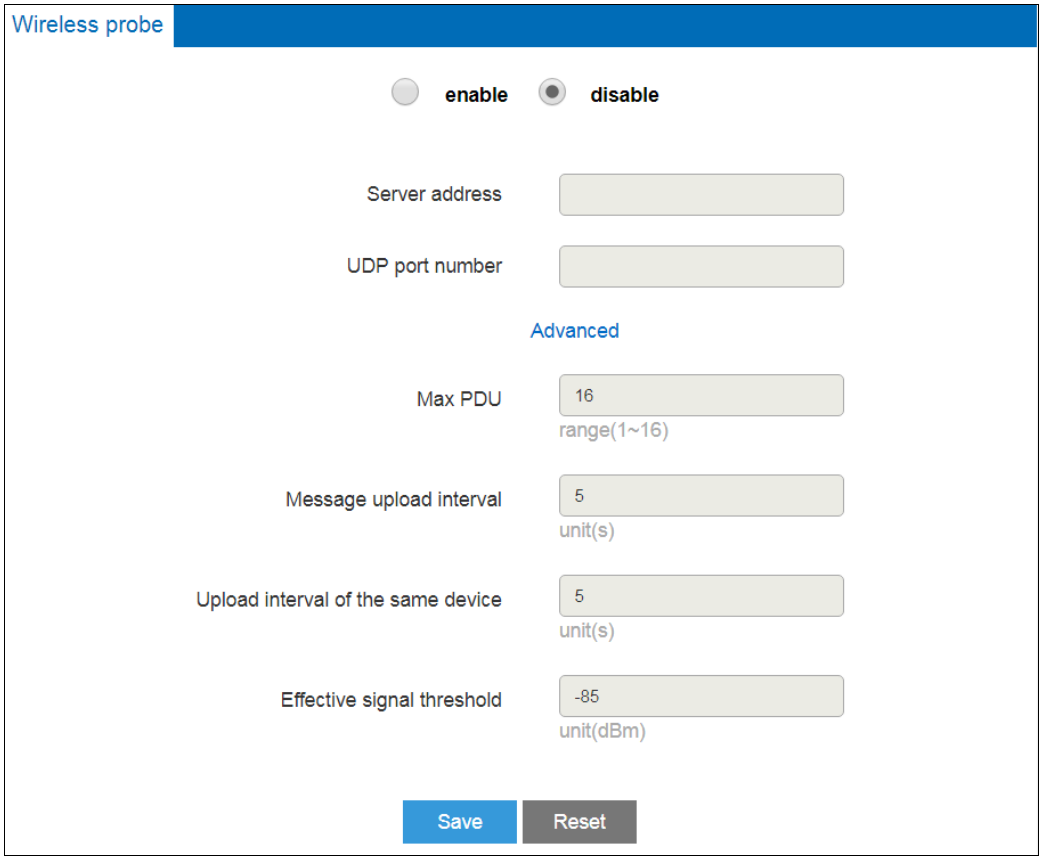
Interface Description

Wireless probe interface as follows:



The main element configuration description of wireless probe interface:

Interface Element	Description
Wireless probe	Wireless probe enable radiobox. • Enable; • Disable.
Server address	Server address.
UDP port number	Port number of the server.
Max PDU	Maximum device number that data transmission unit contains, valid value range 1-16.
Message upload interval	Time interval of data message upload, unit is second.
Upload interval of the same device	Time interval of the same device data upload, unit is second.
Effective signal threshold	Effective wireless signals threshold, unit dBm, threshold is less than 0.

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Interface Element	Description
	Notes: If the signal strength of wireless client is less than threshold, it will be regarded as invalid signal.

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5 Wireless Client

Function Description

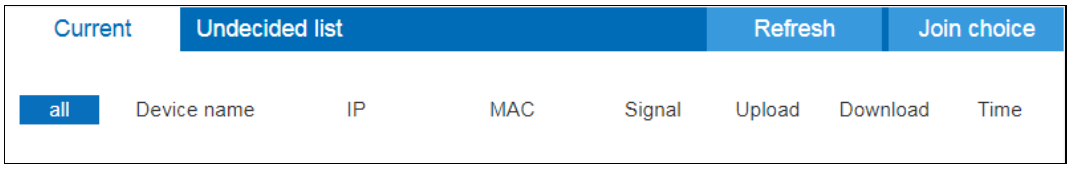
On the "Wireless client" page, user can check current connected devices and manage the connection of wireless client.

Operation Path

Please open: "Wireless client".

Interface Description 1: Current Connected Device

Current connected device interface as follows:



The main element configuration description of current connected device interface:

Interface Element	Description
Device name	Device name of the wireless client connected to the device.
IP	IP address of the wireless client connected to the device.
MAC	MAC address of the wireless client connected to the device.
Signal	Signal strength of the wireless client connected to the device, unit dBm; larger the value is, stronger the signal strength.
Upload	Upload traffic of the wireless client connected to the device.
Download	Download traffic of the wireless client connected to the device.

