



HA3515-DG Access Point

MA_1.3(1)B9P1

Web-based Configuration Guide

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Preface

Intended Audience

This document is intended for:

- Network engineers
- Technical support and servicing engineers
- Network administrators

Technical Support

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- Skype: [service_rj@ruijienetworks.com](https://www.skype.com/people/service_rj@ruijienetworks.com)

Conventions

1. Signs

The symbols used in this document are described as follows:

 Caution

An alert that calls attention to essential information that if not understood or followed can result in function failure or performance degradation.

 Note

A note that contains additional or supplementary information that if not understood or followed will not lead to serious consequences.

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1 Overview of Web-GUI

 This document is applicable only to HA3515-DG.

This chapter will provide an overview of Web-GUI from the following aspects:

- Web-GUI: The Web management system can be accessed through a WWW server (such as Google Chrome) to manage APs;
- Available Functions: This section briefly introduces the features that can be set via the Web-GUI, including SSID parameters, network configurations, security configuration, etc.;
- Preparation before Web-GUI Connection: This section introduces the materials required before connection and provides precautions;
- Preparation for Web-GUI Connection: This section introduces the connection between this device and the PC, the IP address setting and the Internet settings of the browser;
- Web-GUI Login: This section introduces the specific steps of Web login.

 Web-based management involves two parts: Web server and Web client. A web server is integrated into a device to receive and process requests sent from a client and returns the processing results. Generally, a Web client refers to a web browser like Firefox, Google Chrome, Safari.

 If the kernel version of the Microsoft Internet Explorer browser you are using is too low, the Web-GUI may experience slow response. Please roll back the interface or use other browsers. Google Chrome and Safari are recommended.

1.1 Web-GUI

This device can be configured through a WWW browser.

When logging into the Web-GUI, you can easily configure the AP without running commands in CLI (Command Line Interface). Almost all main functions can be set via Web-GUI.

1.2 Configurable Functions on Web-GUI

The main features that can be set via the Web-GUI are as follows:

- SSID Parameters: passwords, encryption modes, etc.
- 2. 4G/5G Parameter: channel, bandwidth, transmit power, etc.
- Network Configuration: WAN port, LAN, DHCP, etc.
- Security Configuration: black lists, white lists, user isolation, etc.
- AP Management: device upgrade, restart, etc.
- G.hn firmware upgrade.

1.3 Preparations before Web-GUI Connection

Please prepare the following materials before connecting to Web-GUI:

| Materials | Description |
|---------------------|--|
| Management Terminal | <p>WWW Browser: Google Chrome, Firefox, Safari.</p> <p>Others: a PC with LAN port, or some other mobile terminal devices, such as laptops, iPads, mobile phones, etc.</p> |
| | <p> It is recommended that the resolution settings are 1280*1024, 1920*1080 and 1440*960. At other resolutions, the page fonts and formats may be misaligned and not beautiful enough. For example, due to the smaller screen of mobile phone terminals, the interface layout and format may be misaligned, unsightly, and other abnormalities.</p> |
| | <p> Due to the influence of WWW browsers, file uploads (updating program file versions, setting files) may fail. If it fails repeatedly, please try changing the WWW browser. We recommend Google Chrome, Firefox, and Safari. Internet Explorer or Microsoft Edge can also be used, but some functions may not be available, such as displaying English when the browser starts.</p> <p> If you perform "Save Settings", "Save File" or "Return" while updating the screen, it may not function properly. Please perform the above operations after the screen update is completed.</p> |
| Ethernet Cable | UTP/STP Category 5e or higher is recommended. |

1.4 Preparation for Web-GUI Connection

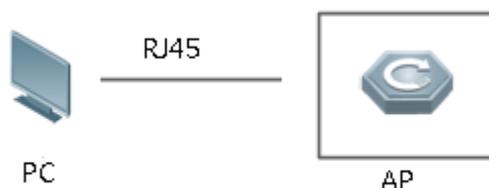
This section describes how to connect to the Web-GUI via the PC. The operations are:

- Form the connection between the AP and a PC
- Set the IP address of the PC
- Set the Internet settings of a WWW browser

1.4.1 Connection between the AP and the PC

As shown in the figure below, the administrator can access the device through a browser and uses the WEB management system to configure the device.

The topology is shown as follows:



Use an Ethernet cable (RJ45) to connect this AP to the PC. Plug one end of the Ethernet cable connected to the PC into the LAN port of the AP until it clicks to the place.

 For unplugging the Ethernet cable, hold the plug, press down on the plastic clip at the top of the plug, and pull the plug from port.

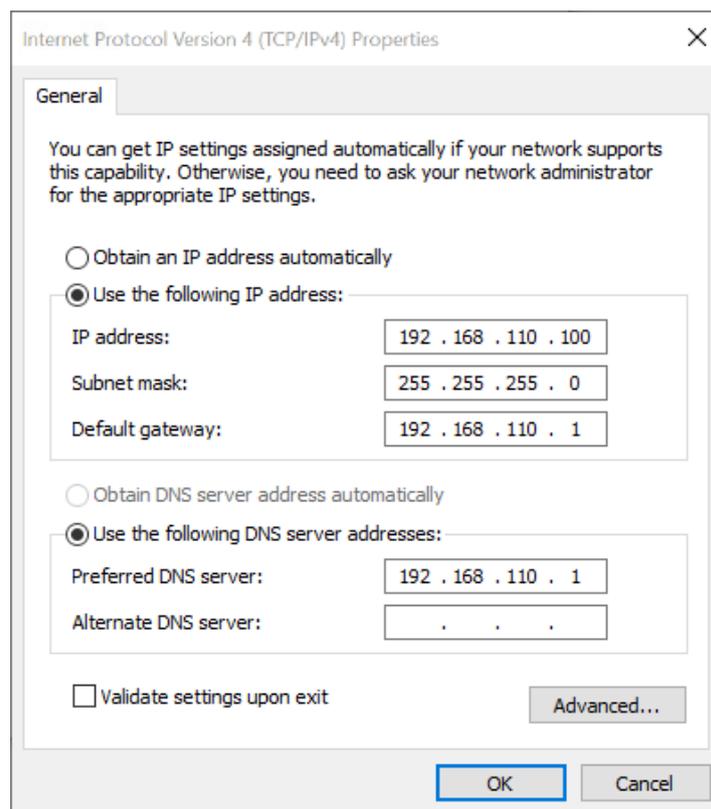
 Do not use a cable other than an Ethernet cable to connect the AP and the PC, otherwise it may cause the device to work abnormally or burned out.

1.4.2 Configuring the IP Address of PC

Set the IP address of the PC to an IP address that can connect to the HA3515-DG. The IP address configured varies from the working modes of AP.

■ AP Mode:

Select "Use the following IP address" in the page, set the IP address to 192.168.110.X (the value of X ranges from 100 to 200) and set the DNS server to 192.168.110.1. For example, set the fixed IP to 192.168.110.100 and the DNS server to 192.168.110.1.



Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

Obtain an IP address automatically

Use the following IP address:

IP address: 192 . 168 . 110 . 100

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 110 . 1

Obtain DNS server address automatically

Use the following DNS server addresses:

Preferred DNS server: 192 . 168 . 110 . 1

Alternate DNS server: . . .

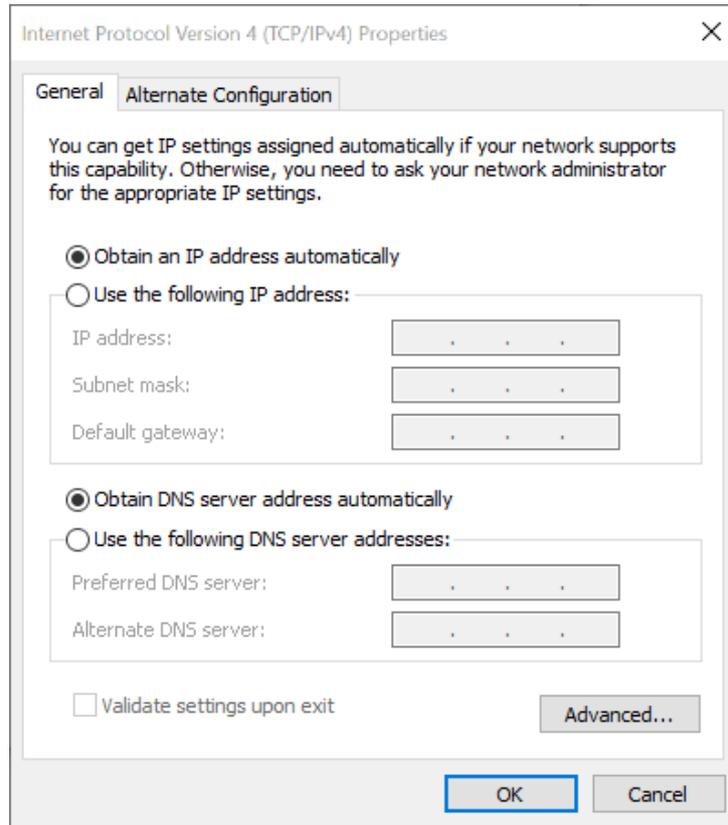
Validate settings upon exit

Advanced...

OK Cancel

■ Routing Mode:

Select "Obtain an IP address automatically" in the settings.



1.5 Web-GUI Login

This section introduces the operation method of logging into the Web-GUI. The specific steps are:

- Open a WWW browser
- What to do when a certificate error appears
- Enter username and password

1.5.1 Open WWW Browser

Open a WWW browser of your PC and enter the following IP address or website. The default URLs are <http://192.168.110.1> or <https://rjap.jp>.

It is recommended to use the default URL <https://rjap.jp> to access the Web.

Both <http://> and <https://> are supported to be connected to the Web-GUI.

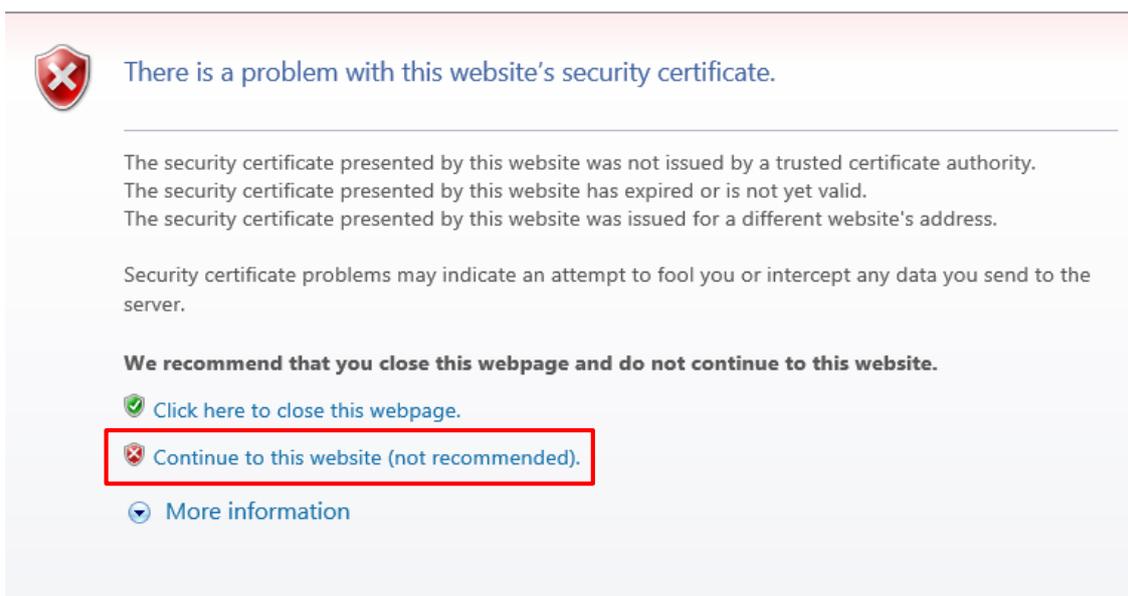
If users access the Web from the WAN port of the AP, the default URL cannot be used. Please use the IP address of the AP to access the Web via the LAN port.

If you want to check the IP of the WAN port IP, you can click "Basics"-> "WAN" in routing mode. In bridge mode, you can click "Basics" -> "External Network" to check.

- ⚡ It is recommended to use Google Chrome, Firefox and Safari. When using other browsers to log into Web management, exceptions such as garbled characters or format errors may occur.
- ⚡ In routing mode, if the "No WAN-Side Access" function is enabled and the whitelist IP is not configured, the AP's Web cannot be accessed through the WAN port. To address this issue, you can access the Web by connecting the SSID or via the LAN port, and then set the whitelist IP address.

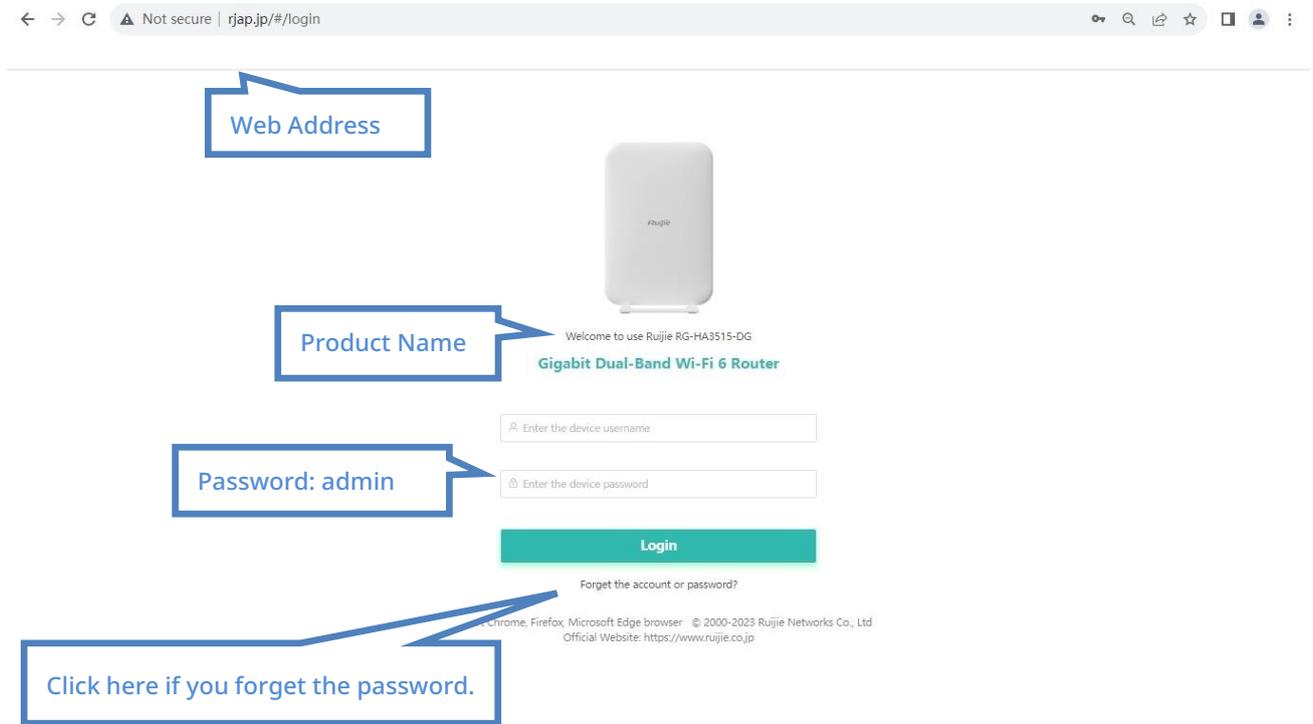
1.5.2 Measures for Certificate Error

A WWW browser may display the following warning message indicating that there is a problem with this website's security certificate. In this case, please click "Continue to this website (not recommended)" to continue browsing.



1.5.3 Entering Username and Password

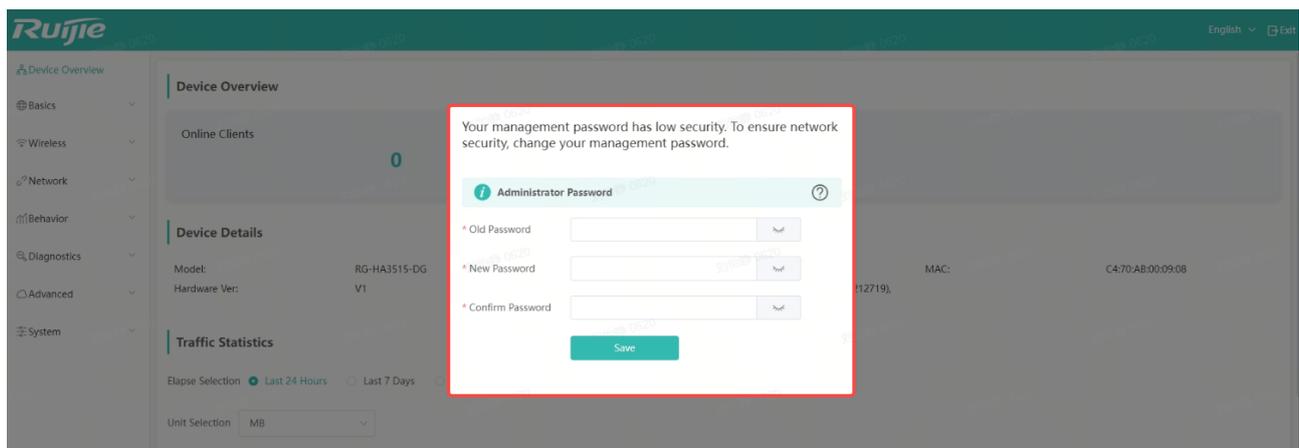
Enter your username and password and click “Login”.



Default username and password

| Default Username / Password | Permission |
|-----------------------------|---|
| admin/admin | Super administrator owning all permissions. |

The initial password admin is only set for initial use. Since the security is very low, please set a new password after the following page pops up.



It is recommended to set a strong password. The length of a strong password should be more than 6 characters and formed by uppercase, lowercase and numbers.

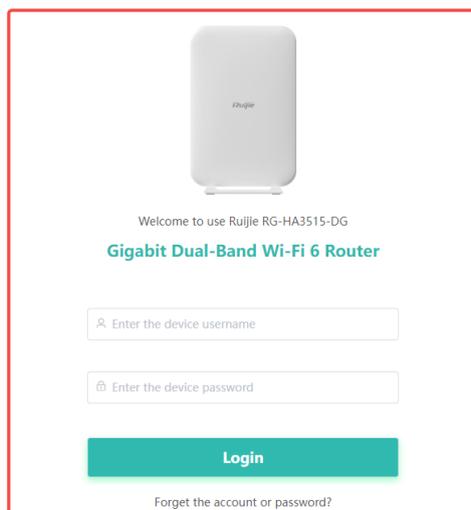
2 Quick Settings

This chapter will introduce how to quickly configure the device, which includes:

- **Web-GUI Login:** Users can use the default password admin to log into the Web;
- **Dashboard:** The dashboard displays multiple system information to users;
- **Configure wireless SSID:** When the dual band is configured, up to 6 SSIDs can be set;
- **Wireless RF Parameters:** Users can not only set the parameters of 2.4 GHz and 5 GHz, but also configure some items, such as the number of online terminals, signal switching and the interval for automatic signal switching;
- **Additional Instructions for Enterprises:** An introduction to device management, AP mode configuration and routing mode configurations are provided;

2.1 Web-GUI Login

Use the default password admin to log into the Web page



Support Chrome, Firefox, Microsoft Edge browser © 2000-2023 Ruijie Networks Co., Ltd
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2.2 Dashboard

When you log into the Web management system, the dashboard will be displayed. On the dashboard, you can see several system information.

Device Overview

Online Clients

0

Status ● Online

Uptime: 52Min 43S

System: 2023-12-04 16:23:26

Device Details

| | | | | | |
|---------------|--------------|---------------|--|------|------------------|
| Model: | RG-HA3515-DG | SN: | G3QH9XW002000 | MAC: | C470:AB:00:09:08 |
| Hardware Ver: | V1 | Software Ver: | MA_1.3(1)89P1, Release(10212719), Revision(6a1bcbe15)/ | | |

WiFi

| SSID 1 List | SSID 2 List | SSID 3 List |
|--|---|---|
| <p> Wi-Fi: PR20-APART-2810 Encrypted: Yes</p> | <p> Wi-Fi: SSID-SSID-C0908D_Wi-Fi5 Encrypted: Yes</p> | <p> Wi-Fi: SSID-SSID-C0908D-3 Encrypted: Yes</p> |
| SSID 4 List | SSID 5 List | Guest Wi-Fi |
| <p> Wi-Fi: SSID-SSID-C0908D-4 Encrypted: Yes</p> | <p> Wi-Fi: SSID-SSID-C0908D-5 Encrypted: Yes</p> | <p> WiFi: SSID-SSID-C0908D-Guest Encrypted: Yes</p> |

Interface Details

Connected
 Disconnected

WAN

LAN

LAN

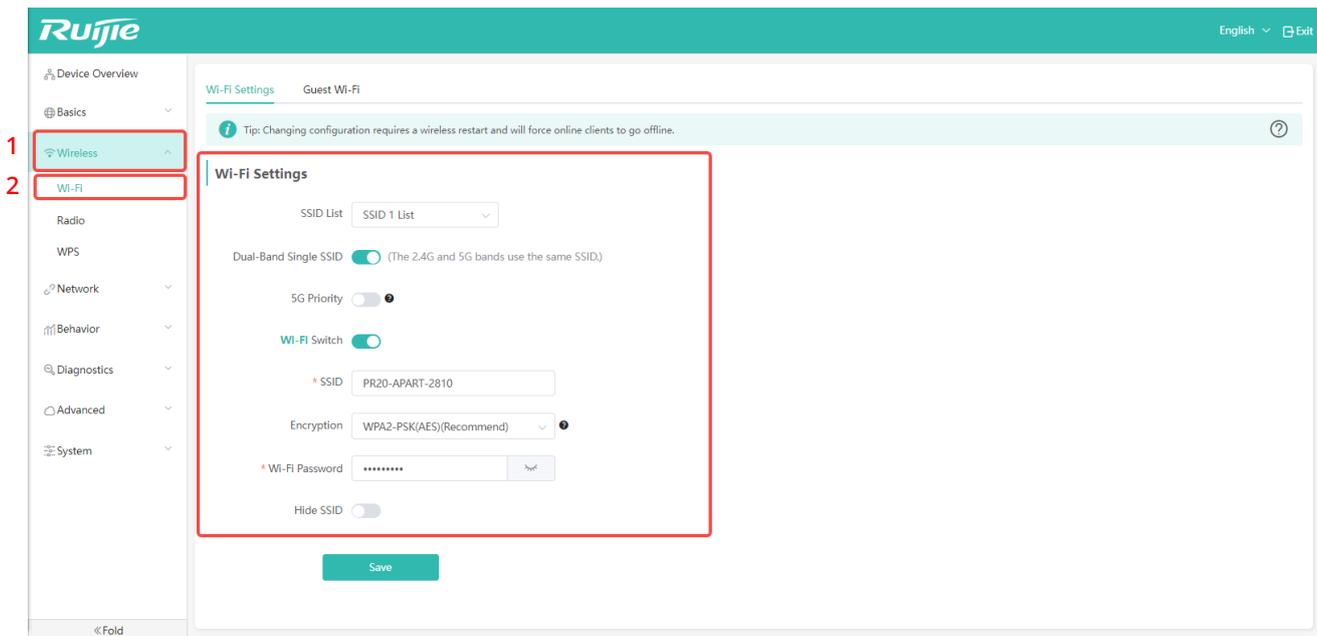
2.3 Configuring Wireless SSIDs

On the Web management system, you can configure wireless SSIDs. For a dual band integration, up to 6 SSIDs can be configured, of which one is specifically used for a guest network and the other five are universal.

Follow the following steps to configure wireless SSIDs:

Step 1: Click the “Wireless” in the left navigation bar (marked "1" in the figure);

Step 2: Click "Wi-Fi" (marked "2" in the figure), and then click "Wi-Fi Settings".

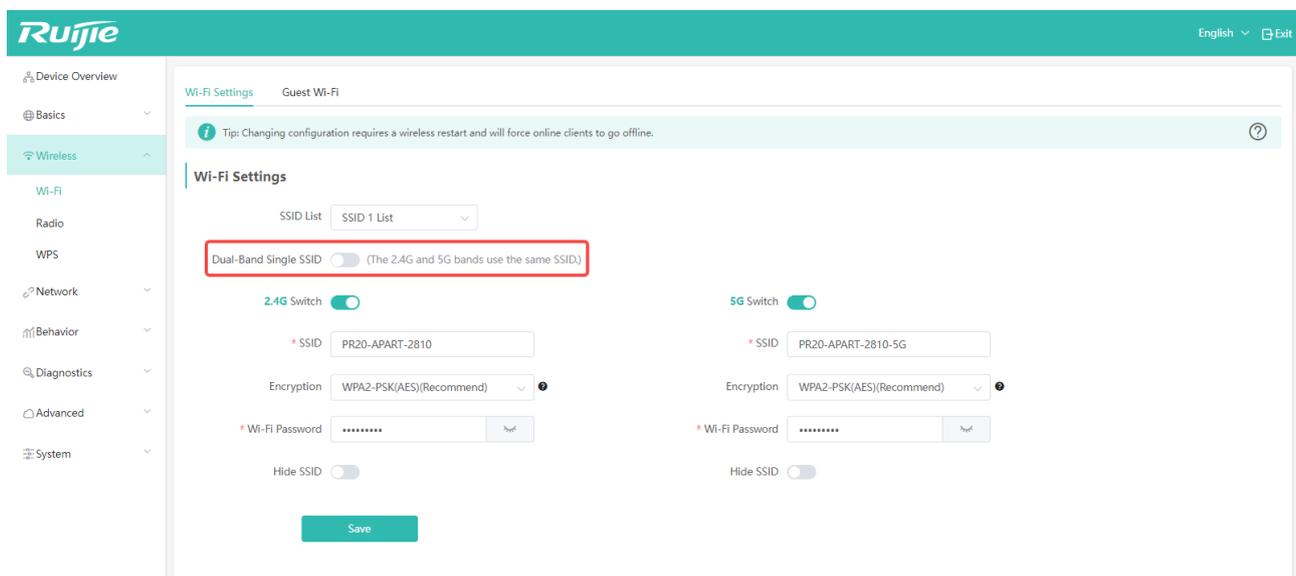


The configuration items are shown as follows:

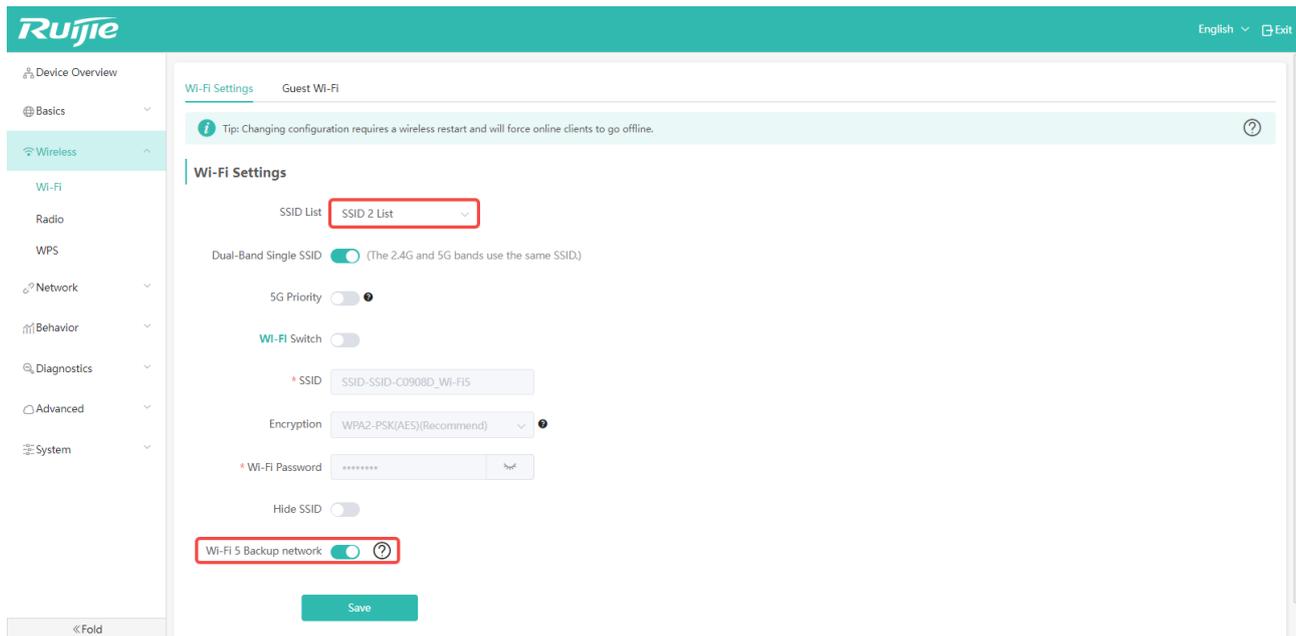
| Items | Description | Default/Options |
|-----------------------|--|--|
| SSID List | Select the SSID list to be configured. Up to 5 SSID lists can be configured with different SSID names at the same time. | Default: SSID 1 List Option: SSID 1 List to SSID 5 List. |
| Dual-Band Single SSID | Choose whether to use the same SSID on 2.4GHz and 5GHz. If it is disabled, you can configure different SSIDs on 2.4GHz and 5GHz. | Default: Enabled (the same SSID is used for 2.4 GHz and 5 GHz) Option: Enabled/Disabled |
| 5G Priority | When 5G priority is enabled, it will give priority to guiding terminals to access the 5G channel. ※It is important to note that the 5G priority function will take effect throughout the entire machine. That is to say, after 5G priority is enabled on a SSID, it takes effect globally, even if it is not enabled on the rest of SSIDs. | Default: Disabled Option: Enabled/Disabled |
| Wi-Fi Switch | If this switch is off, the SSID is turned off. | Default: SSID 1 list is enabled by default, and SSID 1 list to SSID 5 list is disabled by default. |
| SSID | Set a SSID name. | Default: A random value on the device's sticker ※ The name cannot exceed 32 characters. |
| Encryption | Specify an authentication method. OPEN: It requires no password which means anyone can connect to the SSID. WPA-PSK (TKIP): It is an earlier security protocol that evolves from the WEP (Wired Equivalent Privacy). Due to its low security, it is only suggested to be used on some early | Default: WPA2-PSK(AES) Options: WPA2 -PSK(AES) WPA3-SAE(AES) WPA2-PSK & WPA3-SAE (AES) Open (None) WAP-PSK & WPA2-PSK(AESTKIP) |

| | | |
|----------------|--|--|
| | <p>terminal devices that supports WPA.</p> <p>WPA2-PSK: It is a higher security protocol based on the WPA-PSK. It is designed for home users and small offices to protect their networks.</p> <p>WPA/WPA2-PSK: It is a mixed mode of WPA-PSK and WPA2-PSK, and is backward-compatible, which means it can be operated on terminals that do not support WPA2.</p> <p>WPA3-SAE: It is an overall improvement over its iteration, WPA2. It provided more personalized settings to deliver a higher security. But it only can be used on the devices that support WPA3.</p> <p>WPA2-PSK & WPA3-SAE : It is a mixed mode of WPA2-PSK and WPA3- SAE, and is backward-compatible, which means it can be operated on terminals that do not support WPA3.</p> | WPA-PSK(TKIP) |
| Wi-Fi Password | The length of a SSID password must be formed by at least 8 characters. For security reasons, we recommend that you change the initial password. | Default: A random value printed on the device's sticker. |
| Hide SSID | Sometimes for security reasons, you can hide the SSID so that others cannot search for the SSID name. However, when you search the SSID via your mobile phone, it can be found and connected. When the SSID is hidden, the terminals that have connected to it will not be affected. | Default: Disabled. Option: Enabled/Disabled |

When you disable "Dual-Band Single SSID", the following page is displayed. In this page, you can configure 2.4GHz and 5GHz bands separately.



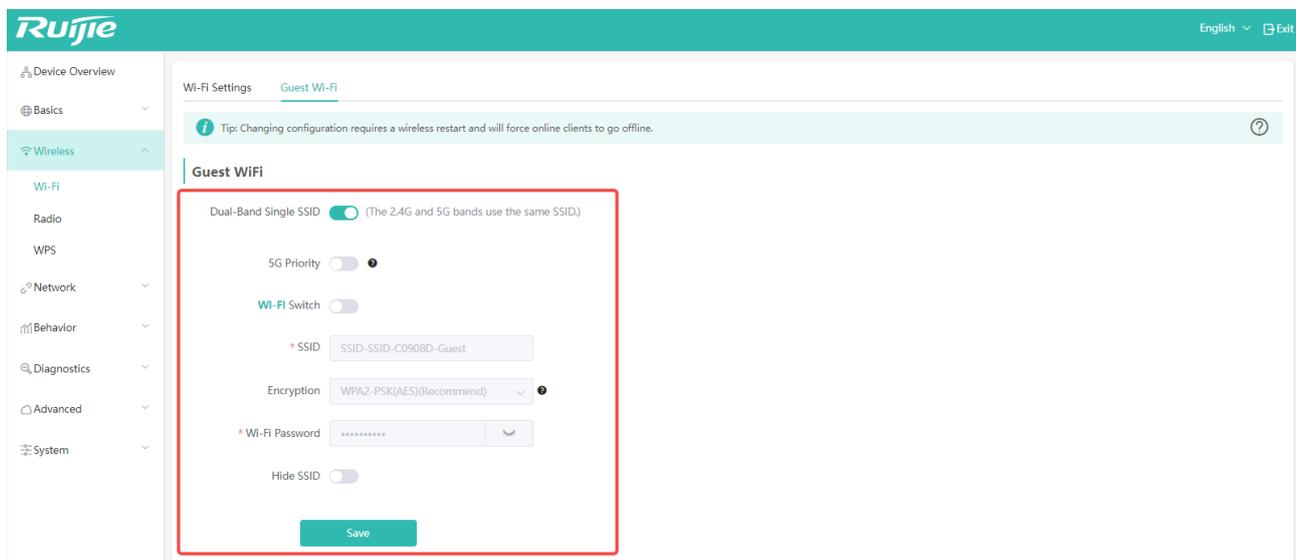
When the SSID 2 list is configured, an additional item will be provided as shown in the red box in the figure below (Wi-Fi 5 Backup network):



This item is only applicable to the SSID 2 list.

| Items | Description | Defaults/Options |
|-------------------------------|--|--|
| <p>Wi-Fi 5 Backup network</p> | <p>This AP is an 802.11ax (Wi-Fi 6) device. Although the 802.11ax standard supports being compatible with the 802.11ac (Wi-Fi 5), there are still a small number of laptops and other terminals that cannot be connected to the Wi-Fi 6 signal released by this device due to their old drives. When this feature is enabled, these terminal devices can be connected to the Wi-Fi 5 signal. But they will not be able to take advantage of the new features brought by Wi-Fi 6 devices.</p> | <p>Default: Enabled Option: Enabled/Disabled</p> |

Under the "Wi-Fi" menu, in addition to the "Wi-Fi Settings" tab page, there is also a "Guest Wi-Fi" tab page.



 All the configurable items on this tab page are the same as the configurable items on the SSID 1 List~ SSID 5 List in "Wi-Fi Settings". The difference is that the signal emitted by this SSID is exclusively for guests. After they are associated with this SSID, they cannot access the local network in routing mode, but only the Internet.

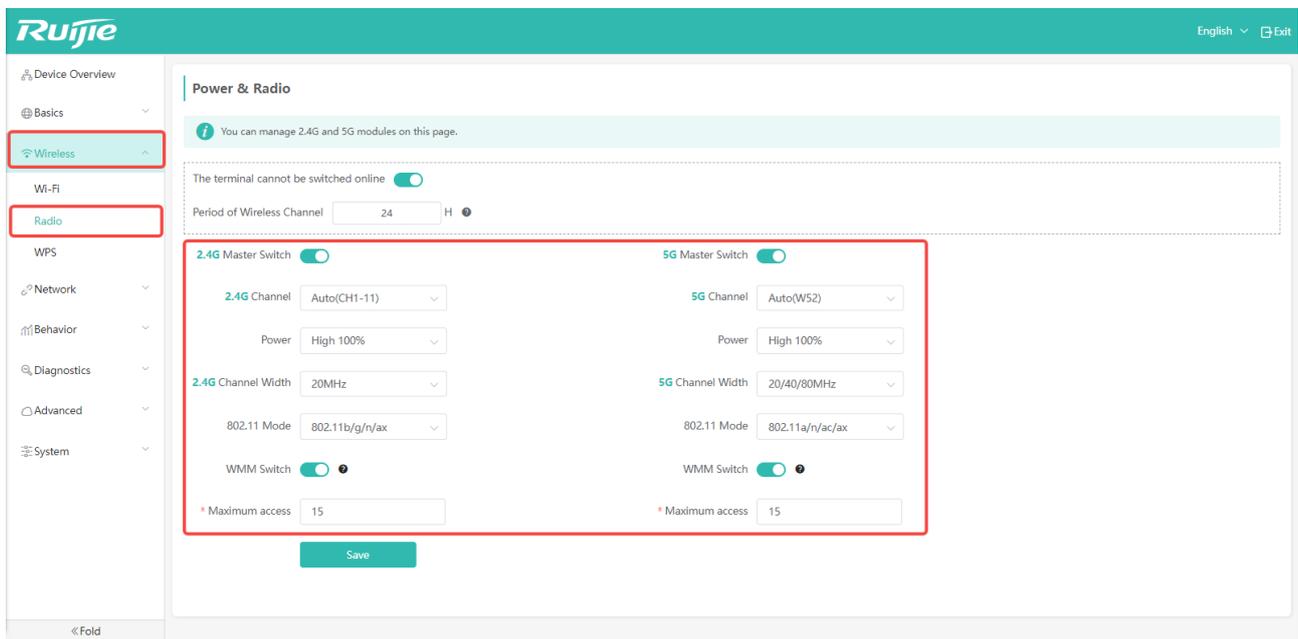
2.4 Configuring RF Parameters

This feature can be configured for 2.4 GHz and 5 GHz.

- The specific steps are:

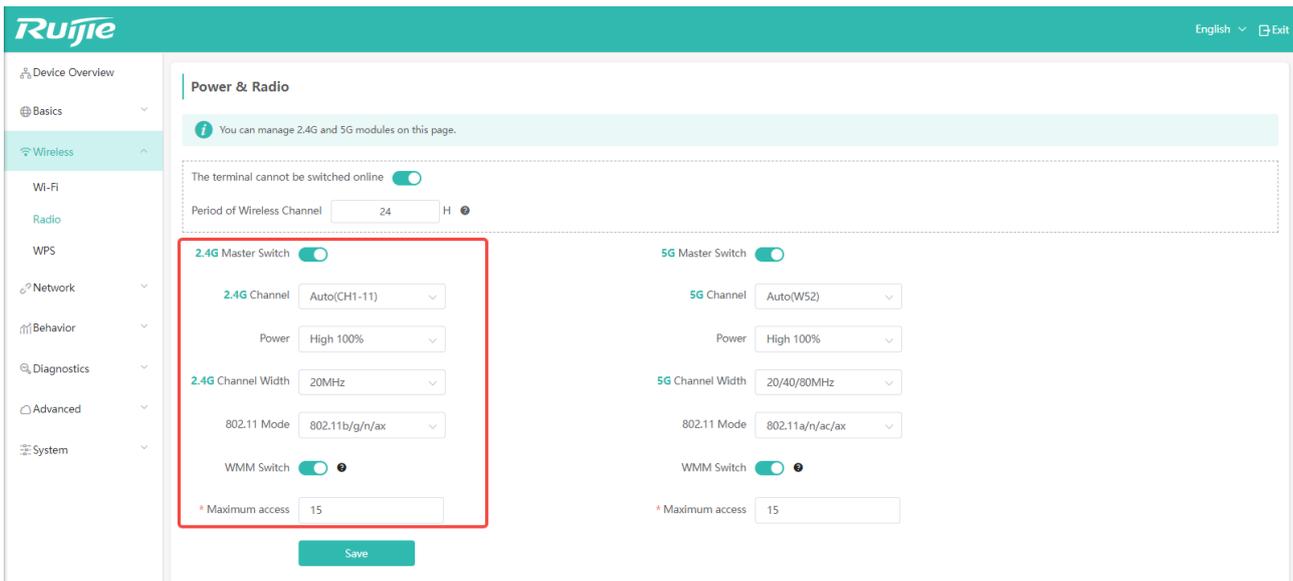
Step 1: Click "Wireless" on the Web (marked "1" in the picture);

Step 2: Click "Radio" (marked "2" in the picture) to go to the setting page.



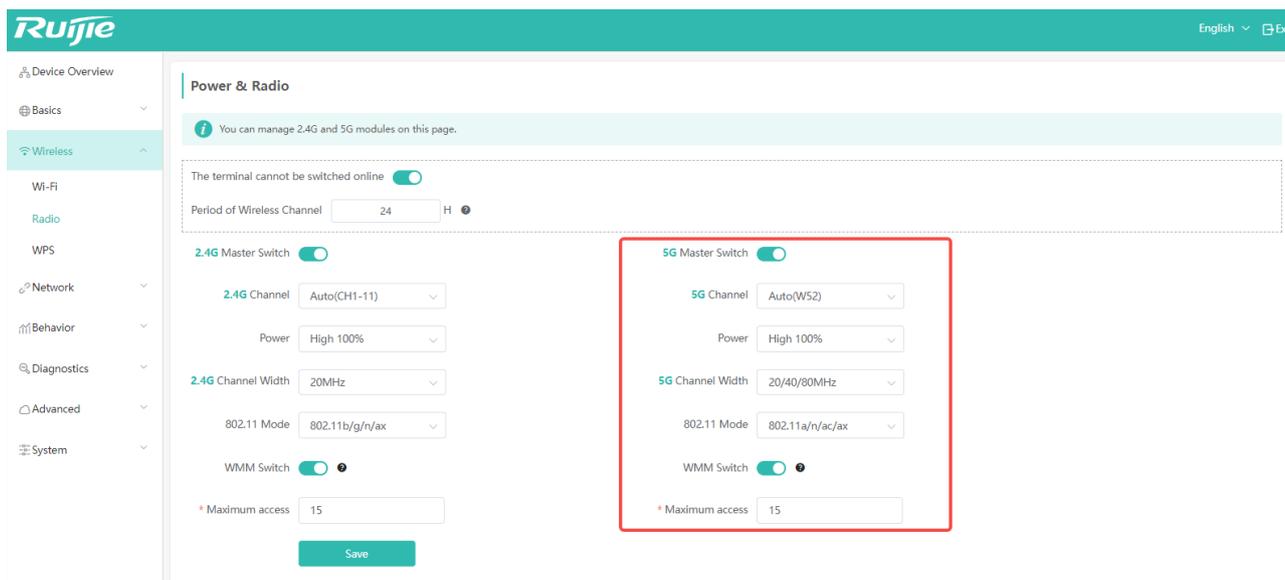
The screenshot displays the Ruijie web-based configuration interface. The left sidebar contains a navigation menu with the following items: Device Overview, Basics, Wireless (1), Wi-Fi, Radio (2), WPS, Network, Behavior, Diagnostics, Advanced, and System. The main content area is titled "Power & Radio" and includes a notification: "You can manage 2.4G and 5G modules on this page." Below this, there is a toggle for "The terminal cannot be switched online" and a "Period of Wireless Channel" set to 24 H. The settings are organized into two columns for 2.4G and 5G modules. The 2.4G settings include: Master Switch (on), Channel (Auto(CH1-11)), Power (High 100%), Channel Width (20MHz), 802.11 Mode (802.11b/g/n/ax), WMM Switch (on), and Maximum access (15). The 5G settings include: Master Switch (on), Channel (Auto(W52)), Power (High 100%), Channel Width (20/40/80MHz), 802.11 Mode (802.11a/n/ac/ax), WMM Switch (on), and Maximum access (15). A "Save" button is located at the bottom of the settings area.

2.4.1 Configuring RF Parameters on 2.4 GHz



| Items | Description | Defaults/Options |
|--------------------|---|---|
| 2.4G Master Switch | Used to determine whether to release the 2.4 GHz signal. If is disabled, the 2.4 GHz signal is not released. | Default: Enabled Options: Enabled/Disabled. |
| 2.4G Channel | Set the channel on 2.4 GHz. You can choose a fixed channel, or choose to automatically select within the channel range 1-11 or the channel range 1-13 . | Default: Auto (CH1-11). Options: Automatic(CH1-11),Auto(CH1-13), 1,2,3,4,5,6,7,8,9,10,11,12,13 |
| Power | Set the transmit power of 2.4 GHz signal. | Default: High 100% Options: High 100%, Medium 60%, Low 40% |
| 2.4G Channel Width | Configure 2.4GHz bandwidth. You can choose a fixed bandwidth or an automatic bandwidth of 20/40MHz. | Default: 20 MHz Options: 20 MHz, 40 MHz, 20/40 MHz |
| 802.11 Mode | Set the wireless working mode of 2.4 GHz. | Default: 802.11b/g/n/ax Options: 802.11b/g/n/ax, 802.11b/g/n, 802.11b/g |
| WMM Switch | When it is enabled, the better quality of multimedia is provided. We recommend turning it on. | Default: Enabled Options: Enabled/Disabled. |
| Maximum Access | Maximum number of terminals supported on 2.4GHz. | Default: 15 Options: 1-15 |

2.4.2 Configuring RF Parameters on 5 GHz

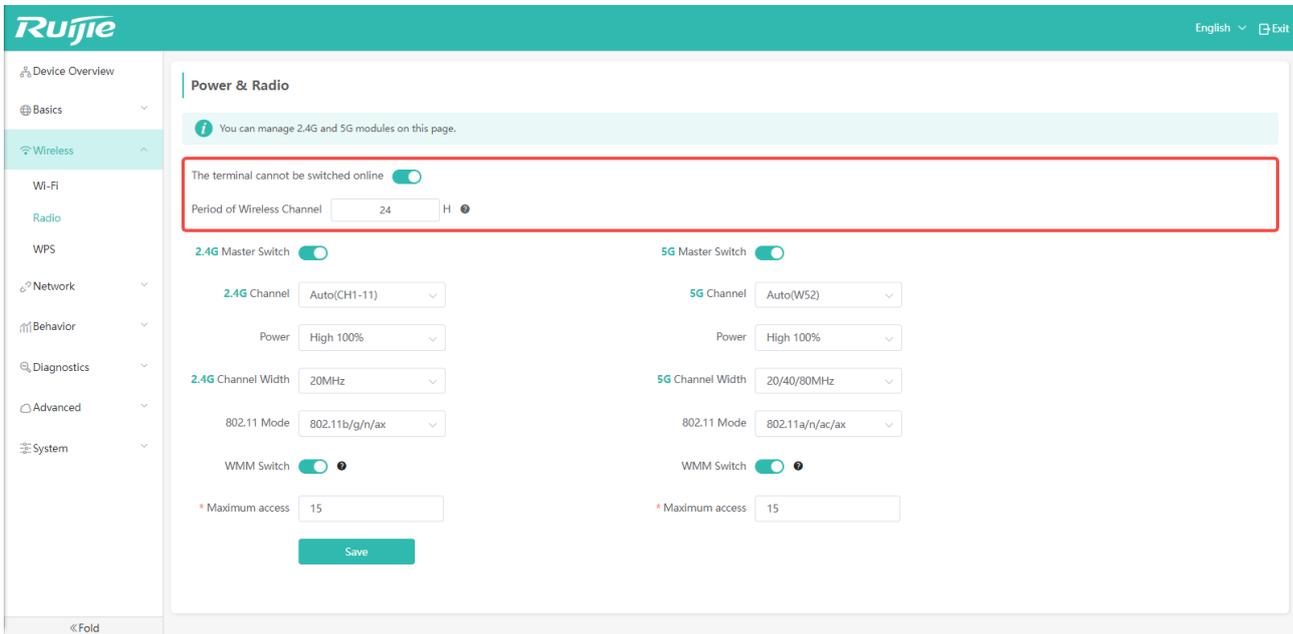


| Items | Description | Defaults/Options |
|------------------|--|--|
| 5G Master Switch | Used to determine whether to release the 5GHz signal. If is disabled, the 5GHz signal is not released. | Default: Enabled. Options: Enabled/Disabled. |
| 5G Channel | Set the channel on 5GHz. You can choose a fixed channel, or choose to automatically select within the channel range 1-11 or the channel range 1-13 . | Default: Auto (W52). Options: Auto (W52), Auto (W52+ W53), Auto (W52+W53+W56), 36,40,44,48,52,56,60,64,100,104,108, 112,116,120,124,128,132,136,140 |
| Power | Set the transmit power of 5GHz signal. | Default: High 100% Options: High 100%, Medium 60%, Low 40% |
| 5G Channel Width | Configure 5GHz bandwidth. You can choose a fixed bandwidth or an automatic bandwidth. | Default: 20/40/80MHz Options: 20MHz, 20/40MHz , 20/40/80MHz |
| 802.11 Mode | Set the wireless working mode of 5 GHz signal. | Default: 802.11a/n/ac/ax Options: 802.11a/n/ac/ax, 802.11a/n/ac, 802.11a/n, 802.11a |
| WMM Switch | When it is enabled, the better quality of multimedia is provided. We recommend turning it on. | Default: Enabled. Options: Enabled/Disabled. |
| Maximum Access | Maximum number of terminals supported by 5GHz. | Default: 15 Options: 1-15 |

⚡ It should be noted that if the 5G channel is set to a fixed channel, automatic bandwidth switching will be used by default, but in fact the underlying algorithm of the AP does not currently support automatic switching between 20/40/80MHz.

2.4.3 Other Settings

After the automatic channel and automatic bandwidth settings take effect, the device will scan the channel and bandwidth according to the set period and reselect the optimal channel and bandwidth.



| Items | Description | Defaults/Options |
|--|---|---|
| The terminal cannot be switched online | When a terminal is online, do not switch the channel and the bandwidth. | Default: On. Options: On/Off. |
| Period of Wireless Channel | Set the time interval for automatic channel switching. The default setting is to automatically select channels after each 24 hours. | Default: 24 hours. Options: 1-48 hours |

2.5 Additional Instructions for Enterprises

2.5.1 Device Management

In the left panel of the Web, eight menus are offered to you to manage the AP.