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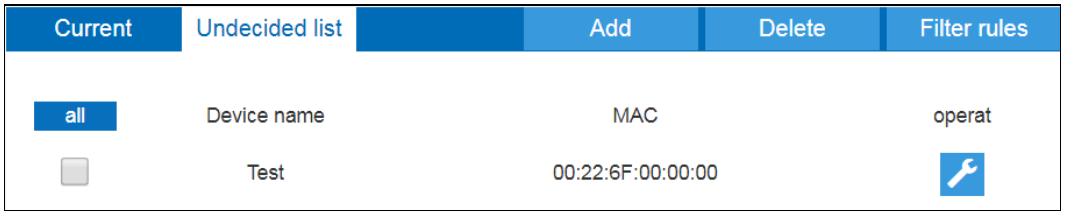
Interface Element	Description
Time	Online time of the wireless client connected to the device.

Interface Description 2: Undecided List

Undecided list interface as follows:



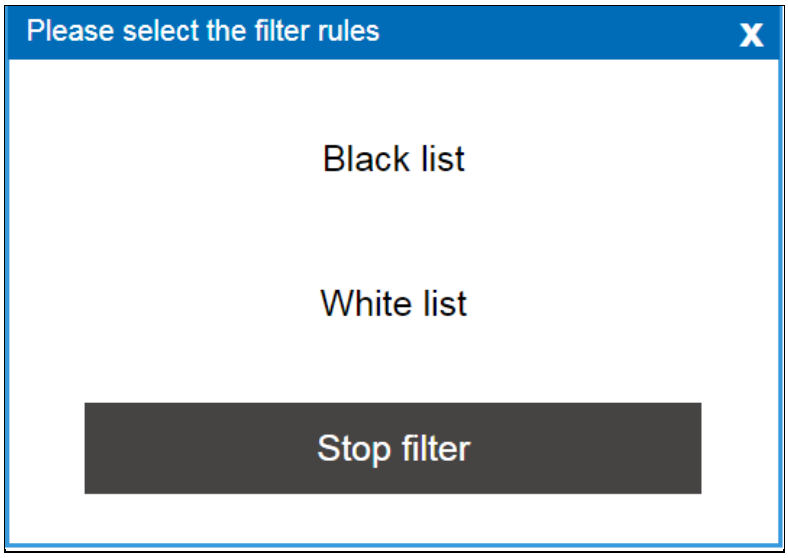
The main element configuration description of undecided list interface:

Interface Element	Description
Device name	Device name of the wireless client that is prohibited from connecting to the device.
MAC	MAC address of the wireless client that is prohibited from connecting to the device.
Operation	Edit the wireless client information.

Interface Description 3: Filter Rules

Click "Filter rules" button for list switching.

Filter rules interface as follows:



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The main element configuration description of filter rules:

Interface Element	Description
Black list	List of the wireless clients that are prohibited from accessing the wireless devices.
White list	List of the wireless clients that are allowed to access the wireless devices.
Stop filter	Pending list of the wireless clients to access the wireless devices.

Note

After switching the list via filter rules, only the current list is valid.

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6 Firewall

Notice

Firewall takes effect only when the device work mode is router.

6.1 IP Filter

Function Description

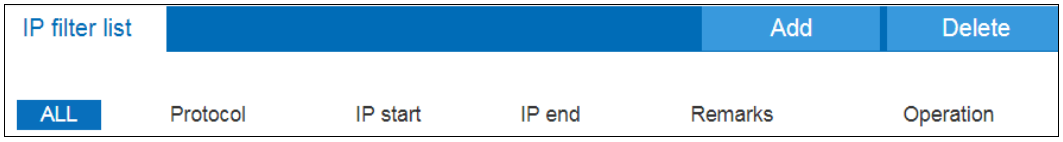
On the "IP filter" page of firewall, user can check or add IP filter to forbid the communication between the clients in LAN and WAN.

Operation Path

Please open in order: "Firewall > IP filter".

Interface Description

IP filter interface as follows:



The main element configuration description of IP filter interface:

Interface Element	Description
ALL	IP filter check box, click "ALL" to check all IP filter entries.
Protocol	Protocols used by data packets.
IP start	Start IP address of LAN IP address range filtered by the