The screenshot displays the Ruijie web interface for device management. The left sidebar menu includes: Device Overview, Basics, Wireless, Network, Behavior, Diagnostics, Advanced, and System. The main content area is titled 'Device Overview' and shows:

- Online Clients:** 0
- Status:** Online
- Uptime:** 51Min 39S
- System:** 2023-12-04 16:22:22
- Device Details:**
 - Model: RG-HA3515-DG
 - SN: G3QH9XW002000
 - MAC: C470:AB:00:09:08
 - Hardware Ver: V1
 - Software Ver: MA_1.3(1)B9P1, Release(10212719), Revision(5a1bcbe15/)
- WiFi Configurations:**
 - SSID 1 List: Wi-Fi: PR20-APART-2810, Encrypted: Yes
 - SSID 2 List: Wi-Fi: SSID-SSID-C0908D_Wi-F, Encrypted: Yes
 - SSID 3 List: Wi-Fi: SSID-SSID-C0908D-3, Encrypted: Yes
 - SSID 4 List: Wi-Fi: SSID-SSID-C0908D-4, Encrypted: Yes
 - SSID 5 List: Wi-Fi: SSID-SSID-C0908D-5, Encrypted: Yes
 - Guest Wi-Fi: Wi-Fi: SSID-SSID-C0908D-Gues, Encrypted: Yes

2.5.2 Access Point Mode

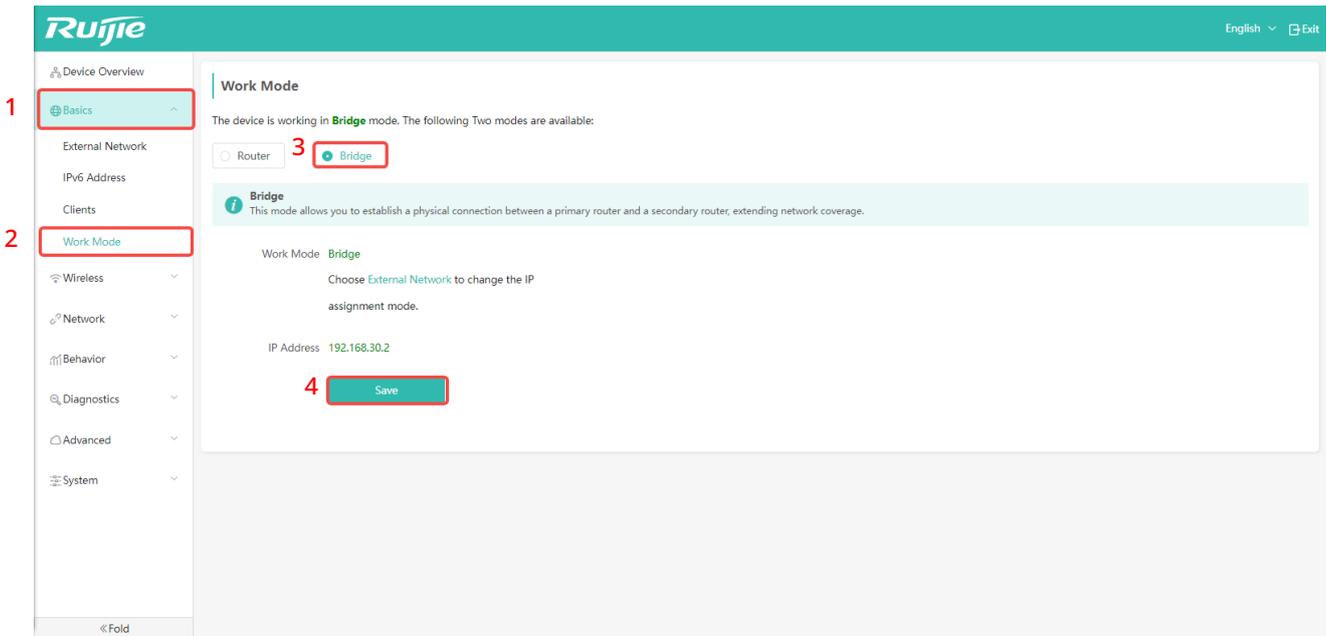
The following page allows you to set the device to the bridge mode.

- The specific steps are as follows:

Step 1: Click "Basic " in the left panel (marked "1" in the picture);

Step 2: Click on "Work Mode " (marked "2" in the picture);

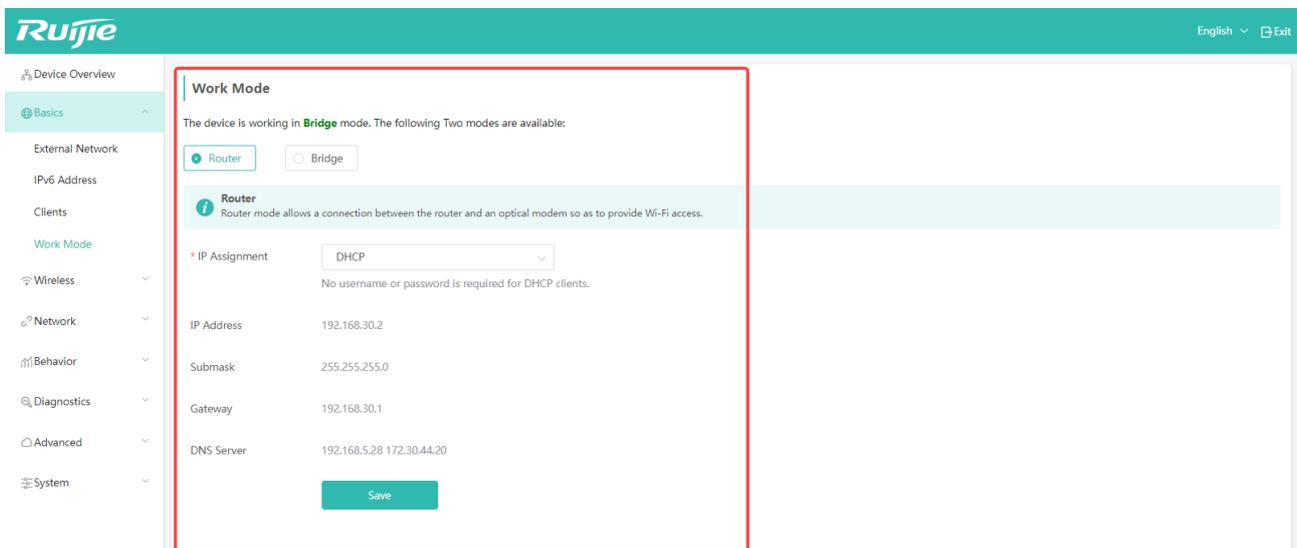
Step 3: Select "AP Mode" (bridge mode) (marked "3" in the picture).



In bridge mode, the management address of 192.168.110.1 has been set for the device. In bridge mode, if the AP is not connected to the upper-level network, the downstream client will not be able to obtain DHCP. In this case, the client can configure an IP in the same network segment as the management address to access the Web homepage through this management address.

2.5.3 Routing Mode

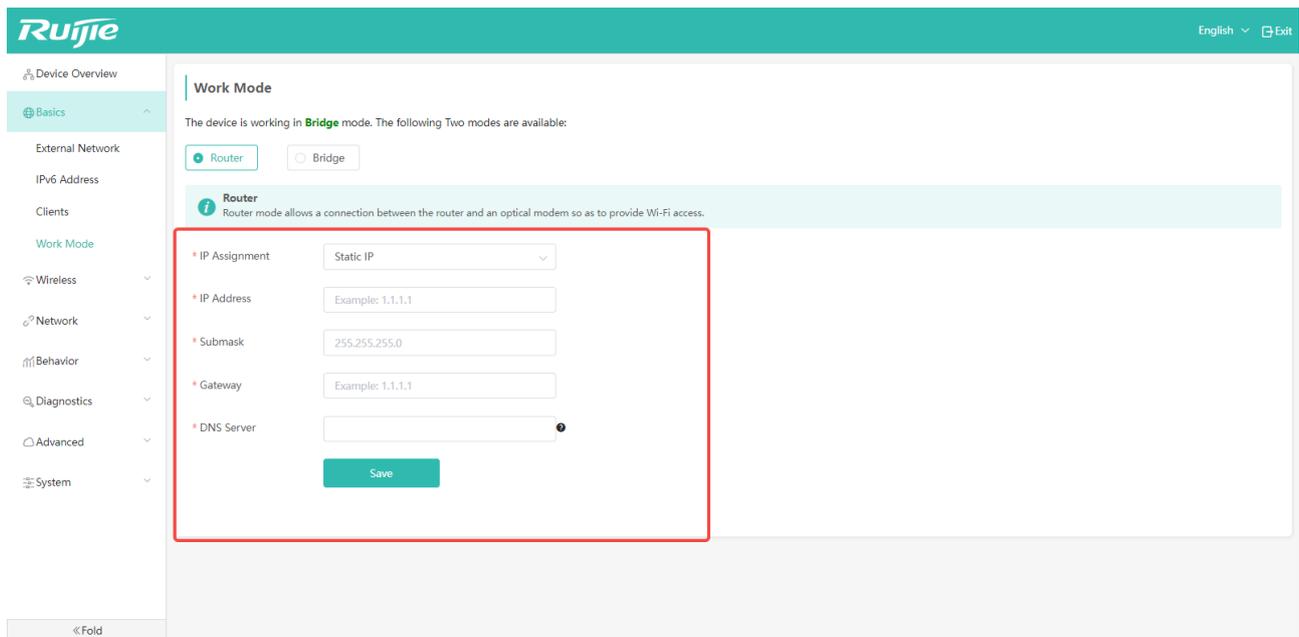
- In bridge mode, a terminal such as a mobile phone can obtain IP addresses from the uplink network of the AP. If there is no uplink network or the uplink network does not assign an IP address, the terminal may not be able to access to the network. To address this issue, you can set the IP address to 1 92.168.110.x on your mobile phone or wired terminal, and then access the Web management system via 192.168.110.1.
- In routing mode, a terminal such as a mobile phone can obtain an IP address in the network segment of 1 92.168.110.x by default. The terminal device can access the Web management system via 192.168.110.1 or `http s:// rjap.jp`. The configuration page of routing mode is shown as the following figure:



| Items | Description | Defaults/Options |
|---------------|--|--|
| IP Assignment | Set the address assignment method of the AP to the terminal. DHCP and static IP are supported. | Default: DHCP Options: DHCP/Static IP |

 If DHCP is set, the address ranging from 192.168.110.100 to 192.168.110.200 will be assigned to the terminal, the default gateway is 192.168.110.1, and the default network mask is 255.255.255.0.

■ If you select the static IP, the setting page is shown as below:



| Items | Description | Defaults/Options |
|---------------|---|---|
| IP Assignment | Set an address allocation method of the AP to the terminal. DHCP and Static IP can be selected. | Default: DHCP Options: DHCP/Static IP ※ If you select the static IP, the AP will use the IP address configured by the user. In this case, users may need to configure their IP address to be in the same network segment as the AP to ensure they can log into the Web of AP again for configuration. |
| IP Address | Set an IP address for the AP. | Default : N/A |
| Submask | Set the subnet mask for the AP | Default : N/A |
| Gateway | Set the gateway address for the AP. | Default : N/A |
| DNS Server | Set the DNS server address for the AP. | Default: N/A |

3 Device Overview

When users log into the Web management system, the device overview page is displayed. The overview page includes:

- **Device Overview:** Display the number of online users, network status and uptime.
- **Device Details:** Display the detailed information of the AP, such as its model, serial number, MAC address, hardware version, and software version information.
- **WiFi:** Display the detailed information of SSIDs, including SSID names, connection status, and encryption modes.
- **Interface Details:** You can check the connection status of a port by its color. When you move your mouse to the corresponding port, you can know the current rate of the port.

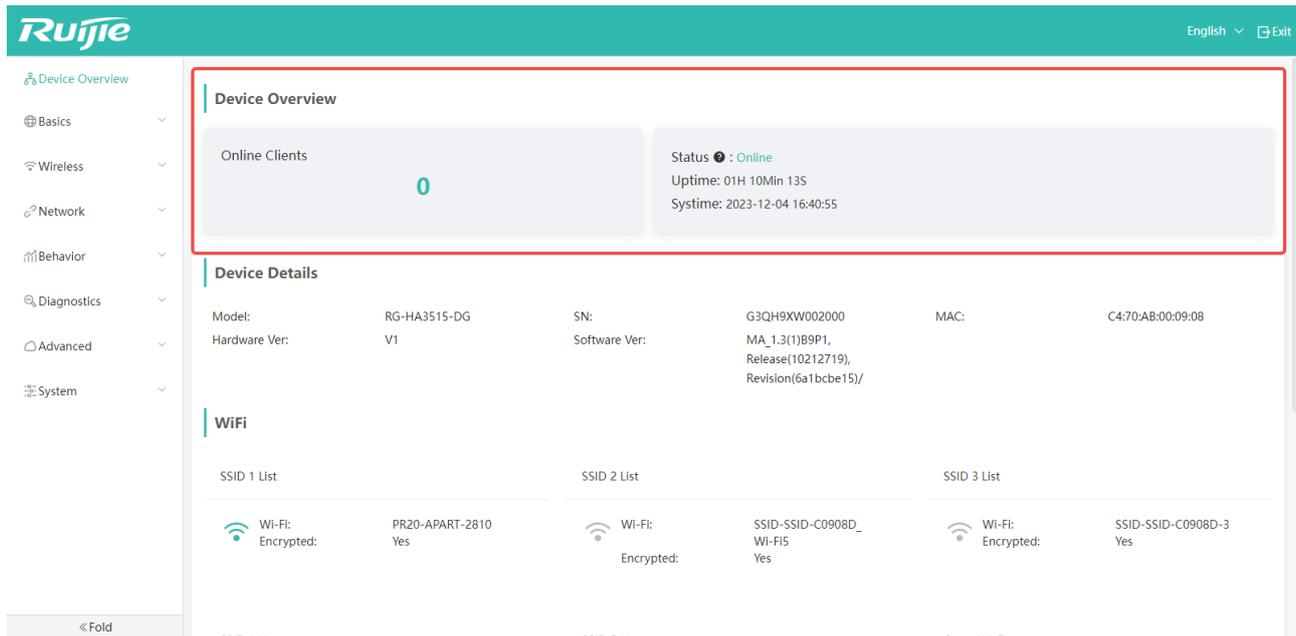
The screenshot displays the Ruijie web management interface for the 'Device Overview' page. The page is divided into several sections:

- Online Clients:** Shows 0 online clients. Status is Online, Uptime is 01H 07Min 11s, and Systemtime is 2023-12-04 16:37:53.
- Device Details:**

| | | | | | |
|---------------|--------------|---------------|---|------|------------------|
| Model: | RG-HA3515-0G | SN: | G3QH9XW002000 | MAC: | C470-A8-00-09-08 |
| Hardware Ver: | V1 | Software Ver: | MA_1.311(B9P1_Release10212719)_Revision(S41bcbe15/) | | |
- WiFi:**

| SSID 1 List | SSID 2 List | SSID 3 List |
|---|--|---|
| Wi-Fi: Encrypted: PR20-APART-2810 Yes | Wi-Fi: Encrypted: SSID-SSID-C0908D_Wi-Fi5 Yes | Wi-Fi: Encrypted: SSID-SSID-C0908D-3 Yes |
| SSID 4 List | SSID 5 List | Guest Wi-Fi |
| Wi-Fi: Encrypted: SSID-SSID-C0908D-4 Yes | Wi-Fi: Encrypted: SSID-SSID-C0908D-5 Yes | Wi-Fi: Encrypted: SSID-SSID-C0908D-Guest Yes |
- Interface Details:** Shows connection status (Connected/Disconnected) and icons for WAN, LAN, and LAN ports.

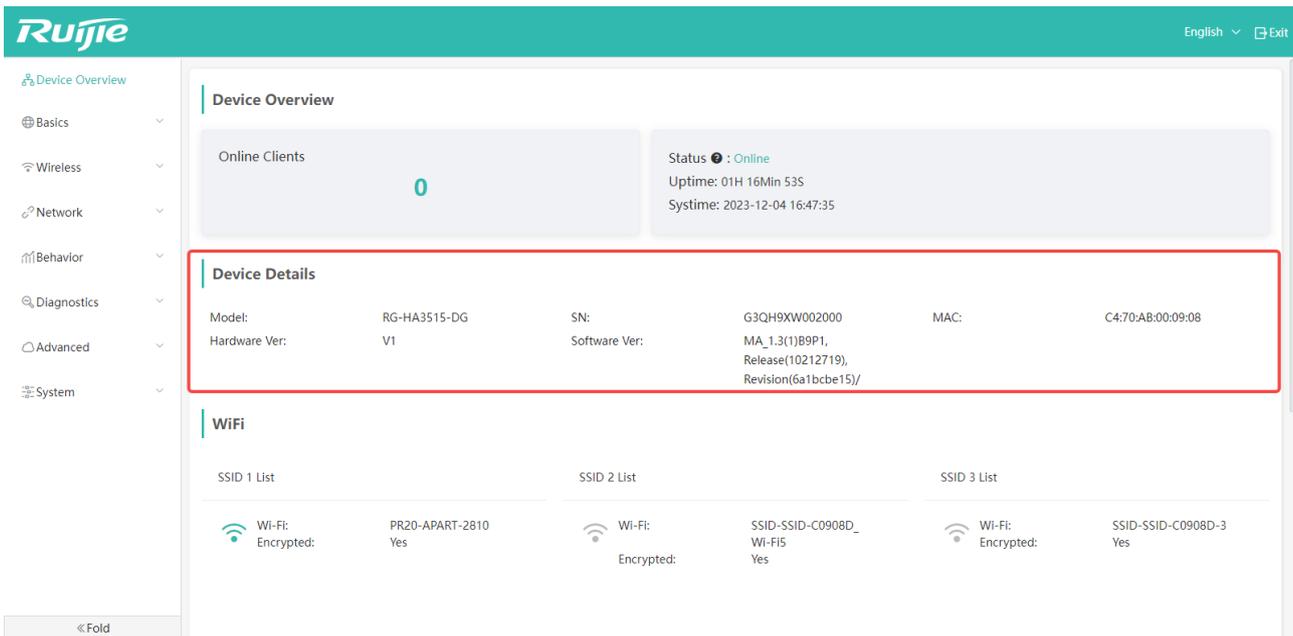
3.1 Equipment Overview



| Items | Description |
|----------------|---|
| Online Clients | Display the number of current online wireless terminals. |
| Status | Display the status of Internet connection. Offline indicates that the Internet is not connected, and online means that the Internet is connected. |
| Uptime | Display the uptime of the device. |
| Systemtime | Displays the current time of the system. |

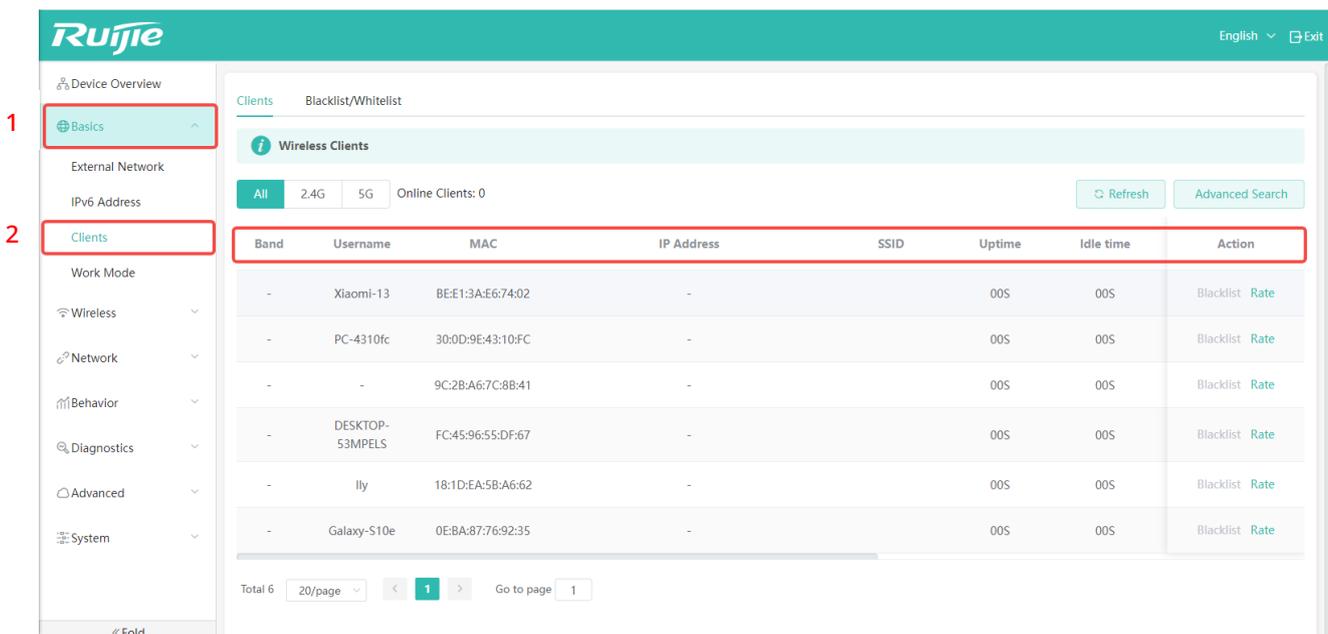
 The offline status may be caused by network disconnection, DNS or other firewalls. You can re-obtain the status by refreshing the interface. If it is still displayed as offline, check whether the network connection is normal.

3.2 Device Details



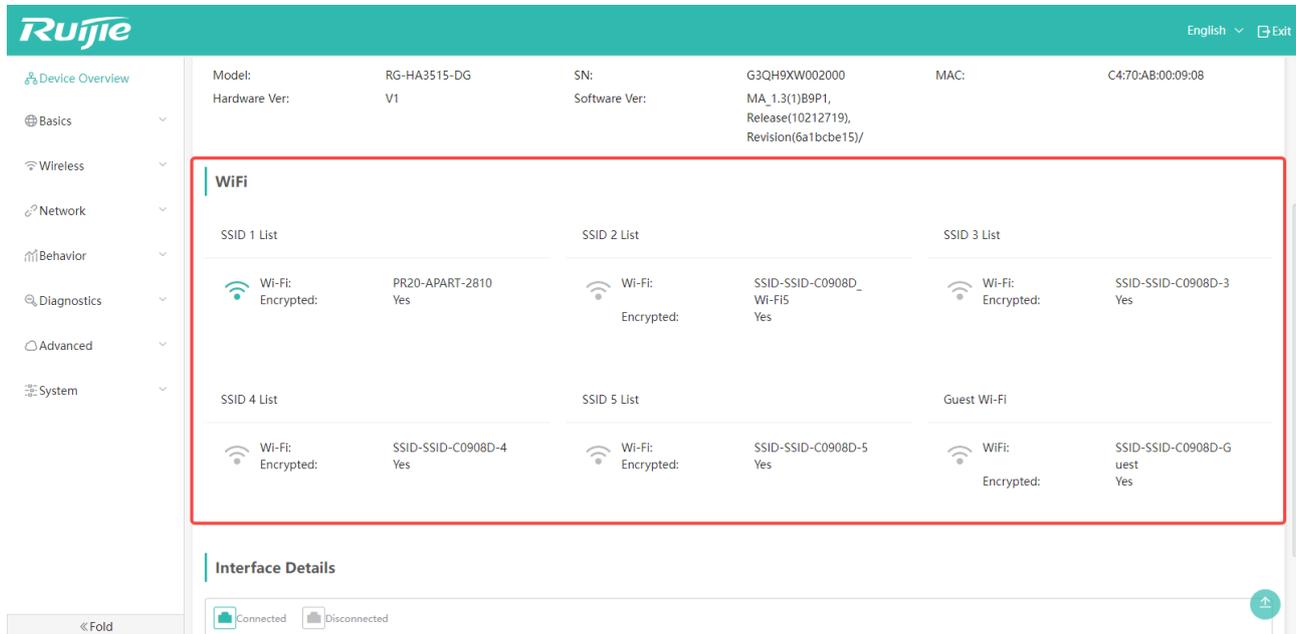
| Items | Description |
|------------------|---|
| Model | Display the device model. |
| Hardware Version | Display the hardware version. The initial version starts from V1. |
| SN | Displays the SN of the device. A SN is a unique identifier for the equipment manufacturer to trace the product. |
| Software Version | Display the currently software version. |
| MAC | Display the MAC address of the device. |

Click the "Basics" > "Clients" to view the terminal information connected to the AP. In this page, you also can view the IP addresses of clients.



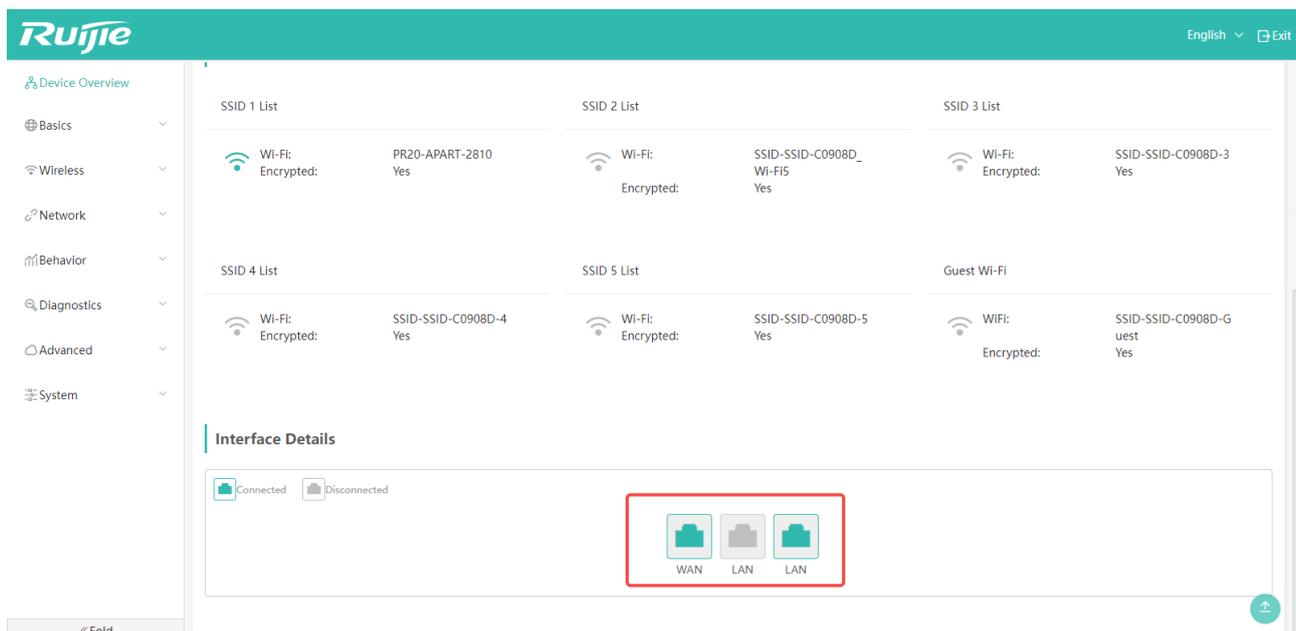
3.3 Wi-Fi Status

This area displays the detailed information about currently available SSIDs, including the SSID status and encryption modes. The system can be configured with up to 5 general SSID lists and a guest SSID. When clients access the guest SSID in routing mode, they only can access the external Internet. The example below shows that only the SSID 1 list is enabled. The SSID 1 list name is PR20-APART-2810, and it is encrypted.