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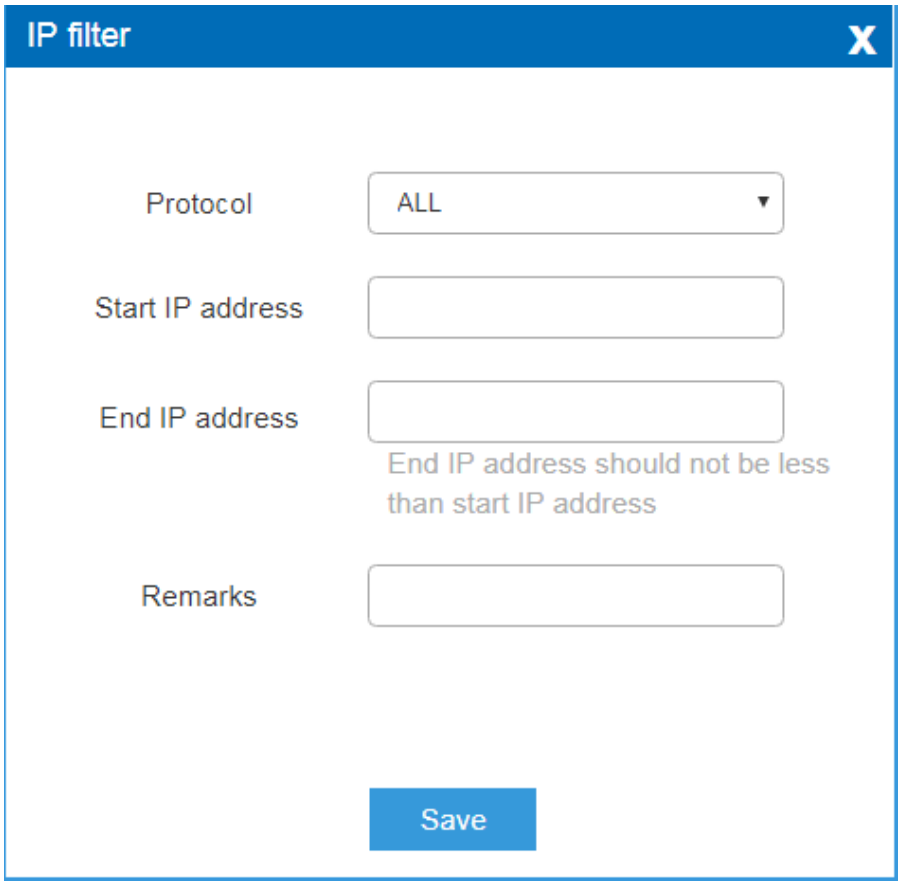
Interface Element	Description
	device.
IP end	End IP address of LAN IP address range filtered by the device.
Remarks	Remarks of IP filter entries.
Operation	Edit: modify the filter entries information.

Interface Description: Add IP Filter Entry

Click "Add" to increase IP filter entry.

IP filter interface as follows:



The main element configuration description of IP filter interface:

Interface Element	Description
Protocol	Drop-down list of data packet protocol, options as follows: • ALL; • TCP;

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Interface Element	Description
	• UDP.
Start IP address	Start IP address of LAN IP address range filtered by the device, such as: 192.168.1.123.
End IP address	End IP address of LAN IP address range filtered by the device, such as: 192.168.1.123.
Remarks	Remarks of IP filter list, support 10 Chinese characters or 32 valid characters, optional.

6.2 MAC filter

Function Description

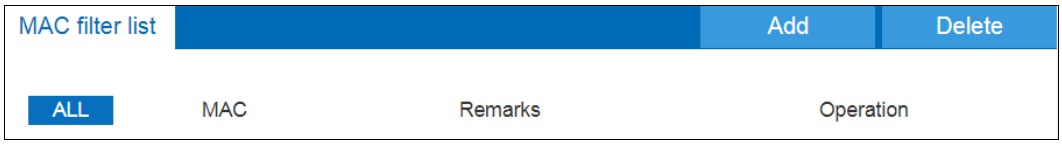
On the "MAC filter" page of firewall, user can check or add MAC filter to forbid the communication between the clients in LAN and WAN; it can effectively control the WAN access rights of user in LAN.

Operation Path

Please open in order: "Firewall > MAC filter".

Interface Description

MAC filter interface as follows:



The main element configuration description of MAC filter interface:

Interface Element	Description
ALL	MAC filter check box, click "ALL" to check all MAC filter entries.
MAC	MAC address of LAN client filtered by the device.
Remarks	Remarks of MAC filter entries.
Operation	Edit: modify the filter entries information.

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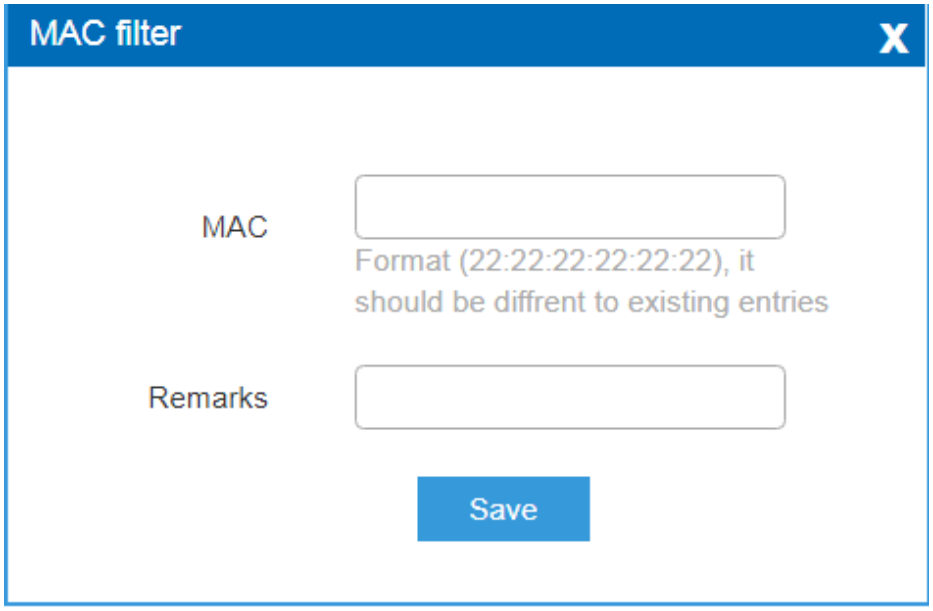
Interface Description: Add MAC Filter Entry

Click "Add" to increase MAC filter entry.