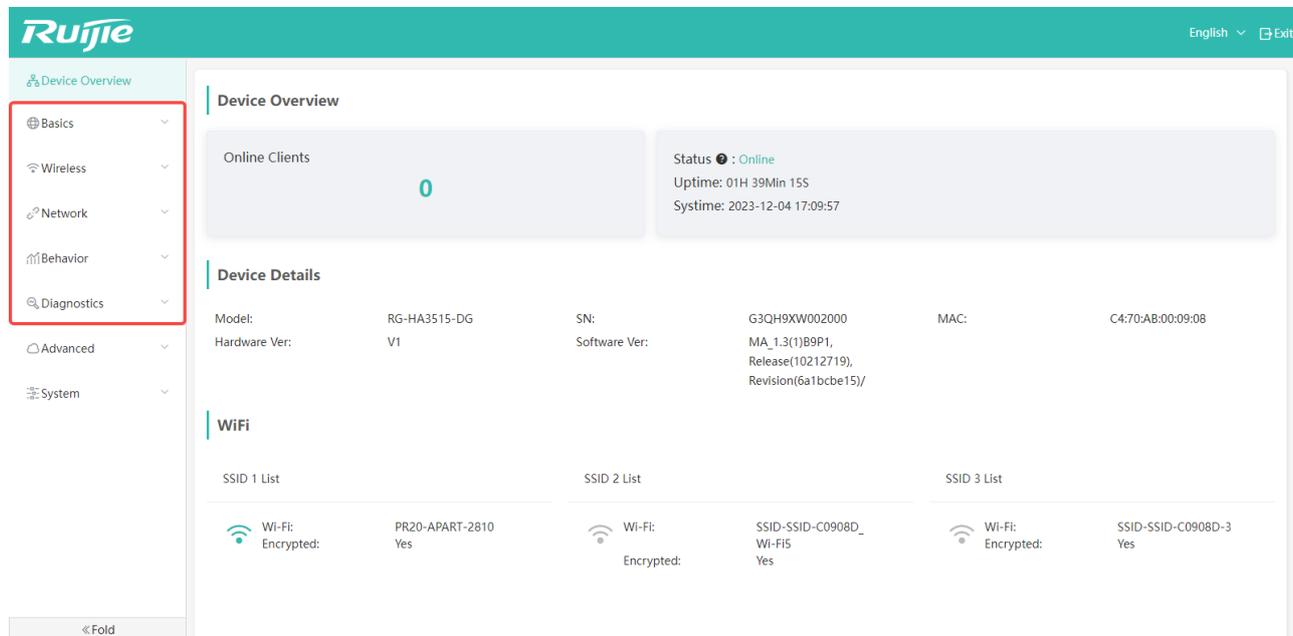
3.4 Interface Information

This area displays the current wired port status. As shown in the following figure, the system has three wired ports. The ports in green indicate that they are enabled, and the ports in gray indicate that they are disabled. Based on port color, we can know that the first and third ports are enabled.



4 Basic Configurations

The content introduced in this chapter is suitable for users who are familiar with AP configurations. Users can optimize their networks via configuring the following features.



The main menus of basic configuration are shown as follows:

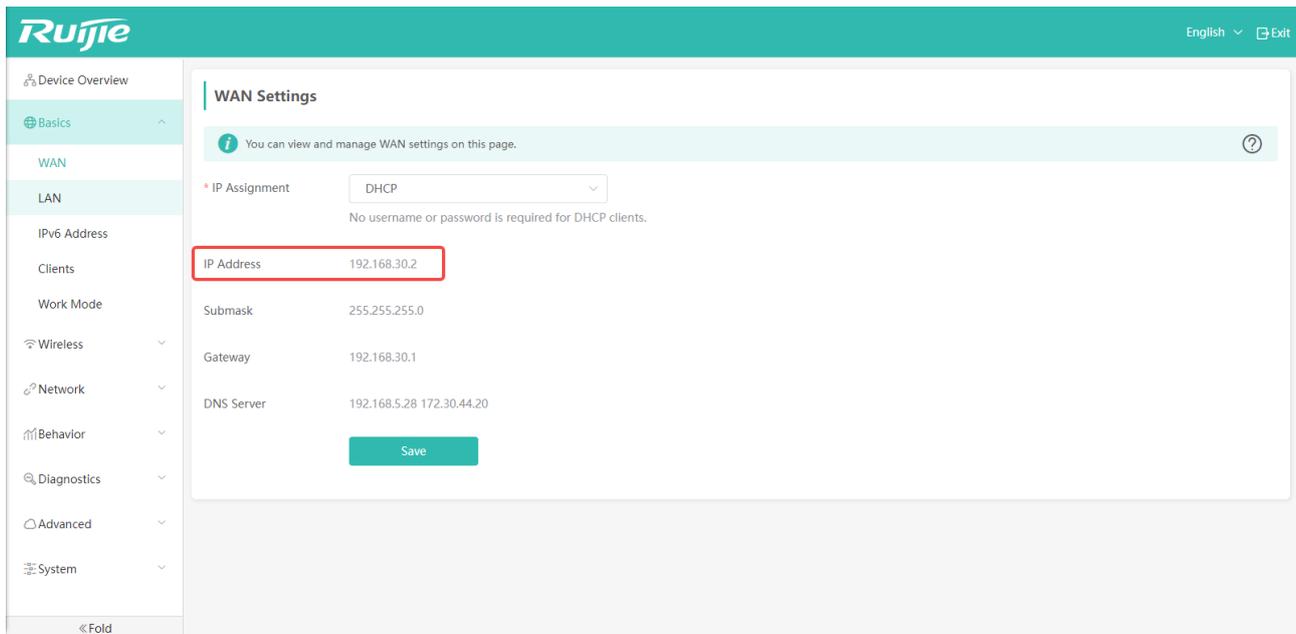
| Menus | Description |
|-------------|---|
| Basics | Configure working modes, port features and blacklists and whitelists, and display terminal information. |
| Wireless | Configure the parameters of SSIDs and radios, and WPS function. |
| Network | Configure and display the parameters of VLANs. |
| Behavior | Configure the blacklists or whitelists of DNS/URL, port security and other security features. |
| Diagnostics | Use network tools such as ping, traceroute and DNS lookup to diagnose networks. |

4.1 Basic Management

4.1.1 WAN Settings (Routing Mode)

In routing mode, you can connect to the Internet by modifying the IP assignment method of the WAN port.

- Click "Basics" -> "WAN" to enter the page to check the IP address of the WAN port.



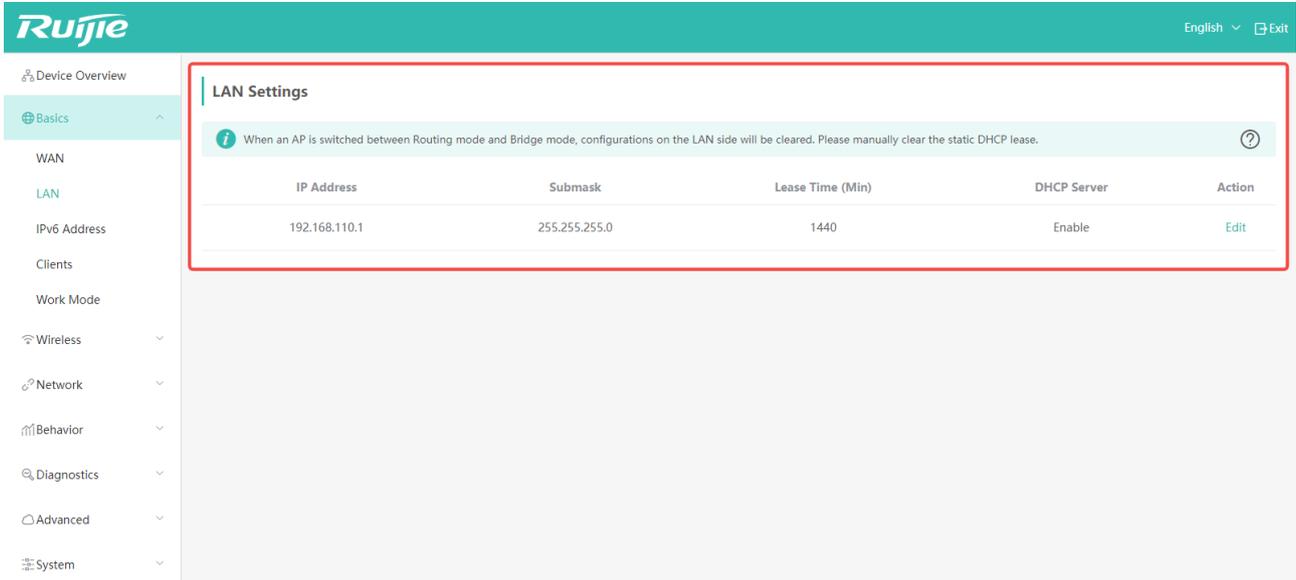
The screenshot displays the Ruijie web-based configuration interface. The top navigation bar includes the Ruijie logo, a language dropdown set to "English", and an "Exit" button. A left sidebar menu shows the navigation structure: Device Overview, Basics (selected), WAN, LAN, IPv6 Address, Clients, Work Mode, Wireless, Network, Behavior, Diagnostics, Advanced, and System. The main content area is titled "WAN Settings" and contains an information message: "You can view and manage WAN settings on this page." Below this, the "IP Assignment" is set to "DHCP" in a dropdown menu, with a note: "No username or password is required for DHCP clients." The IP Address field is highlighted with a red box and contains the value "192.168.30.2". Other settings include Submask (255.255.255.0), Gateway (192.168.30.1), and DNS Server (192.168.5.28 172.30.44.20). A green "Save" button is located at the bottom of the settings area.

If you want to select another IP assignment method, you can click "IP Assignment" to change the assignment method. DHCP and static IP are available. For specific configuration steps, please refer to the section 2.5.3 "Routing Mode".

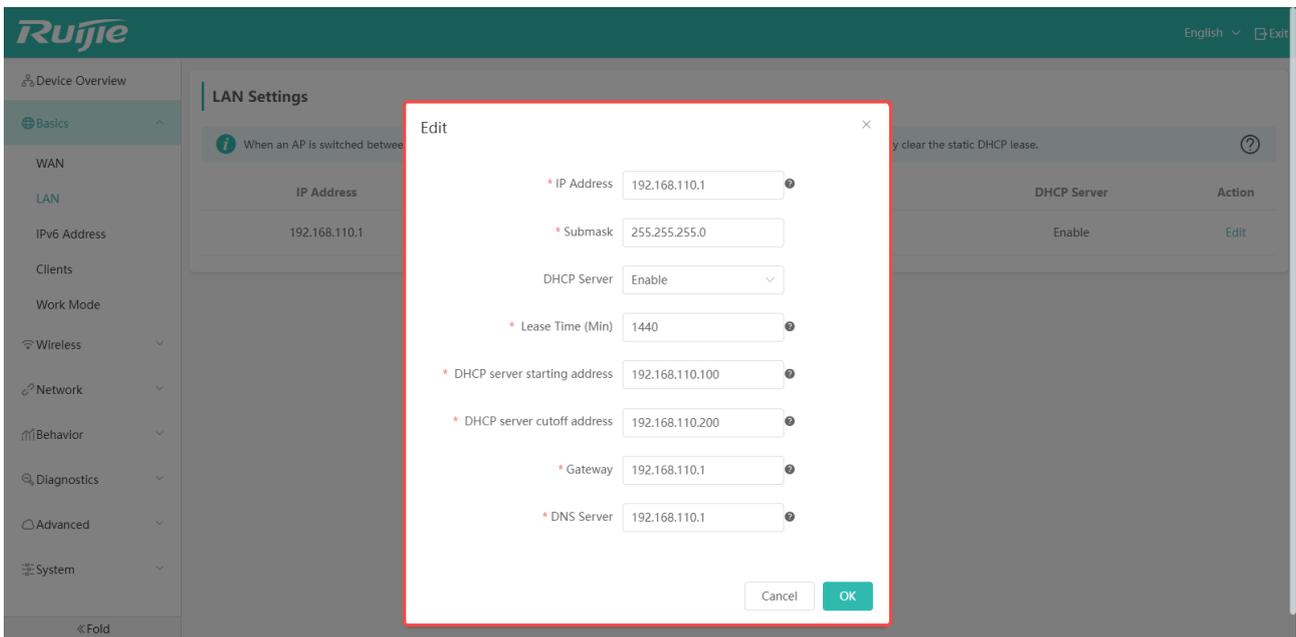
4.1.2 LAN Settings (Routing Mode)

In routing mode, you can change the default DHCP address pool settings in the LAN page."

- Click "Basics" -> "LAN" to enter the setting page.



- Click "Edit" to enter the modification page.



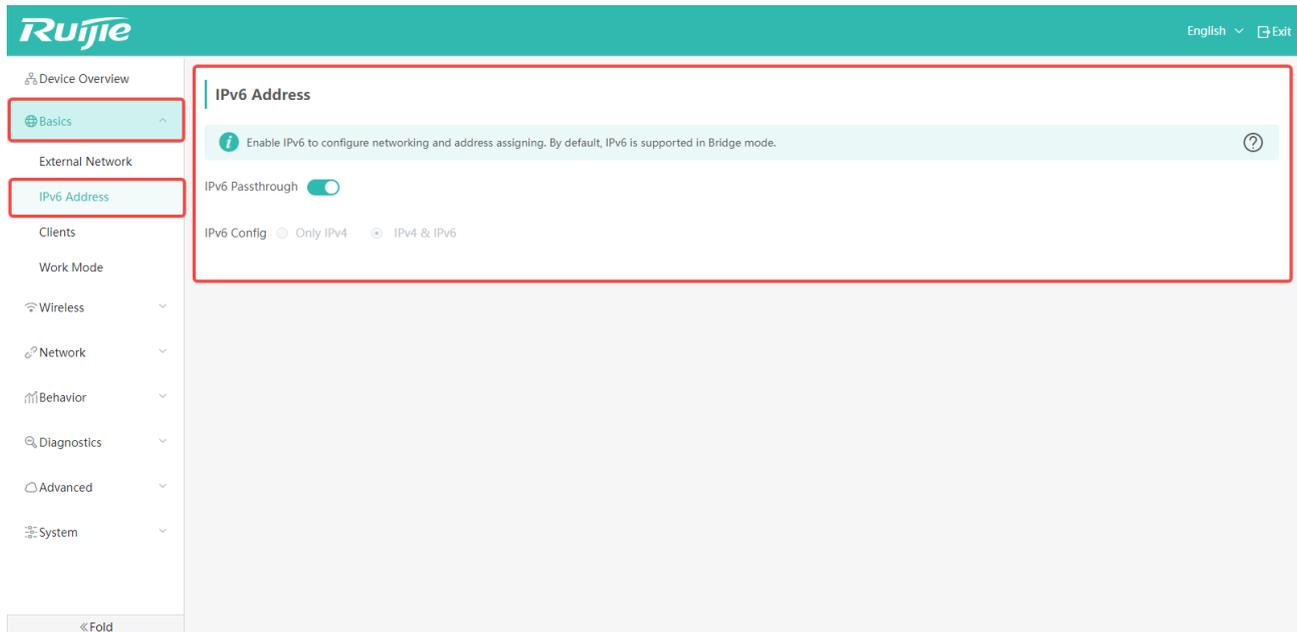
| Items | Description | Defaults/Options |
|-------------|--|---|
| IP Address | The gateway IP of DHCP server. | Default: 192.168.110.1 |
| Submask | The subnet mask of gateway IP of the DHCP server. | Default: 255.255.255.0 |
| DHCP Server | The switch of DHCP address pool. It is not recommended to disable it because when it is disabled, the terminal will not be assigned an IP address. | Default: Enabled Option: Enabled/Disabled/DHCP Relay |

| | | |
|------------------------------|--|--|
| Lease Time (Min) | The lease time of the assigned IP. When the lease expires, the IP will be reclaimed, and the terminal needs to reapply for a new IP address. | Default: 1440 minutes (24 hours) Option: 2-2880 minutes |
| DHCP server starting address | Specify the start address of the IP address pool. | Default: 192.168.110.100 |
| DHCP server cutoff address | Specify the end address of the IP address pool. | Default: 192.168.110.200 |
| Gateway | Specify the gateway address assigned to the terminal. | Default: 192.168.110.1 |
| DNS Server | Specify the DNS address assigned to the terminal. | Default: 192.168.110.1 |

 In routing mode, if the WAN port is assigned an IP address in the range of 192.168.110.XX, the IP address of the DHCP address pool on the LAN side will be changed to an IP address in the range of 192.168.111.XX, and the gateway address is changed to 192.168.111.1, the start address to 192.168.111.100, and the end address to 192.168.111.200. The rest of configurations remain unchanged.

4.1.3 IPv6 Settings

Click "Basics" -> "IPv6 Address" to enter the IPv6 configuration page.



The configuration items provided on the IPv6 configuration page are described in the following table:

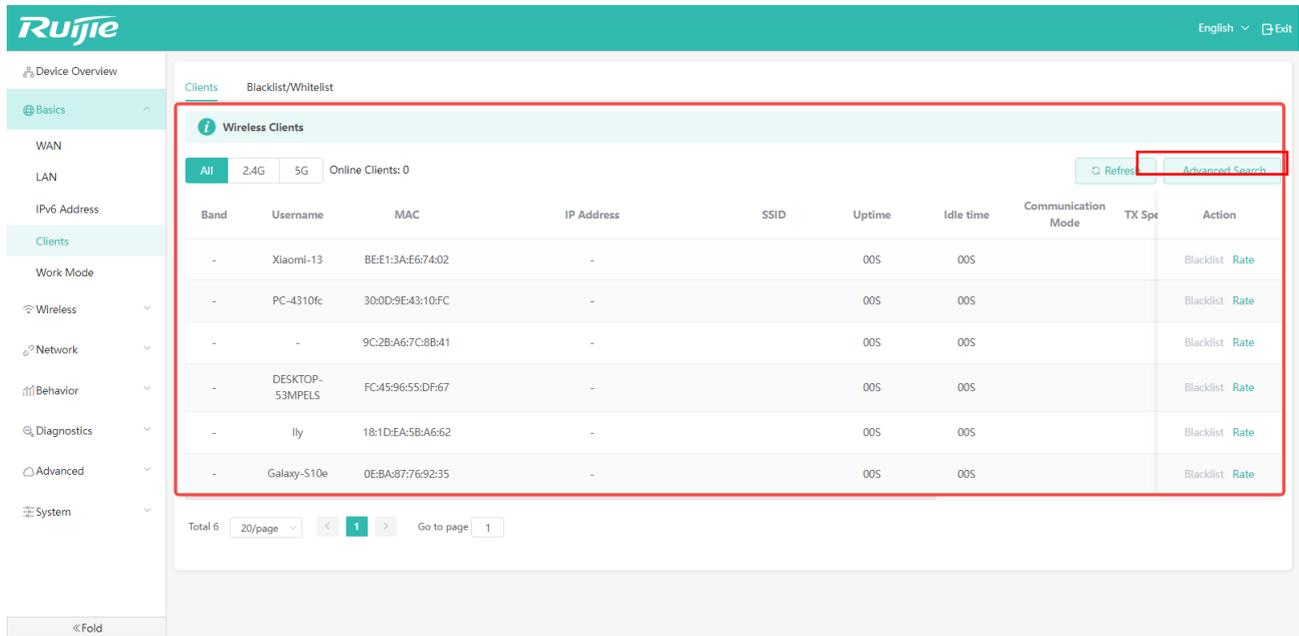
| Items | Description | Defaults/Options |
|--------------------|---|---|
| IPv6 Passthrough | Configure whether to block IPv6 packets. When this feature is enabled, IPv6 packets can be sent to wireless clients. ※ If the devices on both sides have learned the other party's local link address, this function will not take effect. | Default: Enabled. Options: Enabled/Disabled. |
| IPv6 Configuration | Configure whether the AP provides IPv6 services in routing mode. When "Only IPv4" option is selected, the AP only provides IPv4 addresses to clients. If the "IPv4&IPv6" option is selected, the AP will assign IPv4 and IPv6 addresses to clients. | Default: IPv4 &IP v6 Options: Only IPv4, IPv4&IPv6 |

In AP mode, IPv6 packets are transparently transmitted by default and will not be blocked.

Please note that if you select the IPv4&IPv6 option, faults may occur on a small number of APPs that do not support IPv6.

4.1.4 Clients

- Click "Basics" -> "Clients" to display the current client list:

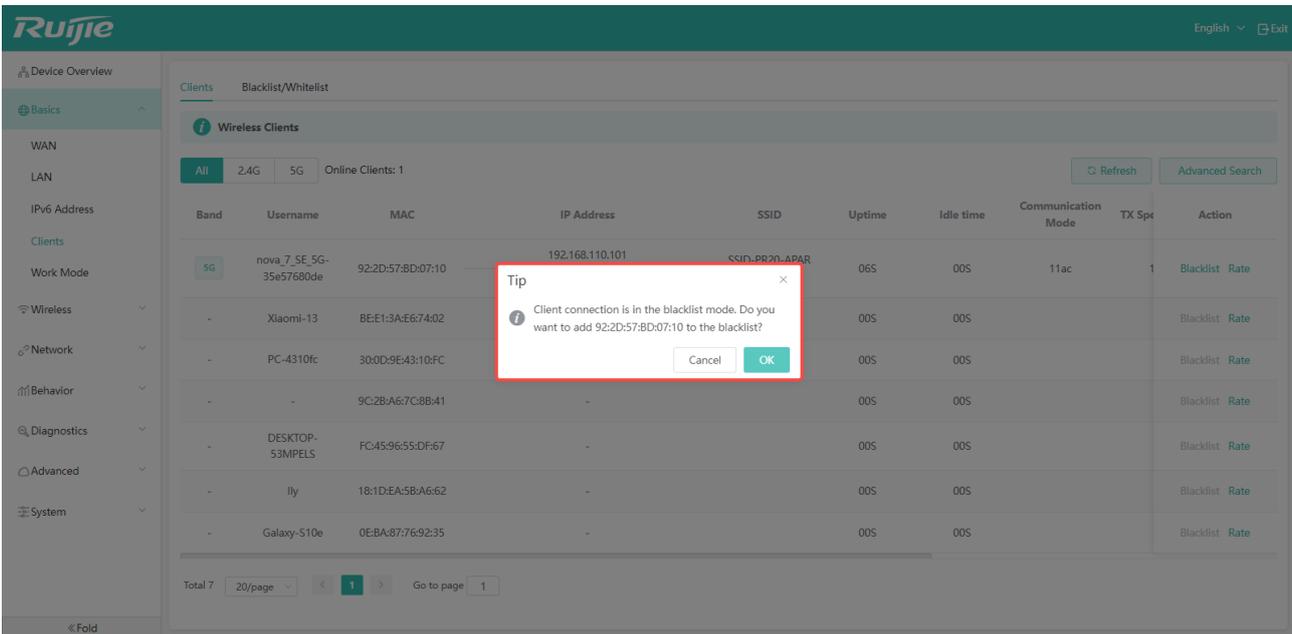


| Items | Description |
|------------------------|---|
| Band | If the client is a wireless client, it will be displayed here whether the client is currently accessing the 2.4G signal or the 5G signal. |
| Username | The host names of some clients, such as PC are displayed here. |
| MAC | The MAC addresses of clients. |
| IP Address | The IP address of clients. |
| SSID | The SSID name associated with the terminal. |
| Uptime | The online duration of the client. |
| Idle Time | The duration of no activity or data transfer. |
| Communication Mode | Wi-Fi standards, such as 802.11a/b/g/n/ac/ax. |
| TX Speed (kbps) | If the client is a wireless client, its sending rate with the unit of Mbps will be displayed here. This value will be updated only by refreshing the page manually. |
| RX (PKTS) | If the client is a wireless client, the number of packets it received will be displayed here. |
| TX (PKTS) | If the client is a wireless client, the number of packets it sent will be displayed here. |
| Signal Intensity (dbm) | If the client is a wireless client, the signal intensity received by the AP from the client will be displayed here. |
| RSSI (dbm) | If the client is a wireless client, its wireless signal strength will be displayed here. RSSI is expressed as a negative number. The larger the number, the stronger the signal strength. |
| Status | Whether the client is currently online. |
| Access | This displays the client's connection type. The possible value displayed here is "wireless". |
| Action | Here you can choose to conduct some simple operations on the client. There are two management actions that can be performed: blacklisting and rate limiting. |
| Refresh | The information on the page will not be updated dynamically. You can press this button to refresh the page to get the latest information. |
| Advanced | If there are too many terminals displayed on the page, you can click the button to search a |

Search device by using its MAC address.