MAC filter interface as follows:



The main element configuration description of MAC filter interface:

Interface Element	Description
MAC	MAC address of LAN client filtered by the device, such as: 00:22:6F:00:00:01.
Remarks	Remarks of MAC filter entries, support 32 valid characters or 10 Chinese characters, optional.

6.3 URL Filter

URL (Uniform Resource Locator) is the brief expression of access method and location of resources gained from Internet; it's the address of standard Internet resources. Each Internet file has a unique URL, which refers to the network address.

Function Description

On the "URL filter" page of firewall, user can check or add URL filter to prohibit the client in LAN from accessing URL address in WAN and prevent user from accessing some of the websites.

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Operation Path

Please open in order: "Firewall > URL filter".

Interface Description

URL filter interface as follows:



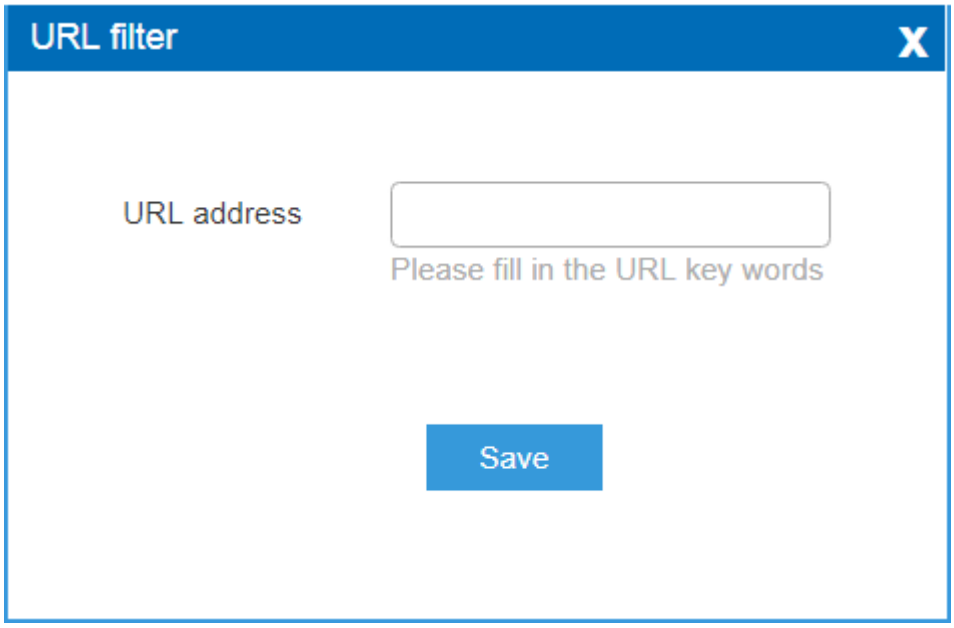
The main element configuration description of URL filter interface:

Interface Element	Description
ALL	URL filter check box, click "ALL" to check all URL filter entries.
URL	URL address in LAN filtered by the device.
Operation	Edit: modify the filter list.

Interface Description: Add URL Filter List

Click "Add" to increase URL filter list.

URL filter interface as follows:



The main element configuration description of URL filter interface:

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Interface Element	Description
URL address	URL address in WAN filtered by the device, ending with ".com", ".cn" and so on. Such as: sina.

6.4 Port Forward

Function Description

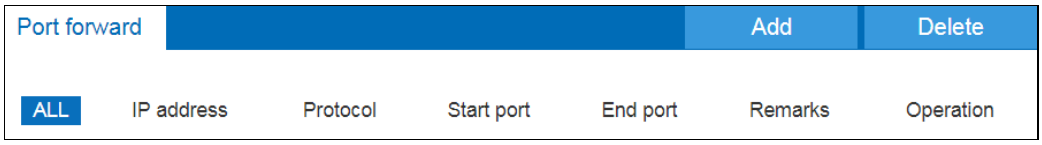
On the "Port forward" page of firewall, user can check or add port forward entry to allow the WAN client to access appointed device in LAN.

Operation Path

Please open in order: "Firewall > Port forward".

Interface Description

Port forward interface as follows:



The main element configuration description of port forward interface:

Interface Element	Description
ALL	Port forward check box, click "ALL" to check all port forward entries.
IP address	IP address of appointed device in LAN.
Protocol	Protocols used by data packets.
Start port	Start port of destination port range of WAN client.
End port	End port of destination port range of WAN client.
Remarks	Remarks of port forward entries.
Operation	Edit: modify the port forward entries.

Interface Description: Add Port Forward Entry

Click "Add" to increase the port forward entries.