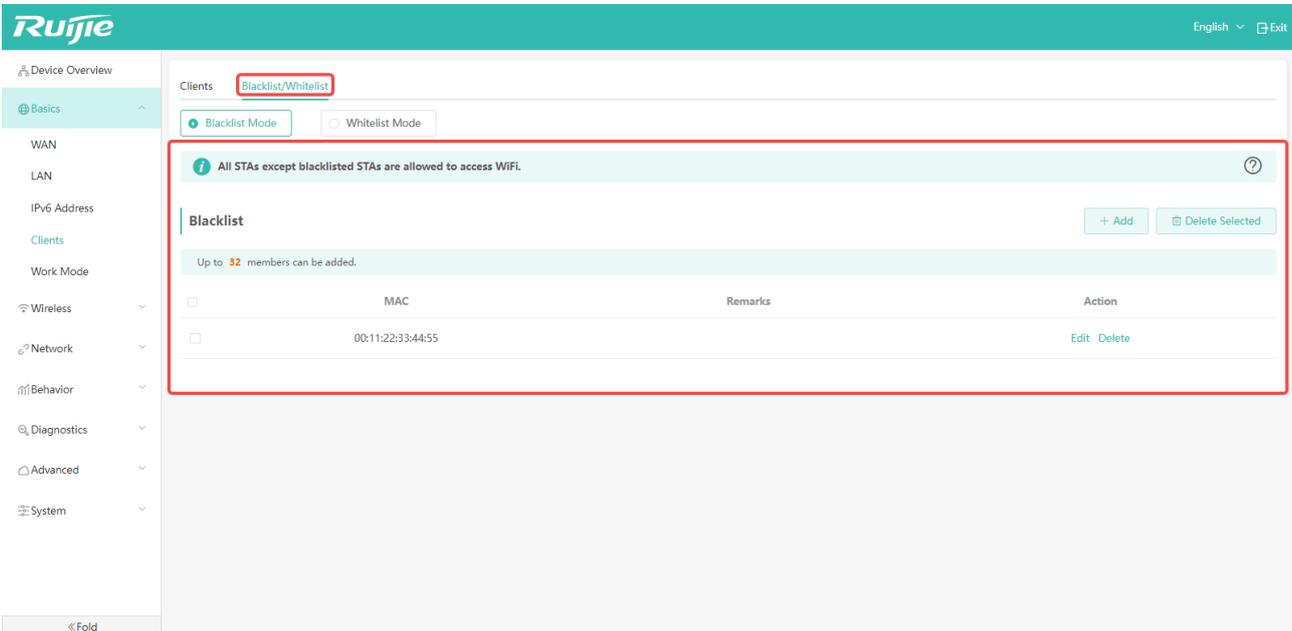
The descriptions of "Blacklist" and "Rate" in Action column are as follows:

- Click "Blacklist" and the following message will appear:

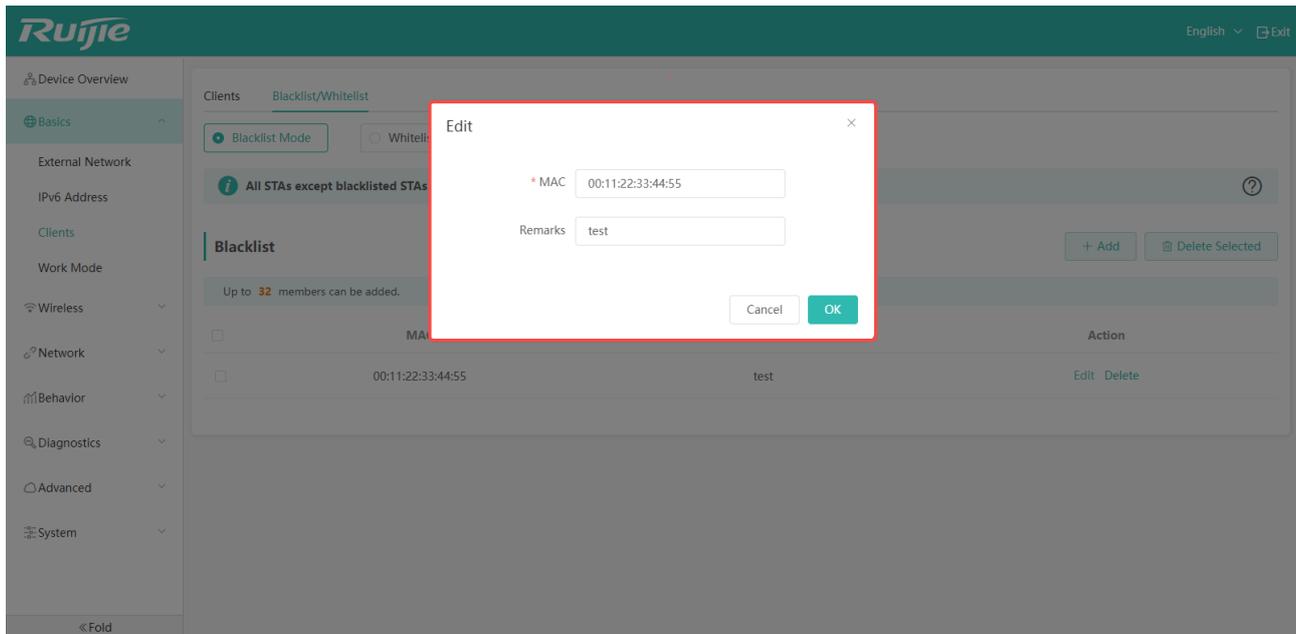


Clients added to the blacklist will not be able to access the AP. For the clients that are whitelisted or blacklisted, you can go to the "Blacklist/Whitelist" page to check the information.

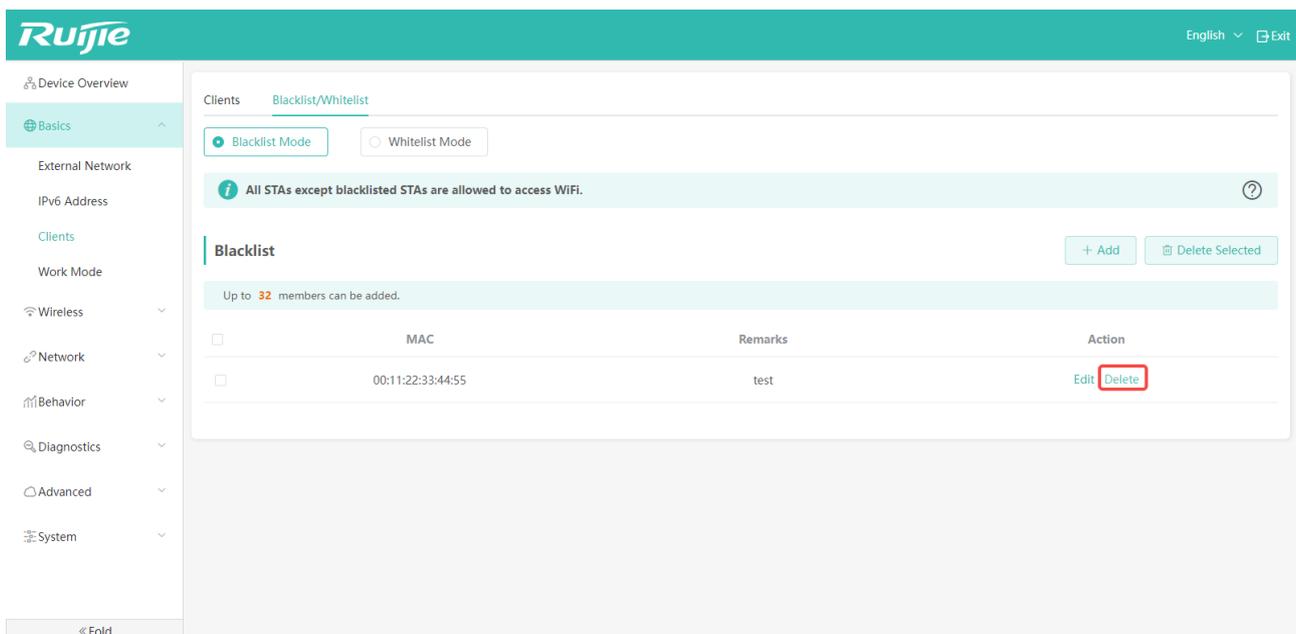
- Click the "Blacklist/Whitelist", you can view the MAC of a client that is blacklisted.



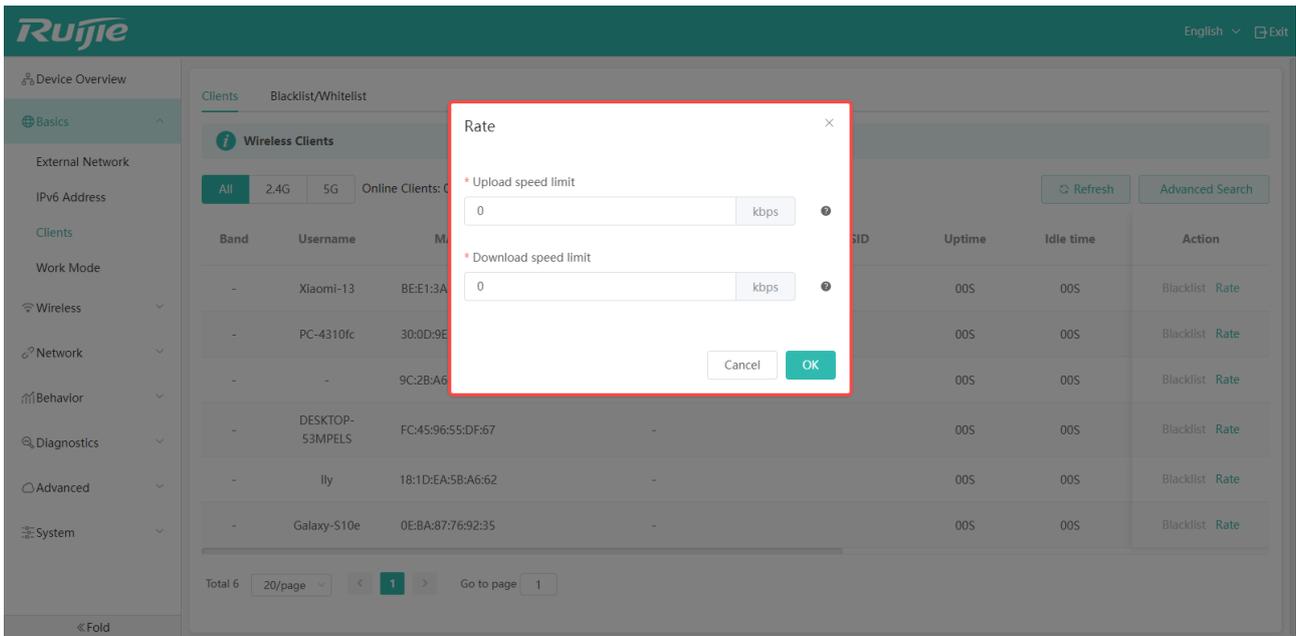
- Click the "Edit" button on the Action column of a client to change the MAC address and the remarks.



- Click "Delete" button in the "Action" column of client to remove the client from the blacklist so that it can connect to the AP normally.



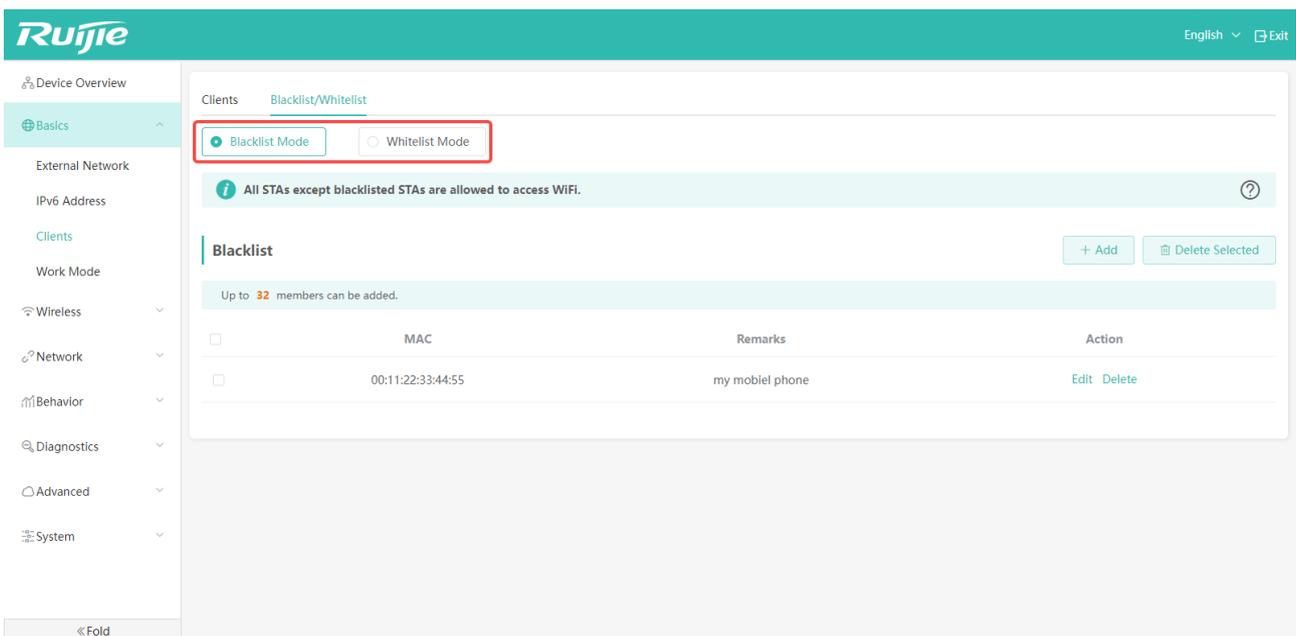
- Click "Rate", and then the following configuration window will appear. In this configuration window, you can configure the uplink and downlink speeds of the clients.

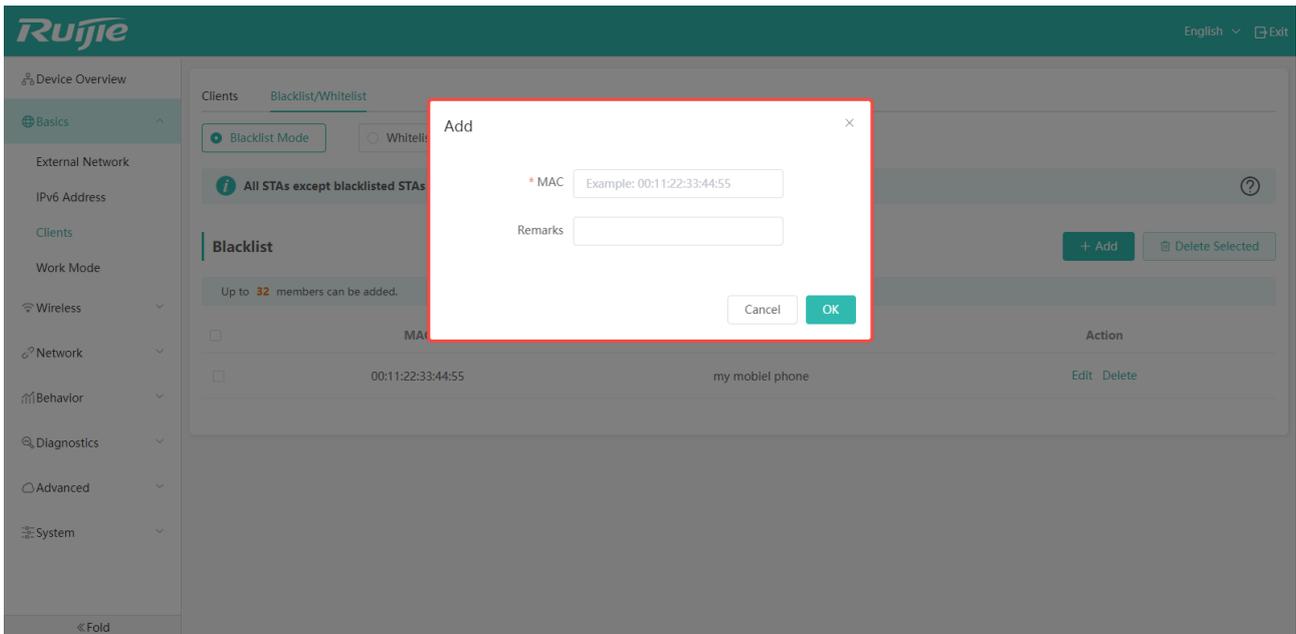


| Items | Description | Defaults / options |
|----------------------|--|---|
| Upload speed limit | Limit the uplink speed of the client. If it is set to 100 kbps, the uplink speed of the client's network will not exceed 100 kbps. | Default: 0, indicating no limit on the uplink rate. |
| Download speed limit | Limit the downlink speed of the client. If it is set to 100 kbps, the downlink speed of the client's network will not exceed 100 kbps. | Default: 0, indicating no limit on the downlink rate. |

■ Blacklist/Whitelist

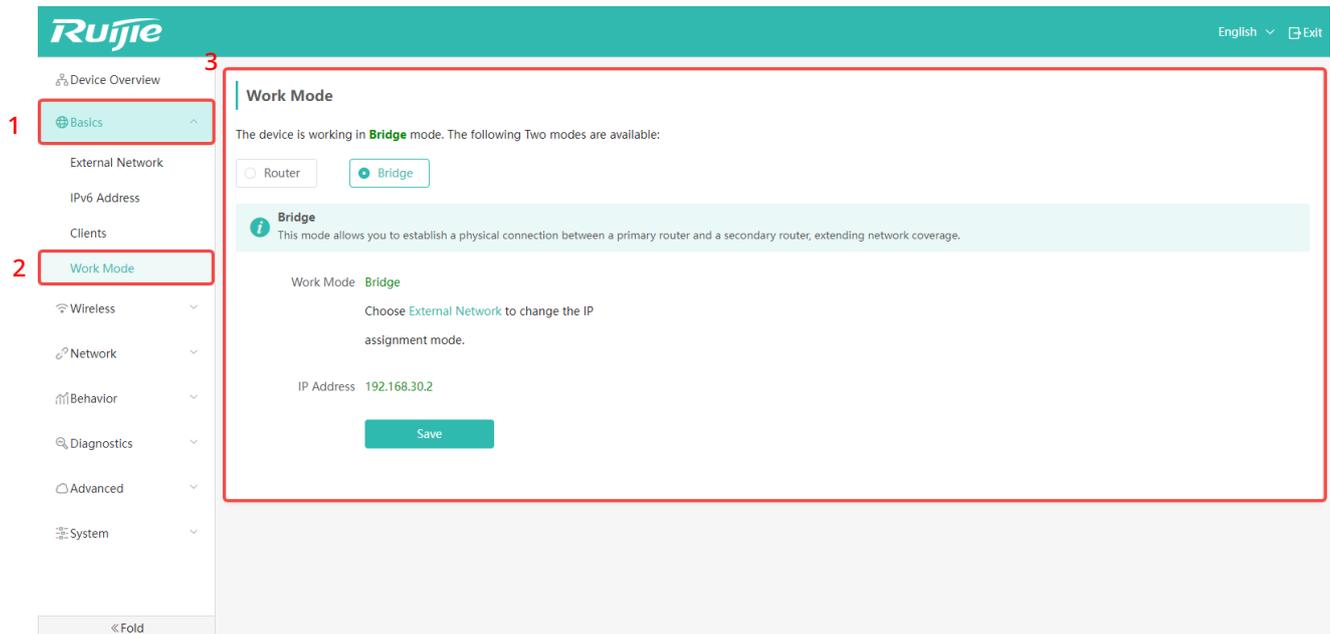
The blacklist and whitelist take effect only on wireless clients. Click the "Add" to add the specified a MAC address to the blacklist or whitelist. Wireless clients whose MAC address is added to the blacklist will not be able to access the AP. You can enter any characters such as "my mobile phone" in the Remark to help you identify the client. The operation of adding a MAC address to the whitelist is the same as that added to the blacklist. When a whitelist is configured, only the terminals with the listed MAC addresses can access the AP.





4.1.5 Mode Switching

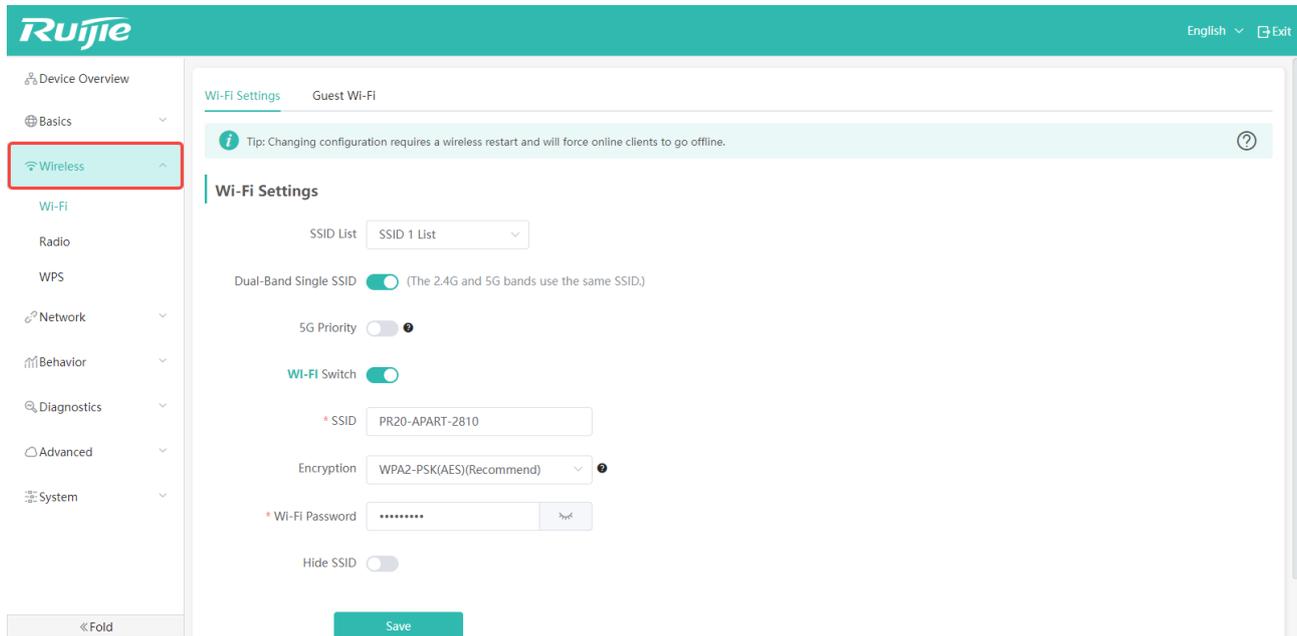
Click "Basics" -> "Work Mode" to switch the working mode.



 For details, please refer to Section 2.5.2 AP Mode, and Section 2.5.3 Routing Mode.

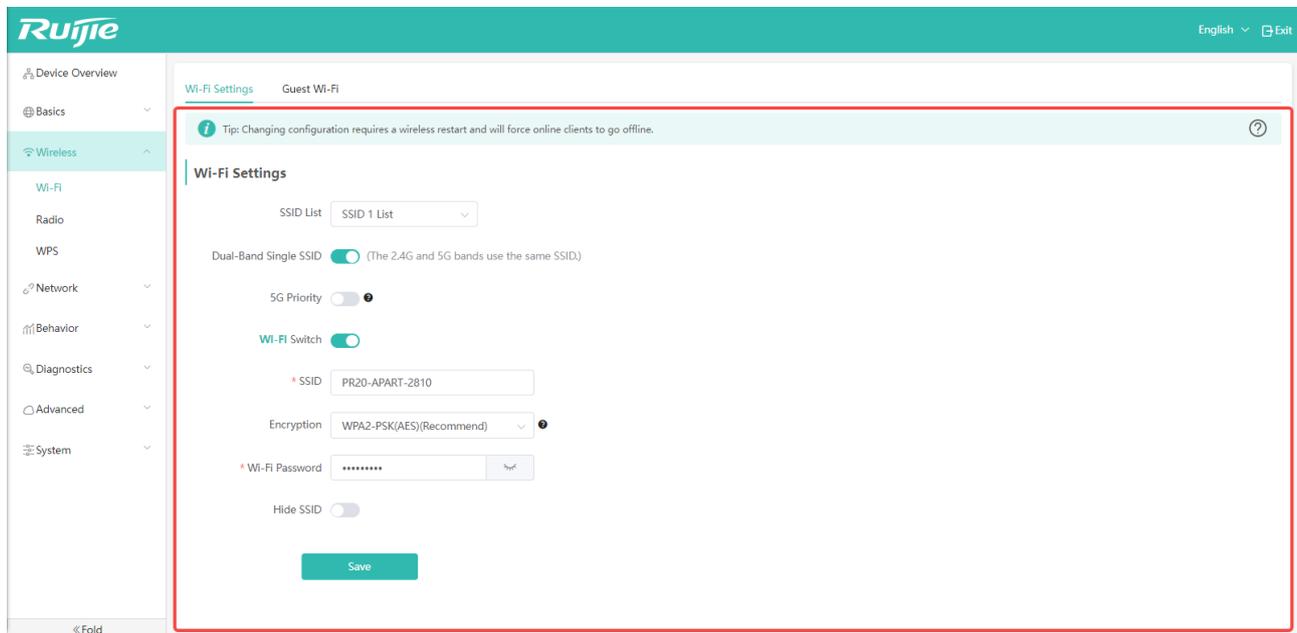
4.2 Wireless Management

Click the "Wireless" -> "Wi-Fi" on the left panel to configure wireless parameters.