Port forward interface as follows:

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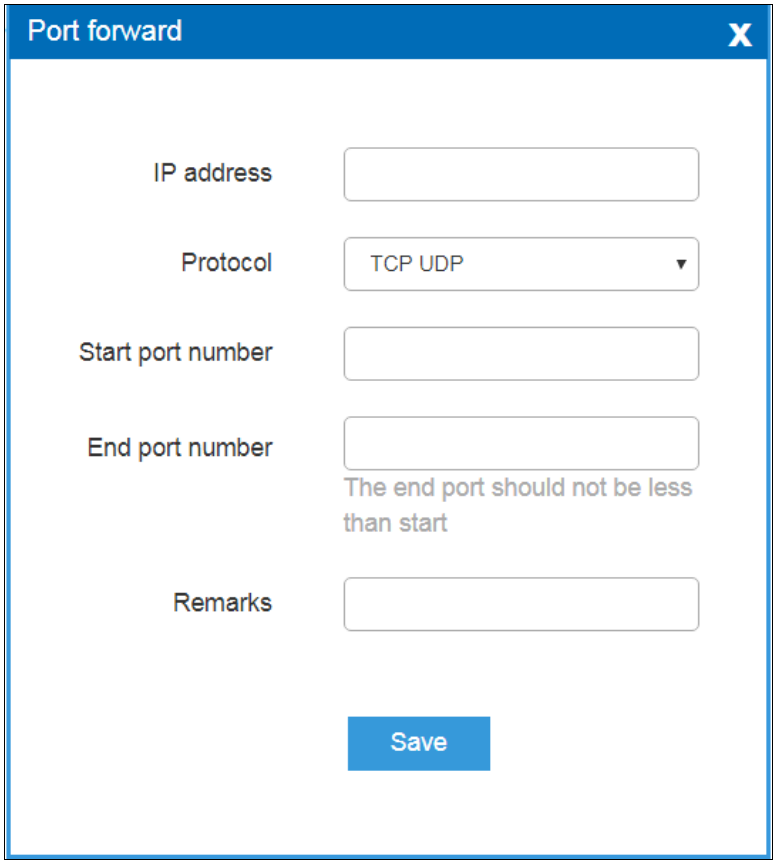

The main element configuration description of port forward interface:

Interface Element	Description
IP address	IP address of appointed device in LAN, such as: 192.168.1.123.
Protocol	Protocol type used by port forward data packet, options as follows: • TCP UDP; • TCP; • UDP.
Start port number	Start port number of destination port range of WAN client, valid input range 1-65535.
End port number	End port number of destination port range of WAN client, valid input range 1-65535.
Remarks	Remarks of port forward entry, support 32 valid characters or 10 Chinese characters, optional.

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6.5 ARP Binding

ARP (Address Resolution Protocol) is a TCP/IP protocol that gains the physical address according to IP address.

Function Description

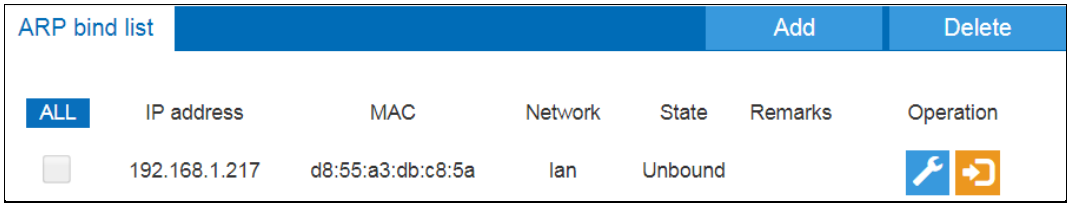
On the "ARP binding" page of firewall, user can check or add ARP binding entry. Binding the client IP address to corresponding MAC address to avoid ARP spoofing. When the client sends ARP request to the device, the device will check ARP binding list according to client IP address; if the MAC address in list is same to the one of client, the device will allow the ARP request; otherwise the request won't be allowed, that is the client can't access the device.

Operation Path

Please open in order: "Firewall > ARP binding".

Interface Description

ARP binding interface as follows:



The main element configuration description of ARP binding interface:

Interface Element	Description
ALL	ARP binding check box, click "ALL" to check all ARP binding entries.
IP address	IP address of client.
MAC	MAC address of client.
Network	Network properties of client connection.
Remarks	Remarks of ARP binding entry.
State	ARP binding status.
Operation	Edit: modify ARP binding entry. Binding: bind the IP and MAC address of this entry.

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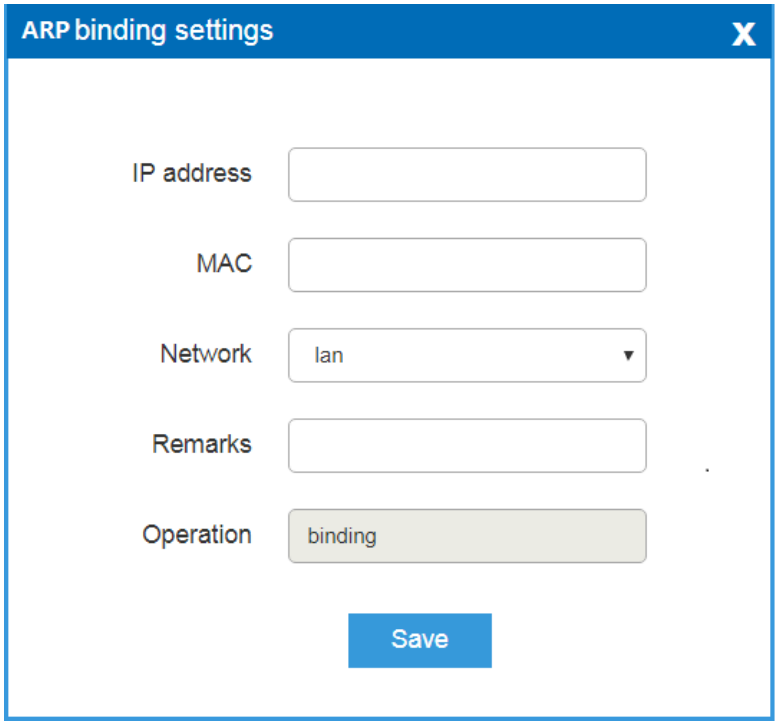
Interface Description: Add ARP Binding Entry

Click "Add" to increase ARP binding entry.

ARP binding settings interface as follows:



The main element configuration description of ARP binding settings interface:

Interface Element	Description
IP address	IP address of client, such as: 192.168.1.123.
MAC	MAC address of client, such as: 00:22:6F:00:00:01.
Network	Network properties of client connection, options as follows: • LAN; • WAN.
Remarks	Remarks of ARP binding entry, support 32 valid characters or 10 Chinese characters, optional.
Operation	ARP binding.

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6.6 DMZ Filter

DMZ (Demilitarized Zone) is a buffer zone between non-security and security system for solving the LAN server accessing issue of user in WAN after firewall installing.

Function Description

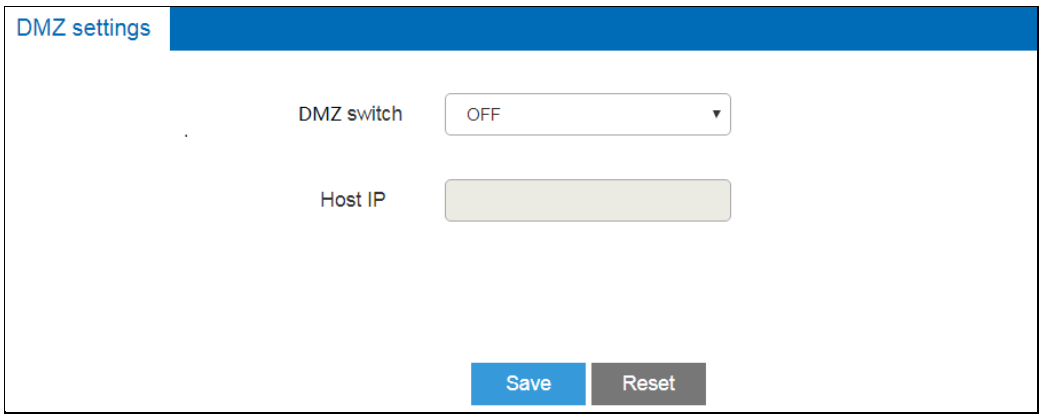
On the "DMZ filter" page of firewall, user can enable or disable DMZ function. The client can access appointed LAN client via WAN.

Operation Path

Please open in order: "Firewall > DMZ filter".

Interface Description

DMZ filter interface as follows:



The main element configuration description of DMZ filter interface:

Interface Element	Description
DMZ switch	DMZ switch drop-down list, options as follows: • OFF; • ON.
Host IP	IP address of LAN client, such as: 192.168.1.123.

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7 System Tools

7.1 User Settings

Function Description

On the "User settings" page of system tools, user can modify the access password of the device.

Note

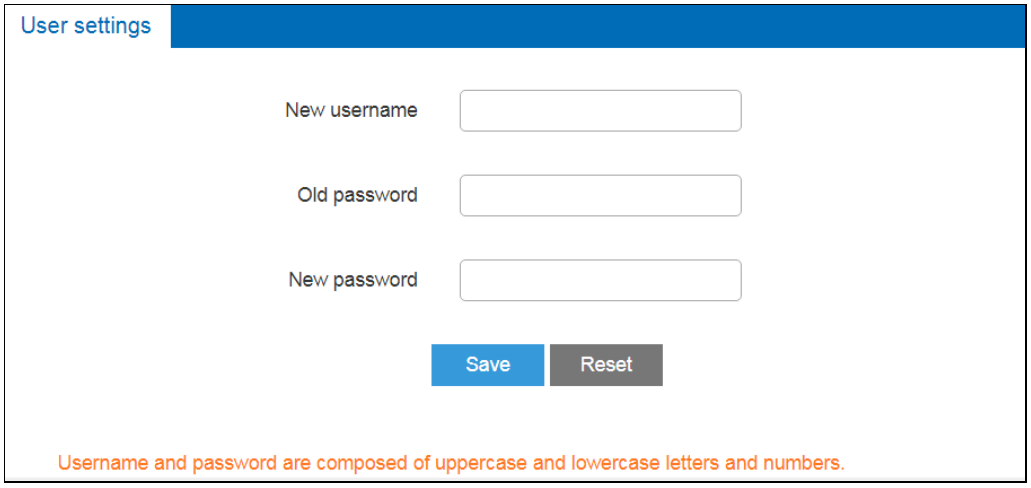
Please log in again after modifying the user name and password.