4.2.1 Wireless Settings

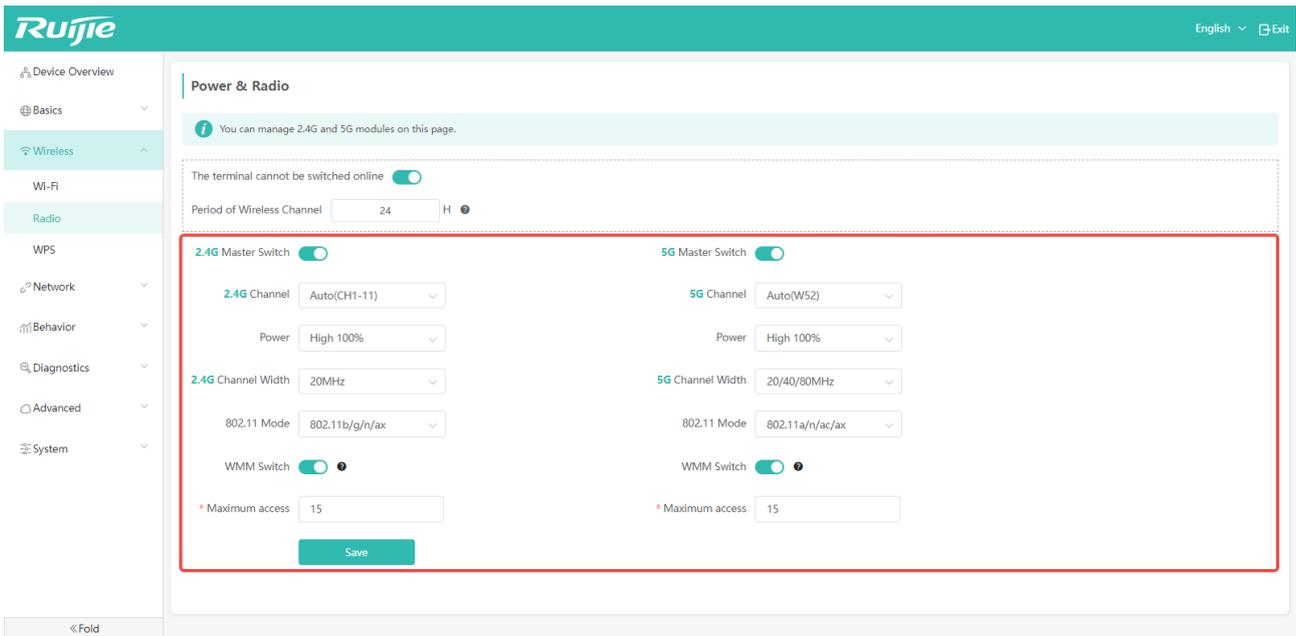
The wireless management page is as shown as follows:



The operations about wireless settings are detailed in Section 2.3 Configuring Wireless SSIDs.

4.2.2 Configuring RF Parameters

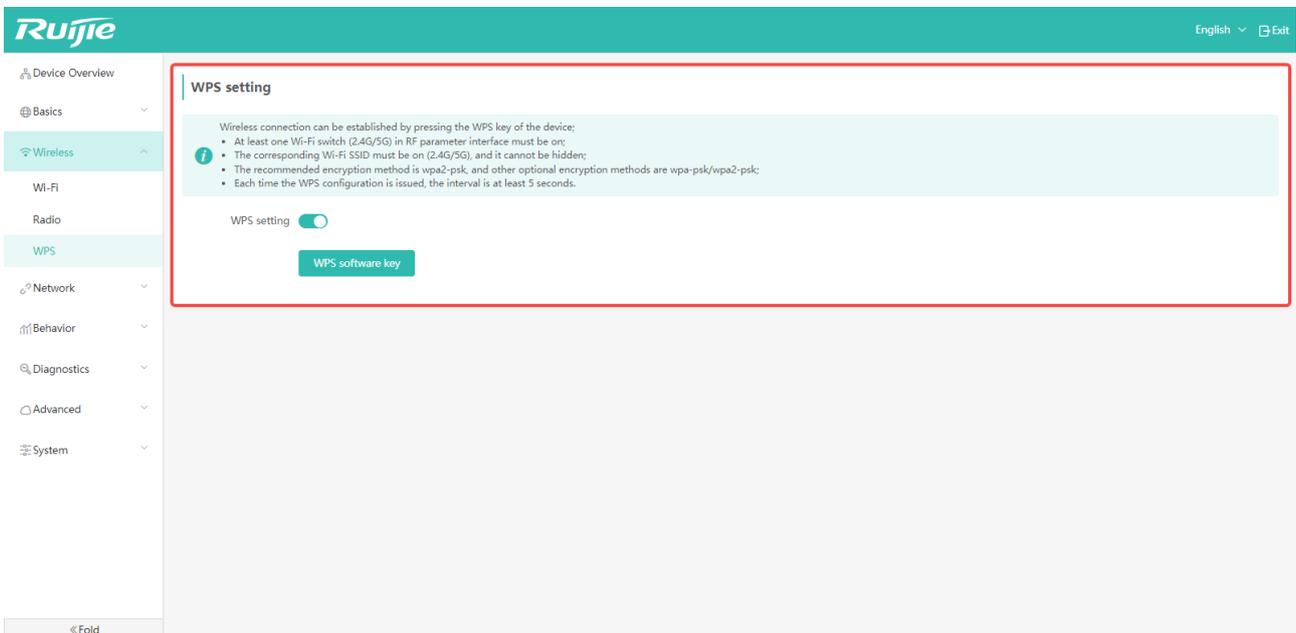
The configuration page of RF is shown as follows:



The operations about RF settings are detailed in Section 2.4 Configuring RF Parameters.

4.2.3 WPS

Currently, WPS (Wi-Fi Protected Setup) can be configured only via the PBC (Push Button Configuration). Press and hold the WPS button for 2 seconds or click “WPS software key” to allow terminals that support WPS to access the AP without entering a password.



4.3 Network Management

4.3.1 VLAN

After configuring the VLAN ID for wired ports and SSIDs, only packets with this VLAN tag can be forwarded.

| Items | Description | Defaults / options |
|------------|---|-------------------------------------|
| WAN | Configure a VLAN tag for the WAN port. | Default: Untagged Range : 1-4094 |
| LAN1 | Configure a VLAN tag for the first LAN port. | Default: Untagged Range : 1-4094 |
| LAN 2 | Configure a VLAN tag for the second LAN port. | Default: Untagged Range : 1-4094 |
| SSIDxxxxxx | Configure a VLAN tag for a specified SSID. | Default: Untagged Range : 1-4094 |

4.4 Behavior Management

4.4.1 Access Control

You can restrict specific devices to access specific websites according to your needs. If you want to prevent a device from accessing a website, you can set the control type to blacklist. If you want a device to be able to access only specified websites, you can set the control type to whitelist.

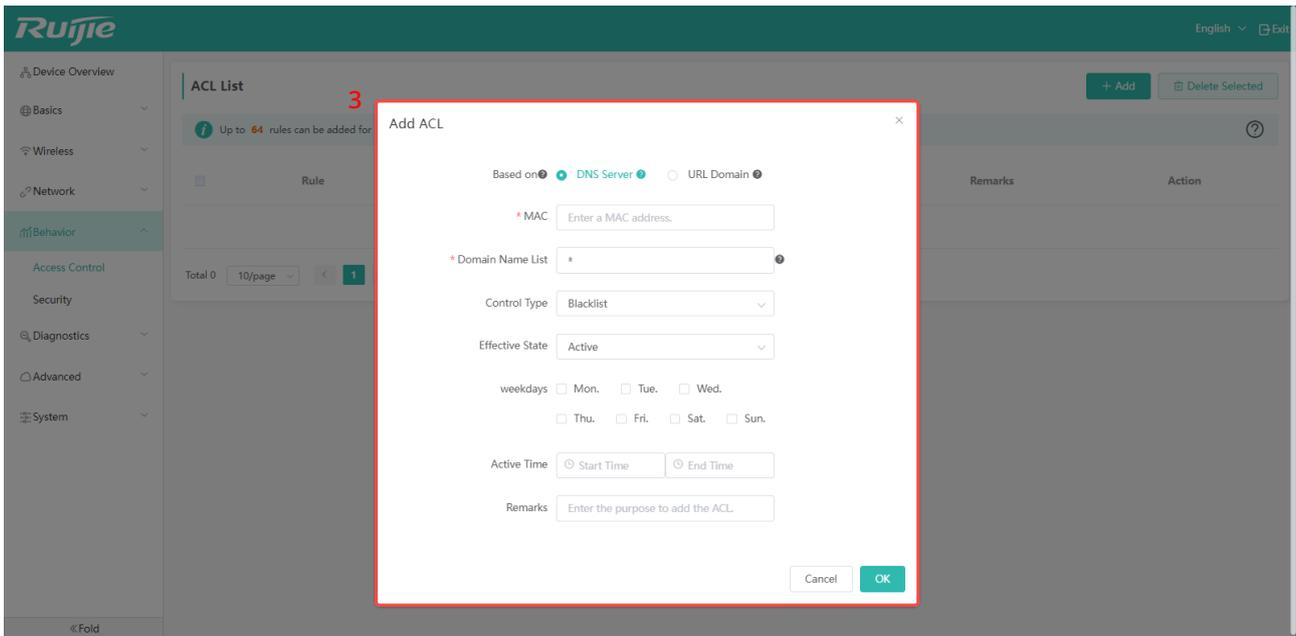
- The specific operations are as follows:

Step 1: Click "Behavior" -> "Access Control"

Step 2: Click the "Add" to add a ACL.

The screenshot displays the Ruijie web-based configuration interface. On the left sidebar, the 'Behavior' menu is expanded, and 'Access Control' is highlighted with a red box and a red '1'. The main content area shows the 'ACL List' page. At the top right of the main area, there is a red '2' and a red box around the '+ Add' button. Below this, a message states: 'Up to 64 rules can be added for access control: 32 based on domain name and 32 on URL.' The table below has columns: Rule, Control Type, Effective Week, Start and End Time, Effective State, Remarks, and Action. The table currently shows 'No Data'. At the bottom of the table, there is a pagination control showing 'Total 0', '10/page', and 'Go to page 1'.

Step 3: Then, enter the configuration page.



| Items | Description | Defaults/Options |
|------------------|---|---|
| Based on | <p>Specify the rule to be based on DNS server or URL domain. The implementation principles of these two methods are different.</p> <p>Based on DNS server: When the rule is set to be filtered based on DNS, the system will resolve the DNS request of a client. If the request asks for the configured address, the rule will take effect.</p> <p>Based on URL domain: When the rule is set to be filtered based on URL domain, the system will resolve the URL visited by the client. If the URL accessed by the client is the configured URL, the rules will take effect.</p> | <p>Default: Based on DNS Server</p> <p>Options: Based on DNS Server or URL Domain</p> |
| MAC | Specify the MAC address of the device to be controlled. | Default: N/A |
| Domain Name List | <p>If the rule is based on the DNS address, you can enter a domain name list string to clarify the domain name to which the rule applies. A device in the blacklist cannot access the domain name even though its DNS addresses is matched. A device in the whitelist that matches this rule can only access the domain name configured. If you want the rule to match all URLs/addresses, enter * .</p> <p>If the rule is based on the domain names of URLs, you can enter the URL string to clarify the URL to which the rule applies. In this way,</p> | <p>Default: *</p> <p>* means matching all URLs and addresses.</p> |

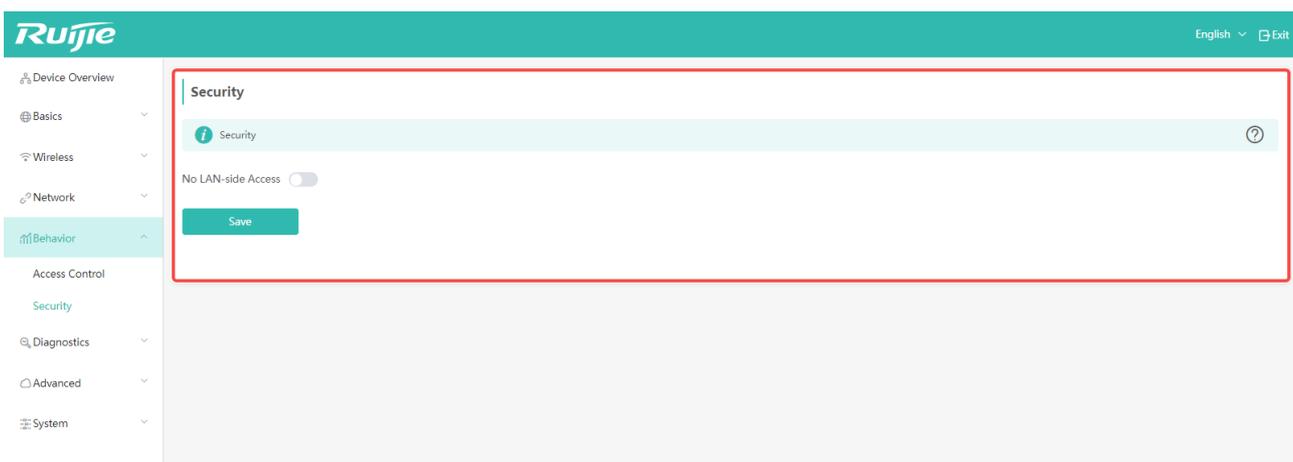
| | | |
|-----------------|---|--|
| | the devices in the blacklist that match this rule cannot access the URL, and the devices in the whitelist that match this rule can only access the URL. If you want the rule to match all URLs/ addresses , enter *. | |
| Control Type | Select whether to add the domain name of the rule to the blacklist or whitelist. Blacklist: Devices are not allowed to access domain names in the blacklist. Whitelist: Devices are only allowed to access domain names in the whitelist. | Default: Blacklist Options: Blacklist/Whitelist |
| Effective State | Make the rule active or inactive. | Default: Active Options: Active/Inactive |
| Weekdays | Select the day(s) of the week on which the rule will be enabled. | Default: N/A Option: Support to select any day in a week. |
| Active Time | Select the time period for this rule to take effect. | Default : N/A |
| Remarks | Notes can be added to identify the purpose of the rule. | Default : N/A |

 Up to 64 rules can be configured, including 32 DNS-based rules and 32 URL-based rules.

4.4.2 Security

- Bridge Mode

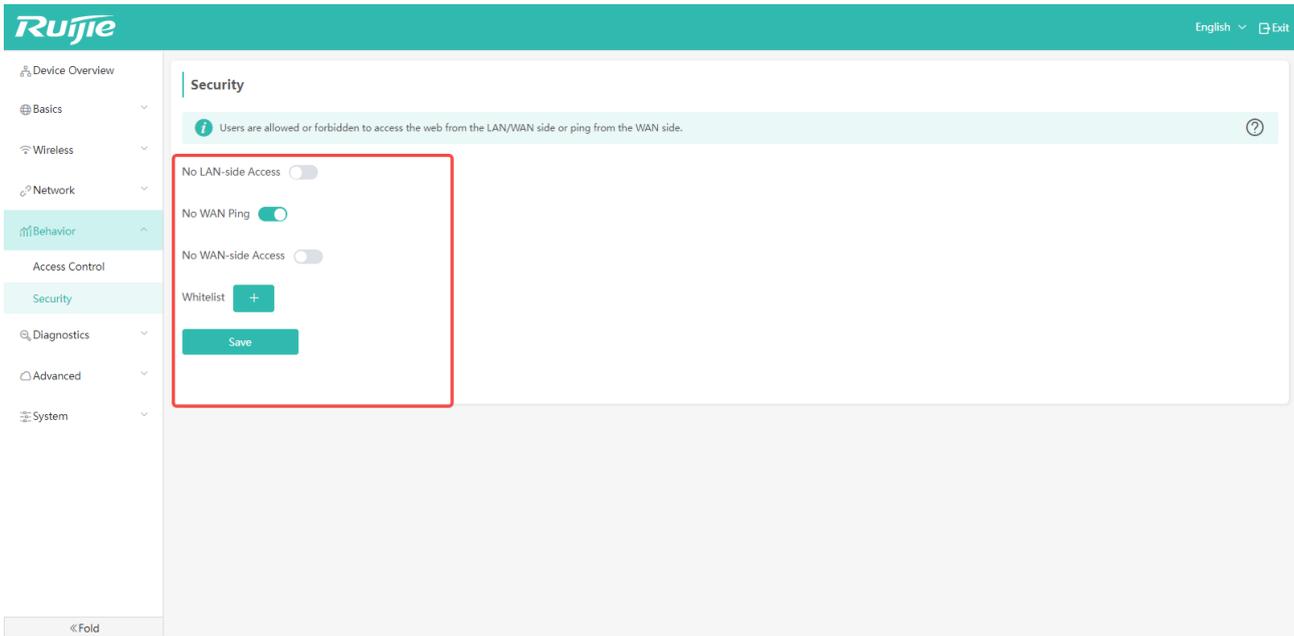
If you do not want the terminals on LAN side to access the Web of the AP, you can click “Behavior” -> “Security” to enable “No LAN-side Access”.



| Items | Description | Defaults /Options |
|--------------------|--|---|
| No LAN-side Access | When it is enabled, the client cannot access the device's Web from the LAN side. | Default: Disabled Option: Enabled/Disabled |

● Routing Mode

In routing mode, apart from the security settings for accessing the WEB from the LAN side, you can also set the switch for accessing the WEB from the WAN side to prevent external access and attacks on the AP.



| Items | Description | Defaults /Options |
|--------------------|--|---|
| No LAN-side Access | When it is enabled, the client cannot access the device's Web from the LAN side. | Default: Disabled Options: Enabled/Disabled |
| No WAN Ping | When it is enabled, the client cannot ping the device successfully from the WAN side. | Default: Enabled Options: Enabled/Disabled |
| No WAN-side Access | When it is enabled, the client cannot access the Web from the WAN side. | Default: Disabled Options: Enabled/Disabled |
| Whitelist | In routing mode, if the "No WAN-side Access" is enabled, addresses in the whitelist can still access the device Web through the WAN port. The first address in the whitelist is still valid after reset. | Default: N/A Up to four IP addresses or IP address ranges can be configured. |

In routing mode, because the "No WAN-side Access" function is enabled by default, and no default IP address is configured on the "Whitelist", any IP address will not be able to access the AP from the WAN side.

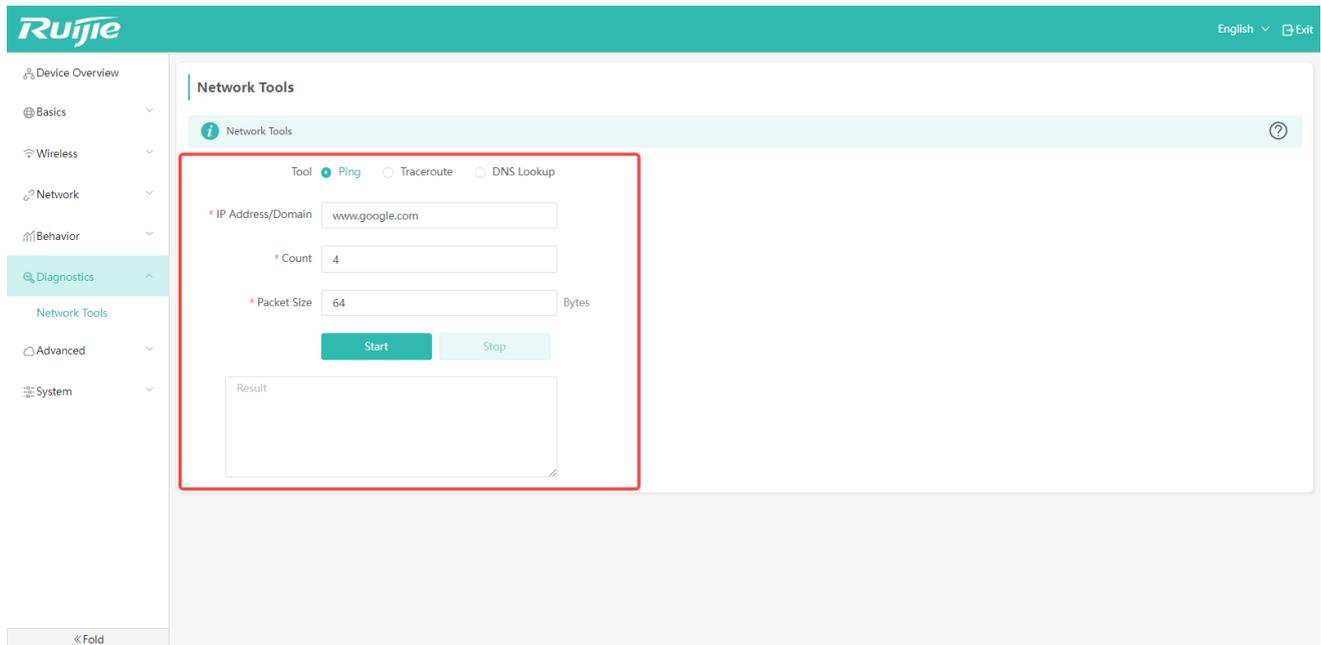
"After the device is reset, the default IP address range stays unchanged, and WAN ping and WAN-side access are allowed." means that after setting the IP address or range, the AP can still retain it after restoring the factory settings.

4.5 Diagnostics

4.5.1 Network Tools

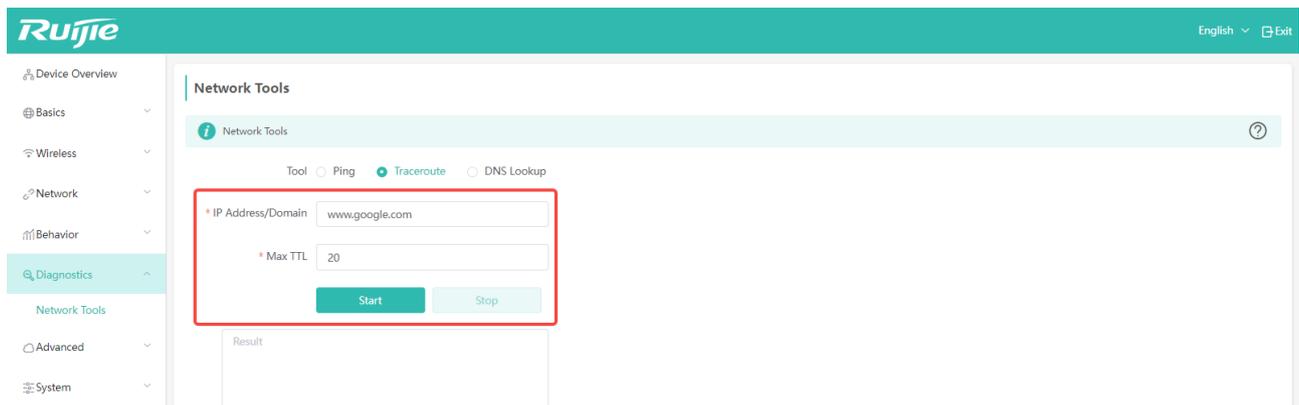
When the network disconnection occurs, you can use three diagnostic tools to check the network status: Ping, Traceroute, and DNS Lookup. Ping is generally used.