Operation Path

Please open in order: "System Tools > User settings".

Interface Description

User settings interface as follows:



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The main element configuration description of user settings interface:

Interface Element	Description
New user name	New user name setting of the device. Notes: Both of the user name and password are composed of uppercase and lowercase letters and numbers.
Old password	Login password used by current device.
New password	New password setting of the device. Notes: Both of the user name and password are composed of uppercase and lowercase letters and numbers.

7.2 System Upgrade

Function Description

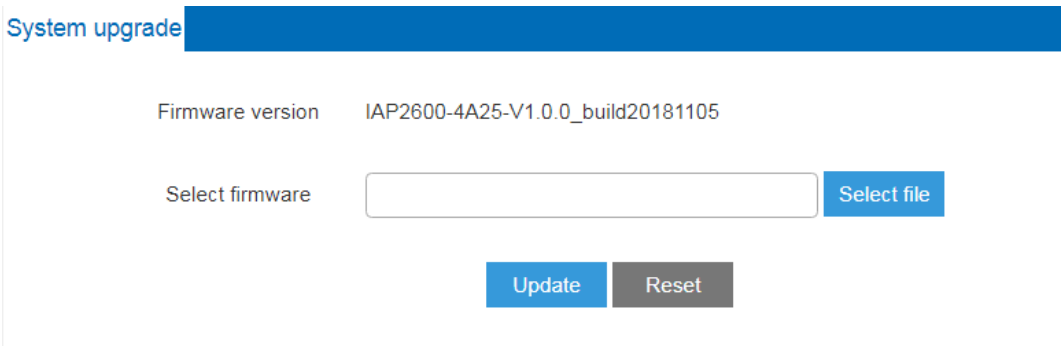
On the "System upgrade" page of system tools, user can update the device system program via firmware upgrade.

Operation Path

Please open in order: "System Tools > System upgrade".

Interface Description

System upgrade interface as follows:



The main element configuration description of system upgrade interface:

Interface Element	Description
Firmware version	Program version used by current device.
Select firmware	Click "Select file" to select local upgrade firmware of the host. Notes: Please select the program version matching current hardware while

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Interface Element	Description
	upgrading.
Update	Click "Update" to upgrade the device program. Note: • Upgrade process will cost a period of time. Don't power off the device. • After successful upgrading, the device configuration will remain unchanged, and firmware version will change.

7.3 Config Update

Function Description

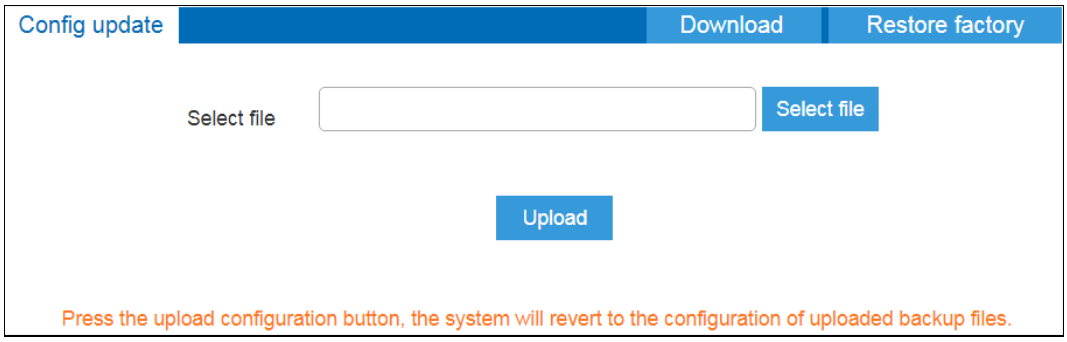
On the "Config update" page of system tools, user can conduct download, upload configuration and restore factory defaults for the device.

Operation Path

Please open in order: "System Tools > Config update".

Interface Description

Config update interface as follows:



The main element configuration description of config update interface:

Interface Element	Description
Config update	**Config update bounding box.**
Select file	Click "Select file" to select the configuration file of standalone dump.
Upload	Click "Upload" to upload the backup configuration file to current device and restore backup file configuration of the

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Interface Element	Description
	device.
Download	Click "Download" to download the configuration file of current device and save it in the file form of ".file".
Restore factory	Click "Restore factory" button, and then the device will restore factory defaults.

7.4 Reboot System

Function Description

On the "Reboot system" page of system tools, user can reboot the device online.

Operation Path

Please open in order: "System Tools > Reboot system".

Interface Description

Reboot system interface as follows:



The main element configuration description of reboot system interface:

Interface Element	Description
Reboot	Click "Reboot" to restart current device.