■ Ping



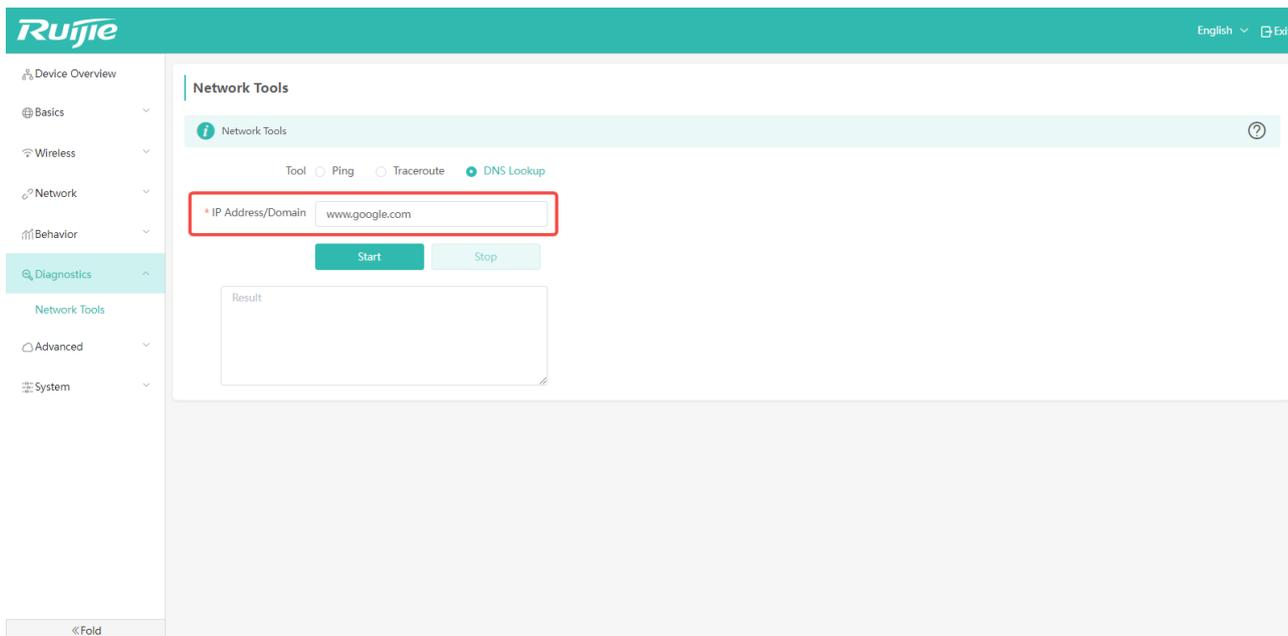
| Items | Description | Defaults /Options |
|-------------------|---|--|
| IP Address/Domain | Specify an IPv4 address or a domain name used to be tested. | Default: <u>www.google.com</u> Support modifying the IP address or the domain name. |
| Count | Set the number of times to send packets. | Default: 4 times Options: 1-50 times |
| Packet Size | Set the size of the packet to be sent. | Default: 64 bytes Options: 4-1472 bytes |

■ Trace Route:



| Items | Description | Defaults/Options |
|-------------------|---|---|
| IP Address/Domain | Specify an IPv4 address or a domain name used to be tested. | Default: www.google.com Support modifying the IP address or the domain name. |
| Max TTL | Specify the maximum value of TTLs for ICMP messages. | Default: 20 hops Options: 1~30 hops |

■ DNS Lookup:



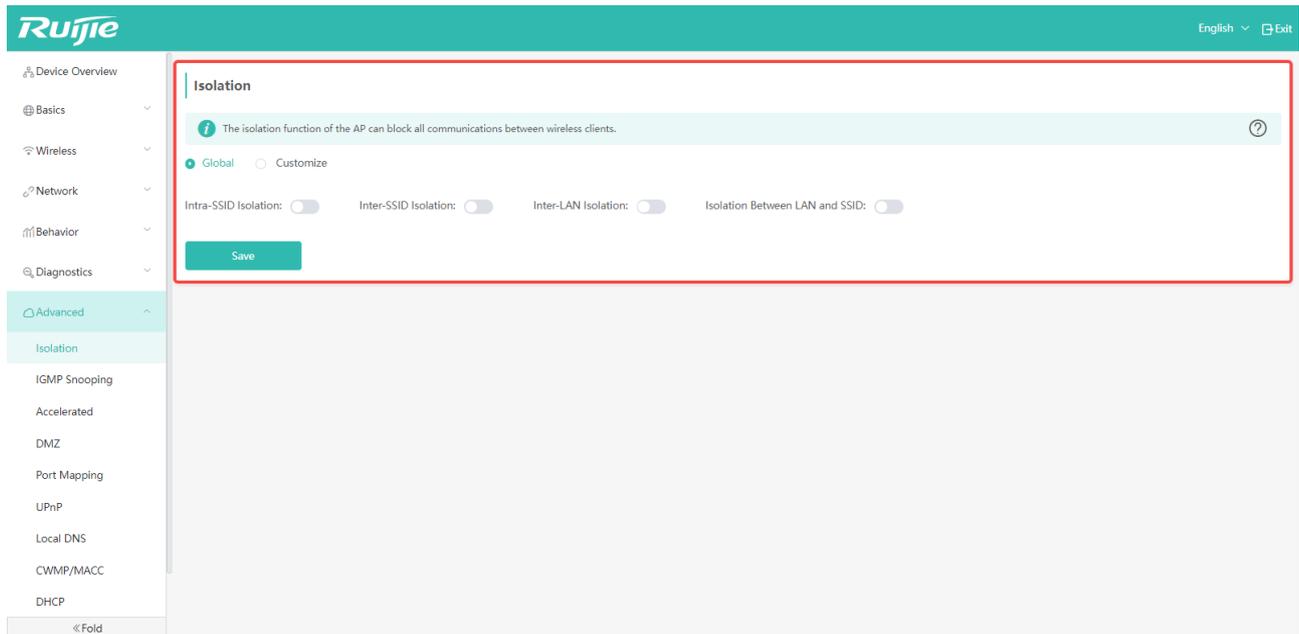
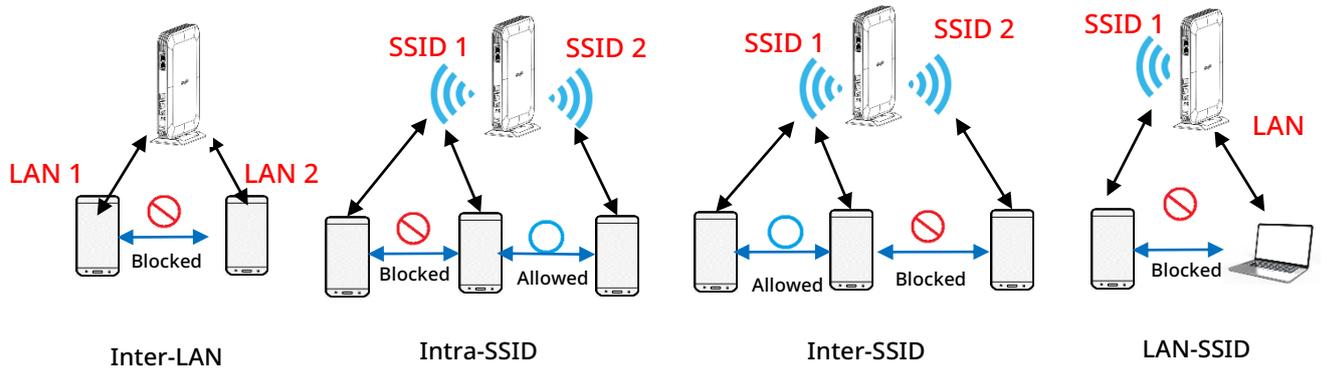
| Items | Description | Defaults/Options |
|-------------------|--|--|
| IP Address/Domain | Specify an IPv4 address or a domain name to be tested. | Default : www.google.com Support modifying the IP address or the domain name. |

5 Advanced Management

5.1 User Isolation

User isolation feature can prevent users on a local Wi-Fi network from communicating with each other to ensure network security and block inadvertent data transmission. It can identify some special users that are allowed to communicate with each other via their usernames and MAC addresses. This feature is disabled by default. If you want to use it, please enable it manually.

Four working modes of user isolation:

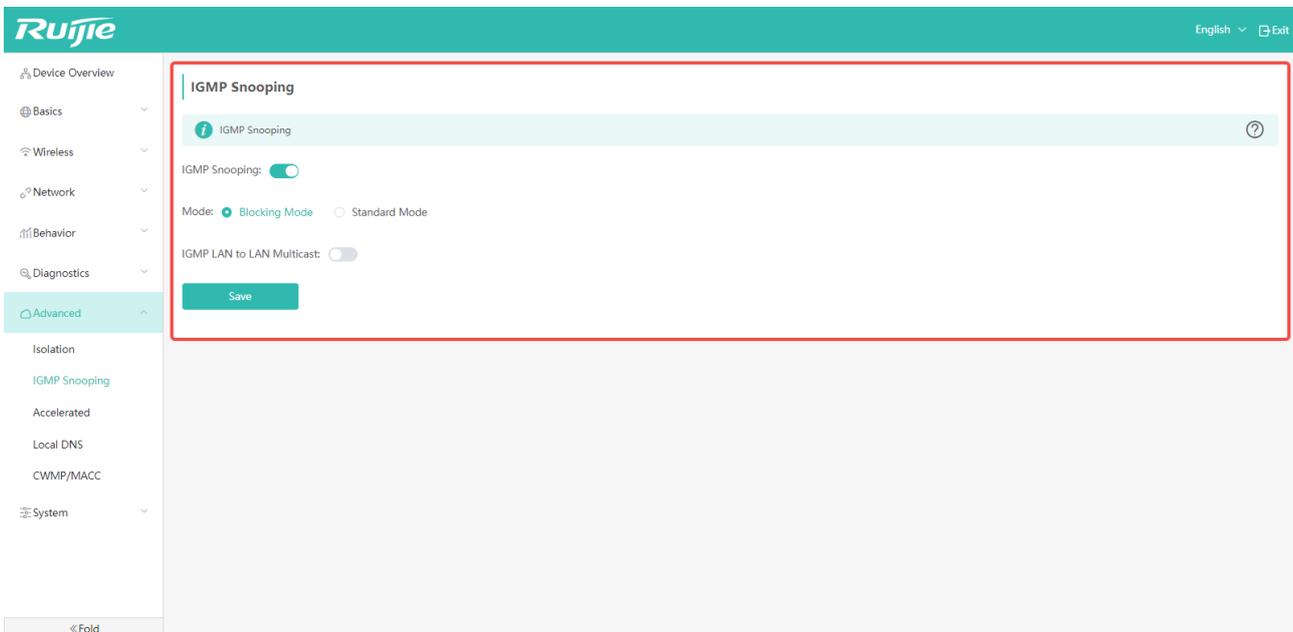


| Items | Description | Defaults/Options |
|----------------------|--|--|
| Intra-SSID Isolation | Indicate the Intra-SSID isolation mode. When it is enabled, users connected to the same SSID cannot communicate with each other. | Default: Disabled Options: Enabled/Disabled |
| Inter-SSID Isolation | Indicate the Inter-SSID isolation mode. When it is enabled, users connected to the different SSIDs cannot communicate with each other. | Default: Disabled Options: Enabled/Disabled |
| Inter-LAN Isolation | Indicate the Inter-LAN isolation mode. When it | Default: Disabled |

| | | |
|--------------------------------|---|--|
| | is enabled, users connected to the different LAN ports cannot communicate with each other. | Options: Enabled/Disabled |
| Isolation Between LAN and SSID | Indicate the LAN-SSID isolation mode. When it is enabled, the traffic of the AP's LAN port will be separated from the that of the Wi-Fi network (SSID), so that users connected to the LAN port and users connected to the SSID cannot communicate with each other. | Default: Disabled Options: Enabled/Disabled |

5.2 IGMP Snooping

If Internet Group Management Protocol (IGMP) snooping is enabled in your network environment, it can help to control the broadcast of IGMP messages to avoid affecting other terminals. By default, the IGMP snooping is enabled on the device.

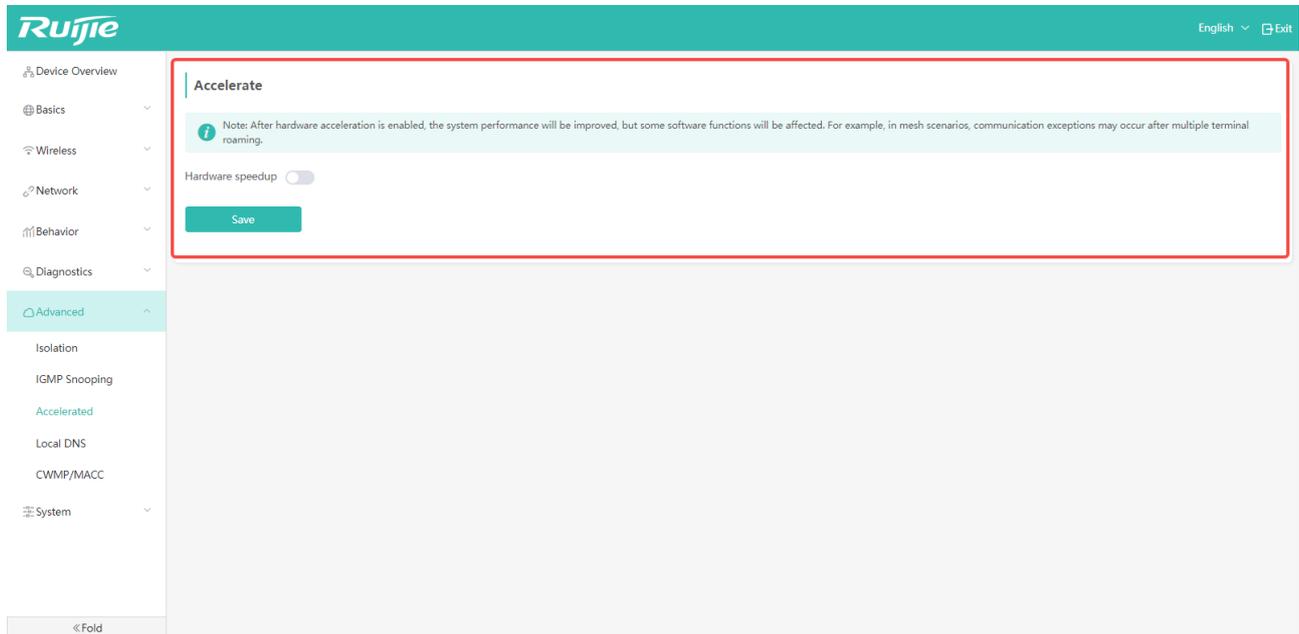


| Items | Description | Defaults/Options |
|---------------|---|--|
| IGMP Snooping | Indicate the switch of enabling or disabling the IGMP Snooping. When it is disabled, IGMP messages can be broadcasted in the LAN. When it is enabled, IGMP messages cannot be broadcasted in the LAN network. | Default: Enabled. Options: Enabled/Disabled |
| Mode | When IGMP Snooping is enabled, specify its mode. There are two modes available: Blocking Mode: In this mode, IGMP messages are blocked in the LAN by default. Only when a client joins a broadcast group can the corresponding IGMP message be sent to the LAN port where the client is located. | Default: Blocking Mode Options: Blocking Mode/Standard mode |

| | | |
|----------------------------------|--|---|
| | <p>Standard Mode: In this mode, IGMP messages are broadcasted to all LAN ports by default. Only when a client joins a certain broadcast group can the corresponding IGMP message be sent to the LAN port where the client is located, instead of broadcasting to all LAN ports.</p> | |
| <p>IGMP LAN to LAN Multicast</p> | <p>Generally speaking, the IGMP source messages come from the WAN port. By default, IGMP source messages on the LAN port will not be affected by IGMP Snooping function. But with its feature enabled, IGMP Snooping also takes effect on the IGMP source messages from the LAN ports.</p> | <p>Default: Disabled. Options: Enabled/Disabled</p> |

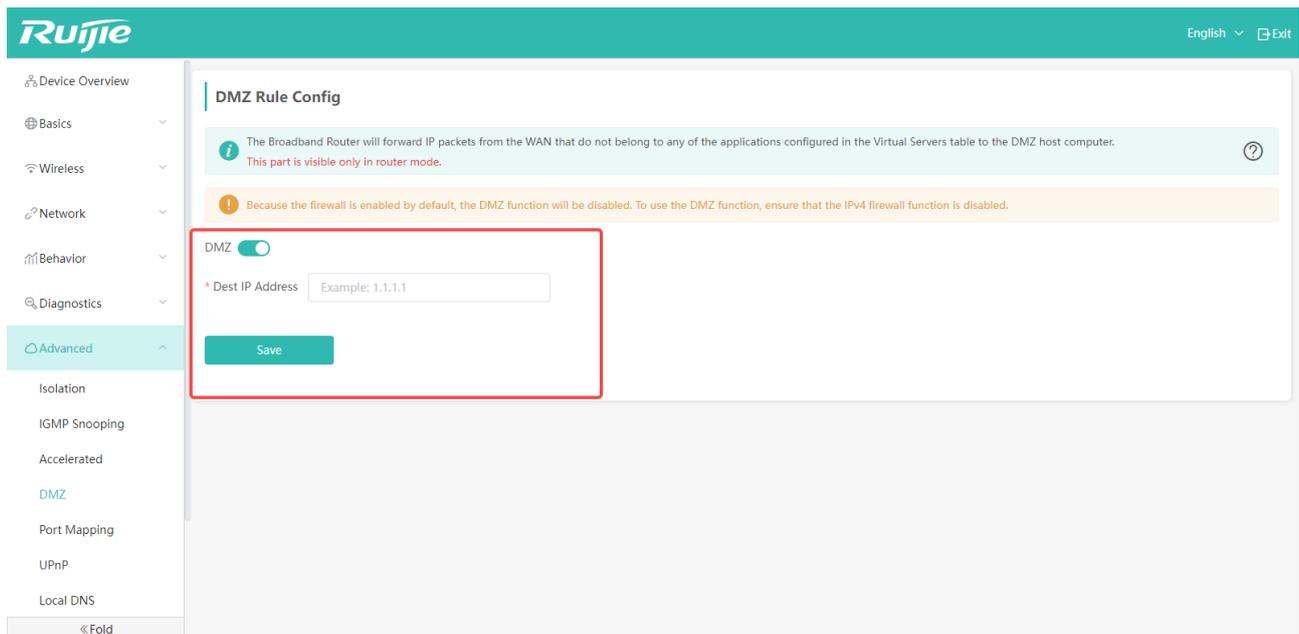
5.3 Acceleration Settings

When the hardware acceleration is enabled, the overall performance of the device will be improved, but some software functions will be affected.



5.4 DMZ (Routing Mode)

If you set up a server on an internal network, such as an FTP server, and want to access the server from an external network, you can use the DMZ function to specify the host on the internal network to enable all ports to be accessed from the external network.



| Items | Description | Defaults/Options |
|-------|---|--------------------|
| DMZ | Enable or disable DMZ function. Only when it is | Default: Disabled. |

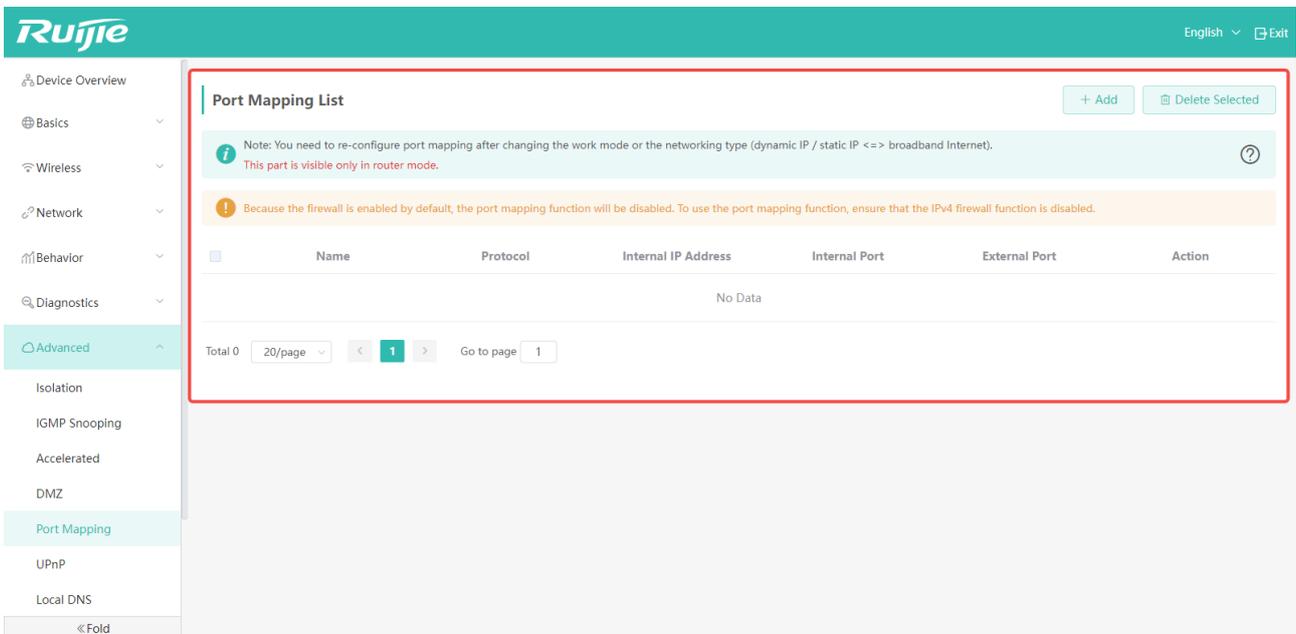
| | | |
|------------------------|--|---|
| | enabled can the IP address of the host be configured. | Options: Enabled/Disabled |
| Destination IP Address | After the DMZ function is enabled, specify the IP address of the DMZ host in the internal network. After configuration, AP will use the IP address of WAN port as the external IP address by default . | Default: N/A Specify the IPv4 address of the DMZ host. |

5.5 Port Mapping (Routing Mode)

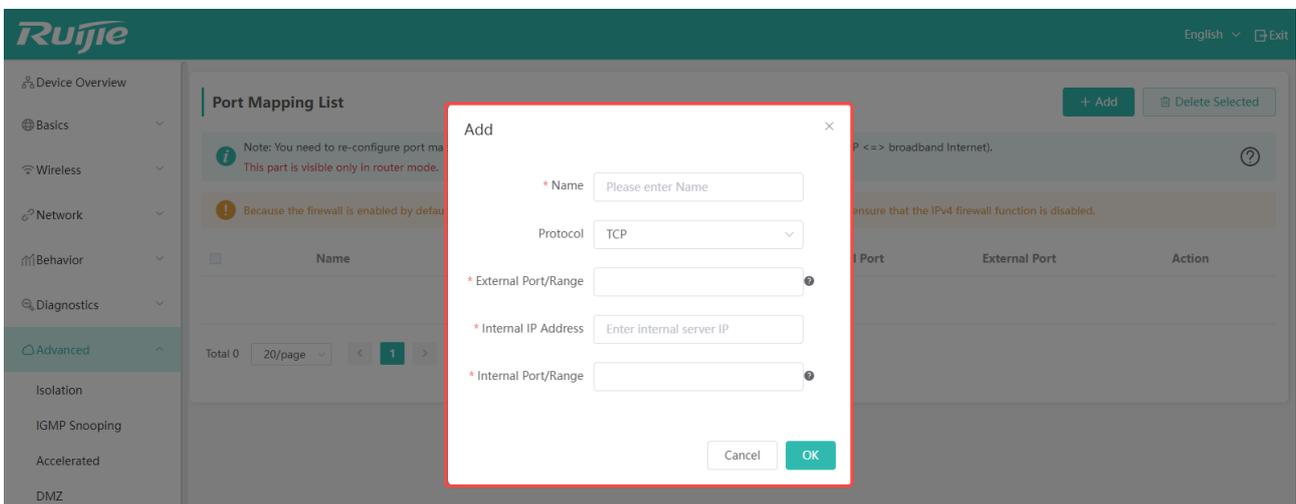
Normally, the host of an internal network cannot be accessed from an external network. However, if the port mapping is enabled, users can access the host from the external network.

Port mapping maps the host IP address n port of an external network to a device in the local area network to provide corresponding services. When a user accesses the port of this IP, the server automatically maps the request to the device in the local area network.

Click "Advanced" -> "Port Mapping" to go to setting page.



Click "Add" to add a port mapping entry.

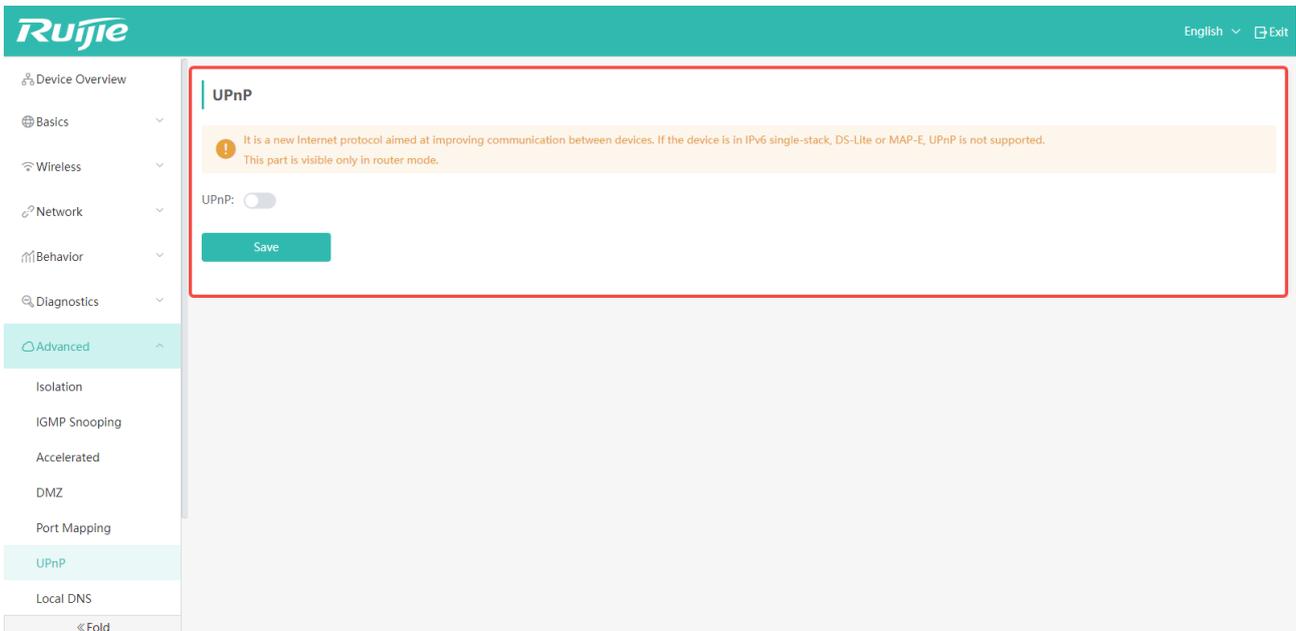


| Items | Description | Defaults/Options |
|---------------------|---|--|
| Name | Set a rule name. | Default: N/A |
| Protocol | Specify a protocol. | Default: TCP Options: TCP and UDP |
| External Port/Range | Specify the port number to be mapped to the external network. By default, the IPv4 address of the external network is the IP address the WAN port. | Default: N/A Port Number Range: 1-65535 |
| Internal IP Address | Specify the IPv4 address to be mapped to the external network. | Default : N/A |
| Internal Port/Range | Specify the port number to be mapped to the internal network. | Default: N/A Port Number Range: 1-65535 |

⚡ It should be noted that after changing the working mode or network type (such as changing the dynamic IP to the static IP), you need to reconfigure the port mapping.