7.5 System Log

Function Description

On the "System log" page of system tools, user can check the device system log message.

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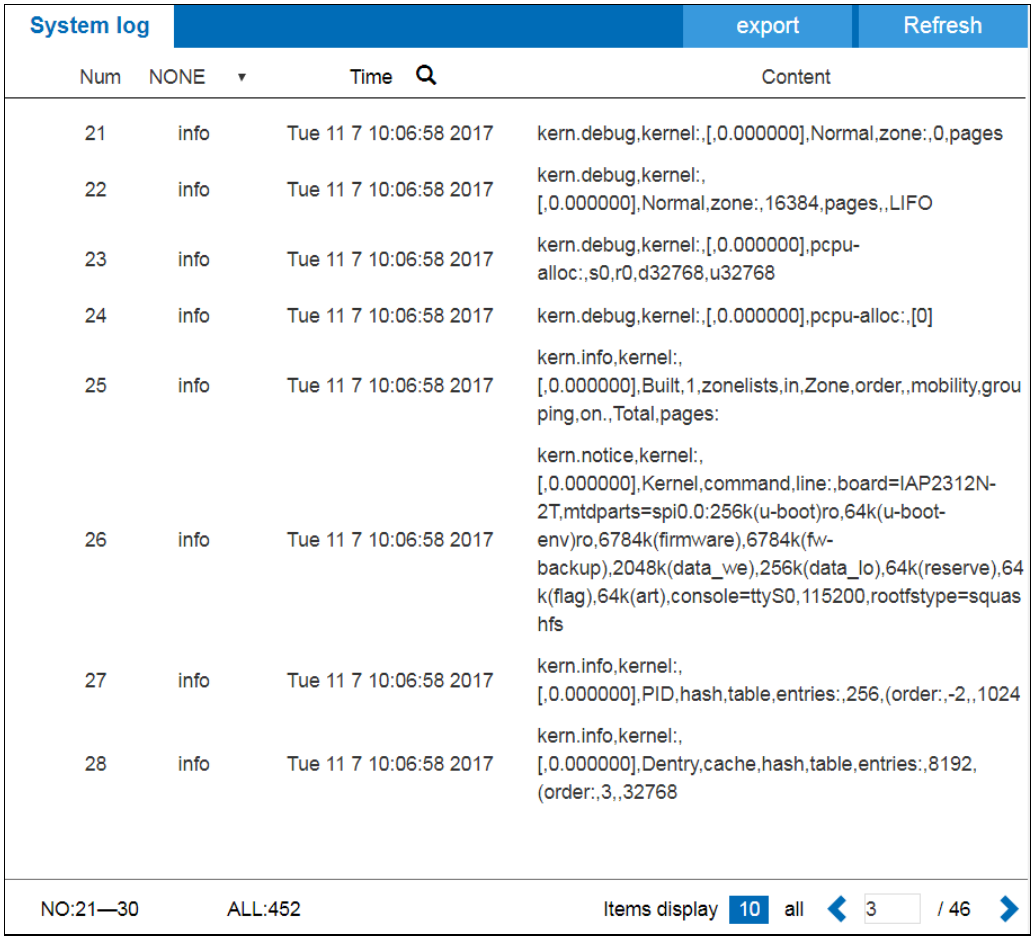
Operation Path

Please open in order: "System Tools > System log".

Interface Description

System log interface as follows:



The main element configuration description of system log interface:

Interface Element	Description
Num	Log messages display sequence.
NONE	Log message type, options as follows: • NONE: all information; • Warning: alarm information; • Error: error information.
Time	Date and time filter button of log message. Notes: Click "Time" to filter the start and end date.
Content	Detailed description of log content.

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Interface Element	Description
Export	Click "export" to save the log messages to the local host in the form of ".txt".
Refresh	Click "Refresh" to regain the newest log messages of the device. Notes: System log can store maximum 256KB log messages of the device in the most recent period.
Items display	"Items display" button, display method of log messages, options as follows: • 10: each page displays 10 log messages; • ALL: single page displays all log messages.

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8 Maintenance and Service

Since the date of product delivery, our company will provide five years warranty. According to our company's product specification, during the warranty period, if the product exists any failure or the functional operation fails, our company will be free to repair or replace the product. However, the commitments above do not cover damage caused by improper usage, accident, natural disaster, incorrect operation or improper installation.

In order to ensure that consumers benefit from our company's wireless AP, consumers can get help and solutions in the following ways:

- Internet service;
- Call technical support office;
- Product repair or replacement;

8.1 Internet Service

More useful information and tips are available via our company's website. Website: http://www.3onedata.com

8.2 Service Hotline

Users of our company's products could call technical support office for help. Our company has professional technical engineers to answer your questions and help you to solve the product or usage problems ASAP. Free service hotline: **+86-400-880-4496**

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8.3 Product Repair or Replacement

As for the product repair, replacement or return, customers should firstly confirm with the company's technical staff, and then contact the salesmen to solve the problem. According to the company's handling procedure; customers should negotiate with our company's technical staff and salesmen to complete the product maintenance, replacement or return.

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