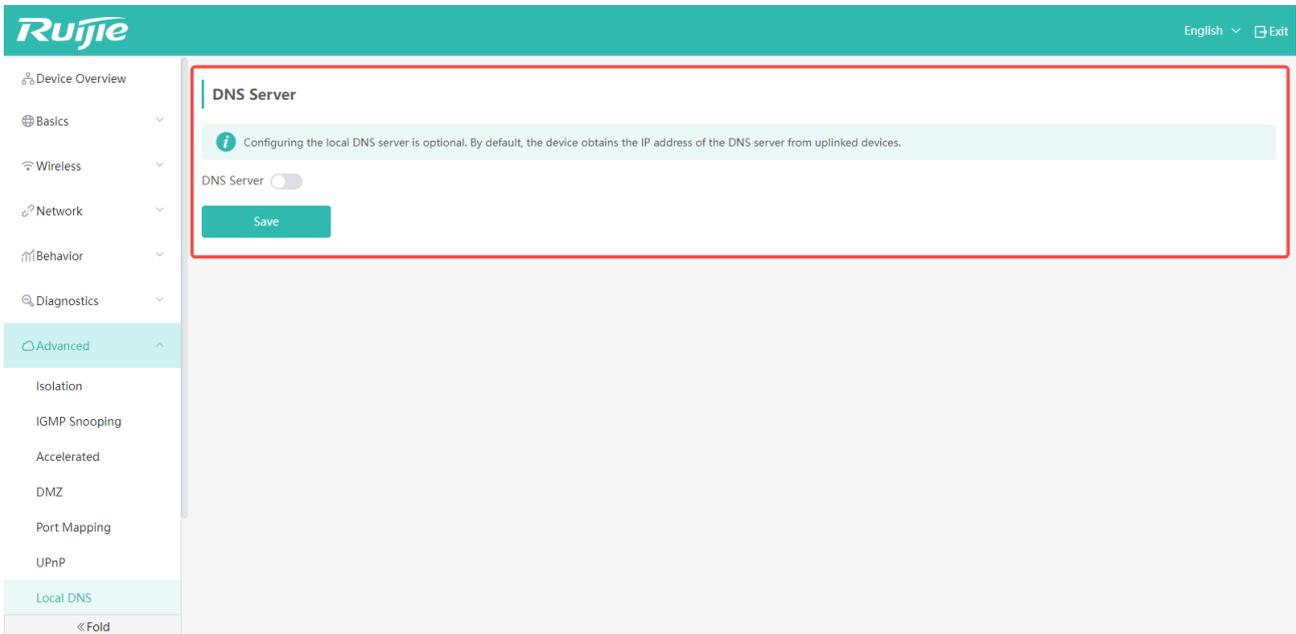
5.6 UPnP (Routing Mode)

The main function of UPnP (Universal Plug and Play) is to automatically install and configure a network device. With the UPnP, devices can share resources within the LAN.

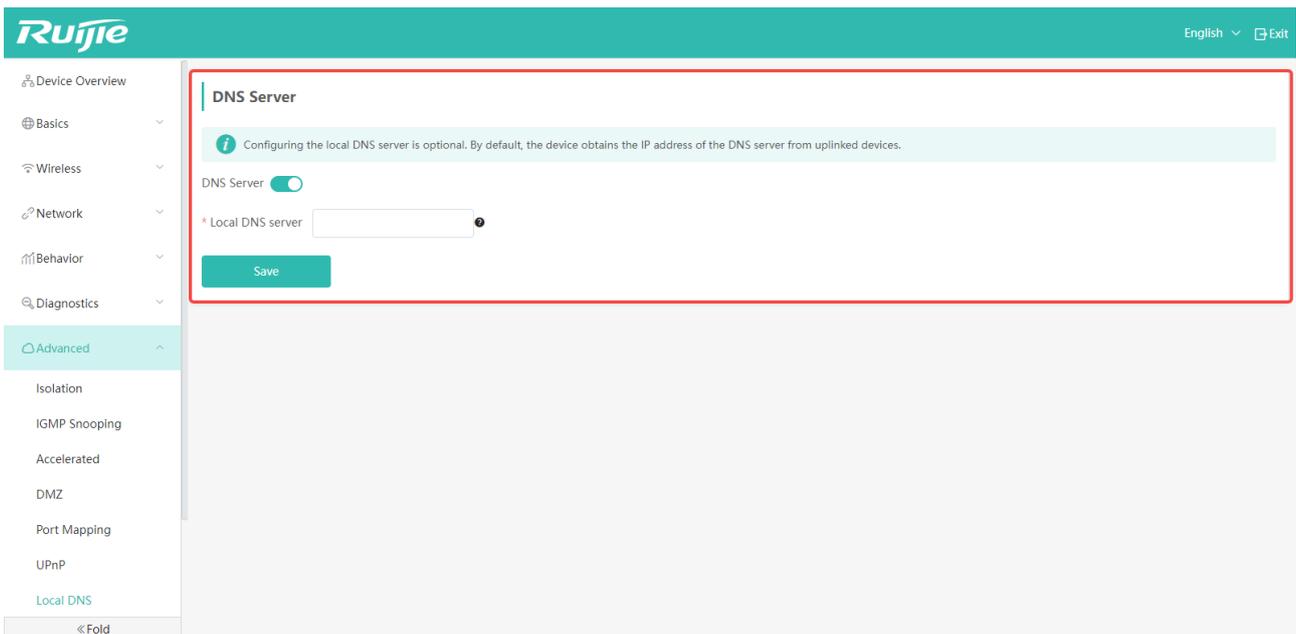


5.7 DNS Server

If you want to use a specific DNS server, you can set it on this page. Usually the DNS server address used by the AP is automatically obtained from its uplink network.



| Items | Description | Defaults/Options |
|-----------|--|--|
| DNS Sever | When it is enabled, you can specify the local DNS server address for the AP, so that the AP will not use the address automatically obtained from its uplink network. | Default: Disabled. By default, the DNS address is not specified, but automatically obtained from its uplink network. Options: Enabled/Disabled |



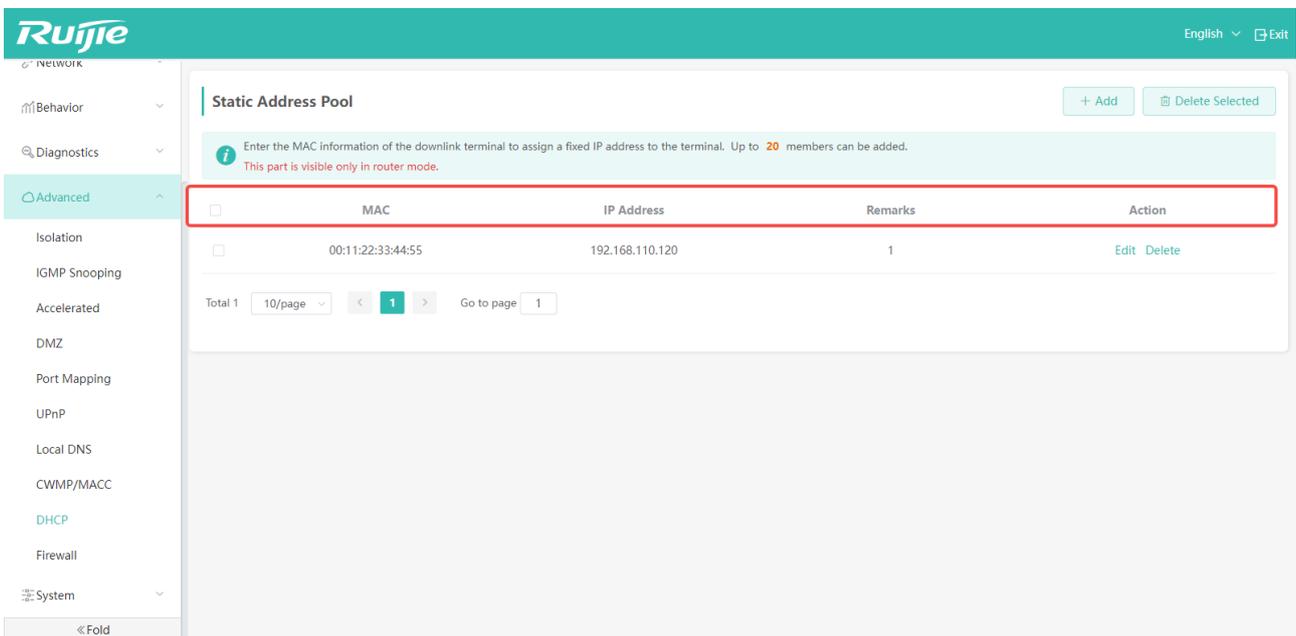
After it is enabled, you can enter the DNS server address.

| Items | Description | Defaults/Options |
|------------------|---|---|
| Local DNS Server | Manually specify the address of DNS Server. | Default: N/A. The DNS server address is automatically assigned by the uplink network . |

⚡ It should be noted that before configuration, please ensure that the DNS Server to be configured is working normally, otherwise it may fail to access the Internet.

5.8 DHCP (Routing Mode)

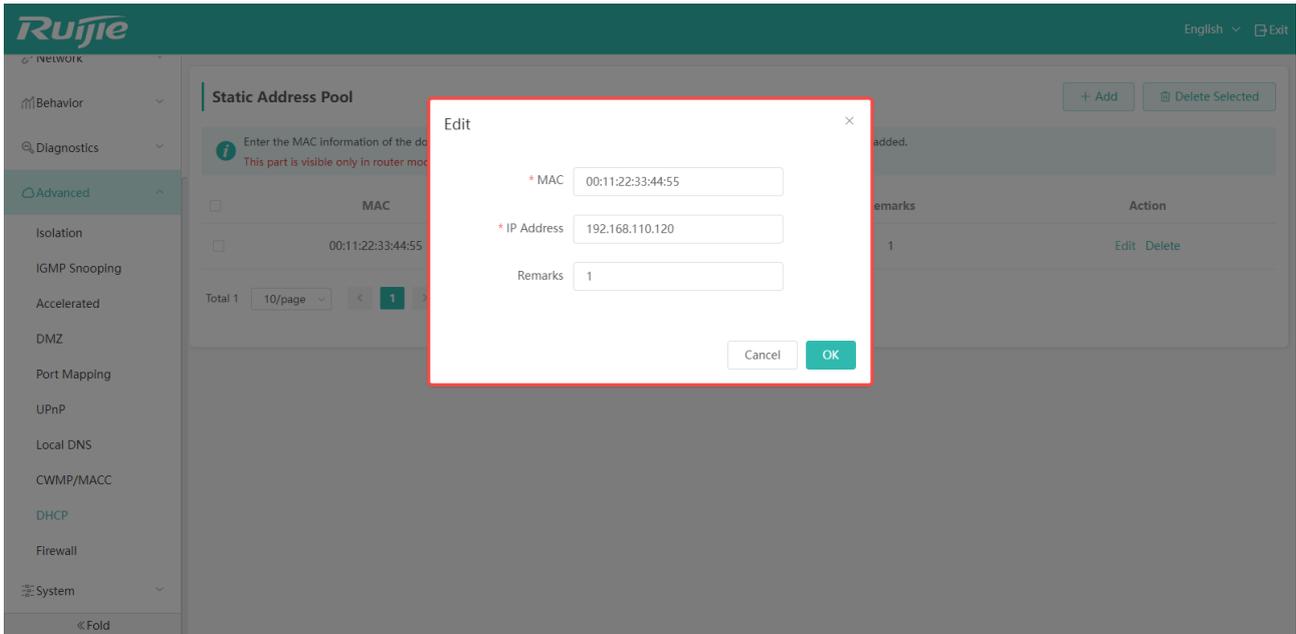
Assign a fixed IP address to the downstream client by adding its MAC address. (Up to 20 clients can be added.)



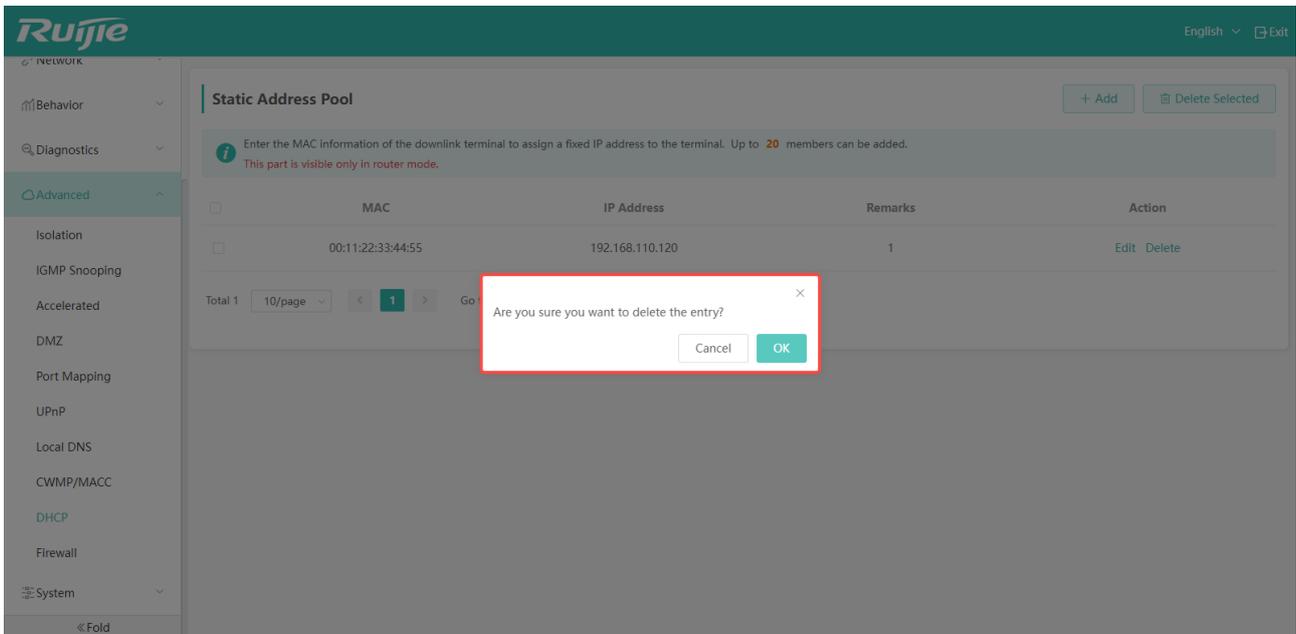
| Items | Description |
|------------|--|
| MAC | Display the client's MAC address. |
| IP Address | Display the assigned IP address. |
| Remarks | Display the note for the MAC address. You can enter any description such as "my mobile phone". |
| Action | Two management actions can be performed, including modification and deletion. |

The description of "Edit" and "Delete" in the Action column:

- Click "Edit" to modify the client's MAC address, assigned IP and the remark.



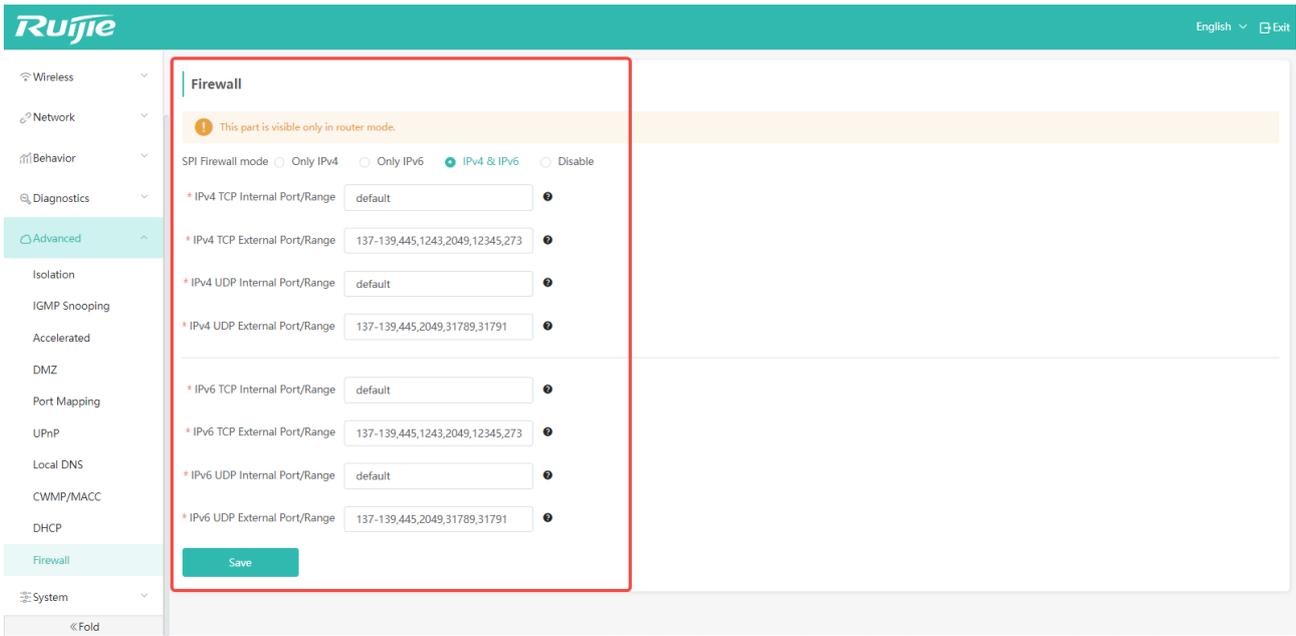
- Click "Delete" to delete the assigned IP. After the AP is connected again, a random IP address is obtained.



5.9 Firewall (Routing Mode)

A firewall is a network security device or software used to monitor and control network traffic to protect the network from suffering unauthorized access, malicious attacks, and data leaks. Firewalls filter network traffic by restricting access to specific IP addresses, ports or protocols through rules or implementing access control policies to block potential threats.

With the firewall feature, the AP restricts access to the ports based on its IPv4 or IPv6 TCP and UDP protocols.



| Items | Description | Defaults/Options |
|------------------------------|--|---|
| SPI Firewall Mode | Four options are available: Only IPv4, IPv4 & IPv6, Only IPv6, Disabled. | Default: IPv4 & IPv6 |
| IPv4 TCP Internal Port/Range | The internal port range of IPv4 TCP is from 1 to 65535. You can specify a single port (X) or a port range (X-Y). If multiple items are configured, separated them by commas (,). | It is recommended to specify the default configuration, which is to select all ports. |
| IPv4 TCP External Port/Range | The external port range of IPv4 TCP is from 1 to 65535. You can specify a single port (X) or a port range (X-Y). If multiple items are configured, separated the by commas (,). | It is recommended to specify the following ports that are frequently attacked: 137-139, 445, 1243, 2049, 12345, 27374, 31785 |
| IPv4 UDP Internal Port/Range | The internal port range of IPv4 UDP is from 1 to 65535. You can specify a single port (X) or a port range (X-Y). If multiple items are configured, separated them by commas (,). | It is recommended to select the default configuration, which is to select all ports. |
| IPv4 UDP External Port/Range | The external port range of IPv4 UDP is from 1 to 65535. You can specify a single port (X) or a port range (X-Y). If multiple items are configured, separated them by commas (,). | It is recommended to specify the following ports that are frequently attacked: 137-139, 445, 2049, 31789, 31791 |
| IPv6 TCP Internal Port/Range | The internal port range of IPv6 TCP is from 1 to 65535. You can specify a single port (X) or a port range (X-Y). If multiple items are configured, separated them by commas (,). | It is recommended to select the default configuration, which is to select all ports. |
| IPv6 TCP External Port/Range | The external port range of IPv6 TCP is from 1 to 65535. You can specify a single port (X) | It is recommended to specify the following ports that are |

| | | |
|------------------------------|--|---|
| | or a port range (X-Y). If multiple items are configured, separated them by commas (,). | frequently attacked: 137-139, 445, 1243, 2049, 12345, 27374, 31785 |
| IPv6 UDP Internal Port/Range | The internal port range of IPv6 UDP is from 1 to 65535. You can specify a single port (X) or a port range (X-Y). If multiple items are configured, separated them by commas (,). | It is recommended to select the default configuration, which is to select all ports. |
| IPv6 UDP External Port/Range | The external port range of IPv6 UDP is from 1 to 65535. You can specify a single port (X) or a port range (X-Y). If multiple items are configured, separated them by commas (,). | It is recommended to select the following ports that are frequently attacked: 137-139,445,2049,31789,31791 |

6 System Management

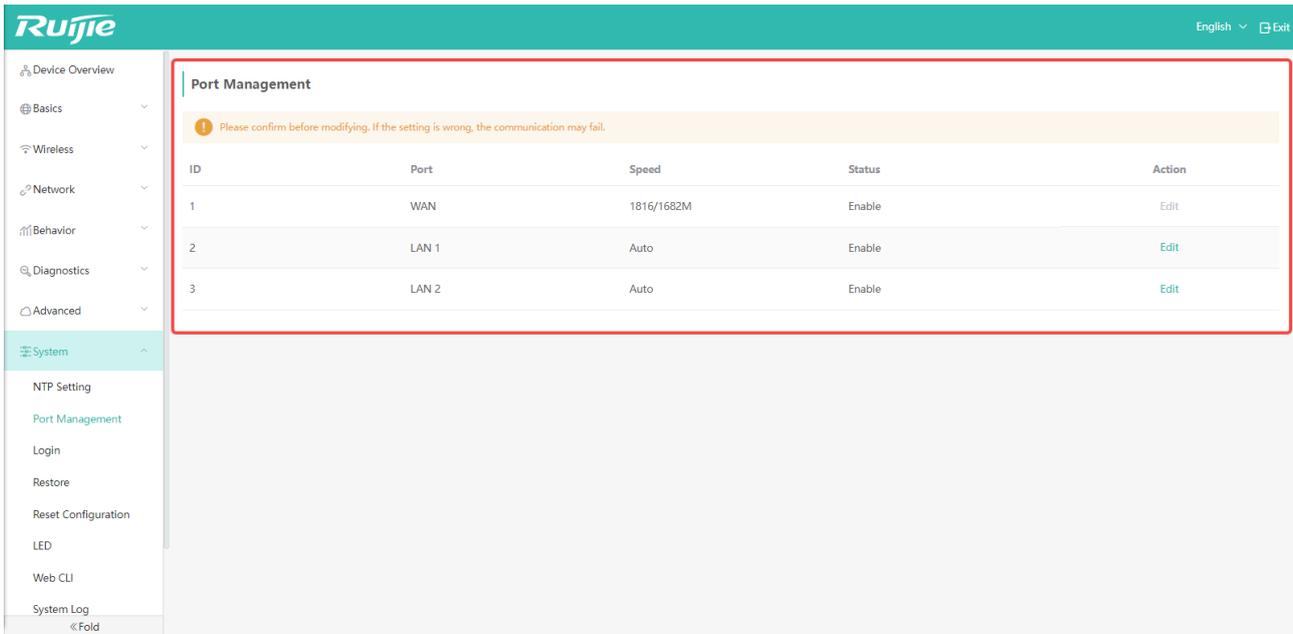
6.1 NTP Settings

Network Time Protocol (NTP) is a protocol used to synchronize the clocks of devices on a network. NTP is designed to ensure that the consistency and accuracy of clicks of devices on the network.

| Items | Description | Defaults |
|-------------------|--|--|
| NTP function | Enable or disable NTP function. | Default: Enabled. |
| NTP Server Name | Specify the domain name of the NTP server. | Default: ntp.nict.jp |
| Confirmation Time | Specify the synchronization period. | Default: 24 hours |
| Time Zone | Specify the time zone. | Default: (GTM 09:00) Tokyo, Osaka, Sapporo |
| Time | Display the current time. | Default: Current time. |

6.2 Port Management

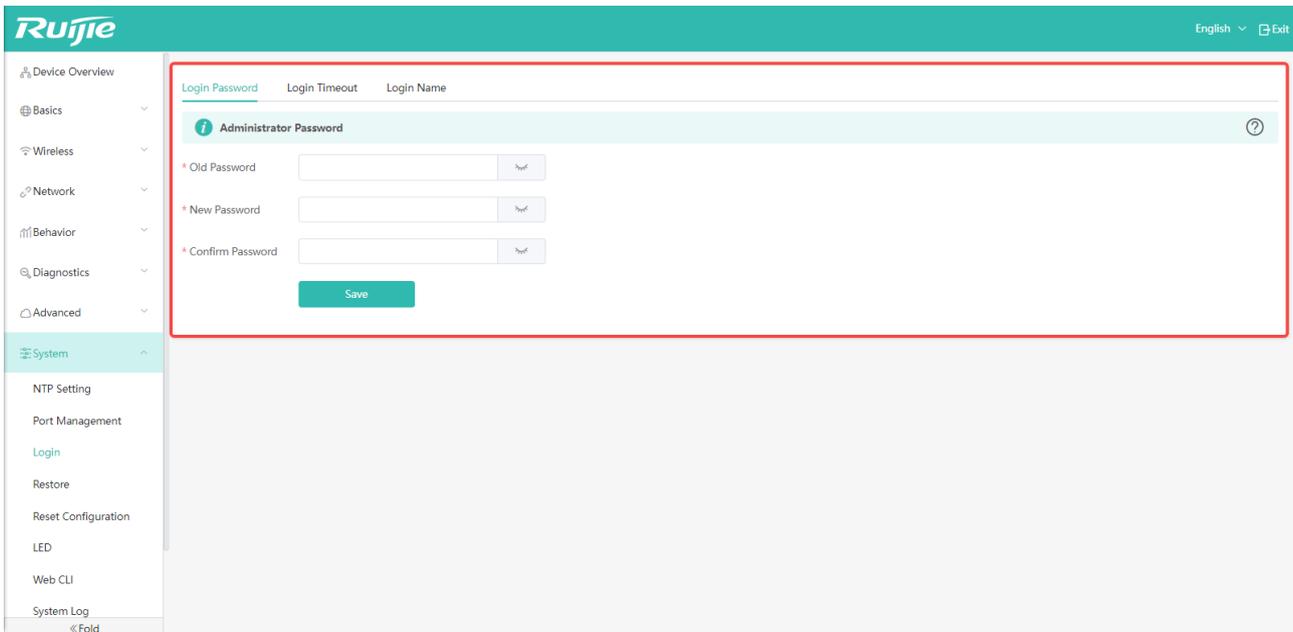
This function is designed to manage the physical attributes of the WAN port and two LAN ports. Currently, a WAN port cannot be set to a G.hn port. The LAN port supports shutdown and rate negotiation (Auto/100Mbps/1000Mbps).



6.3 Login Management

6.3.1 Administrator Password

In order to improve system security and make information interaction more secure, please click "System" -> "Login"-> "Login Password" to change the default password.

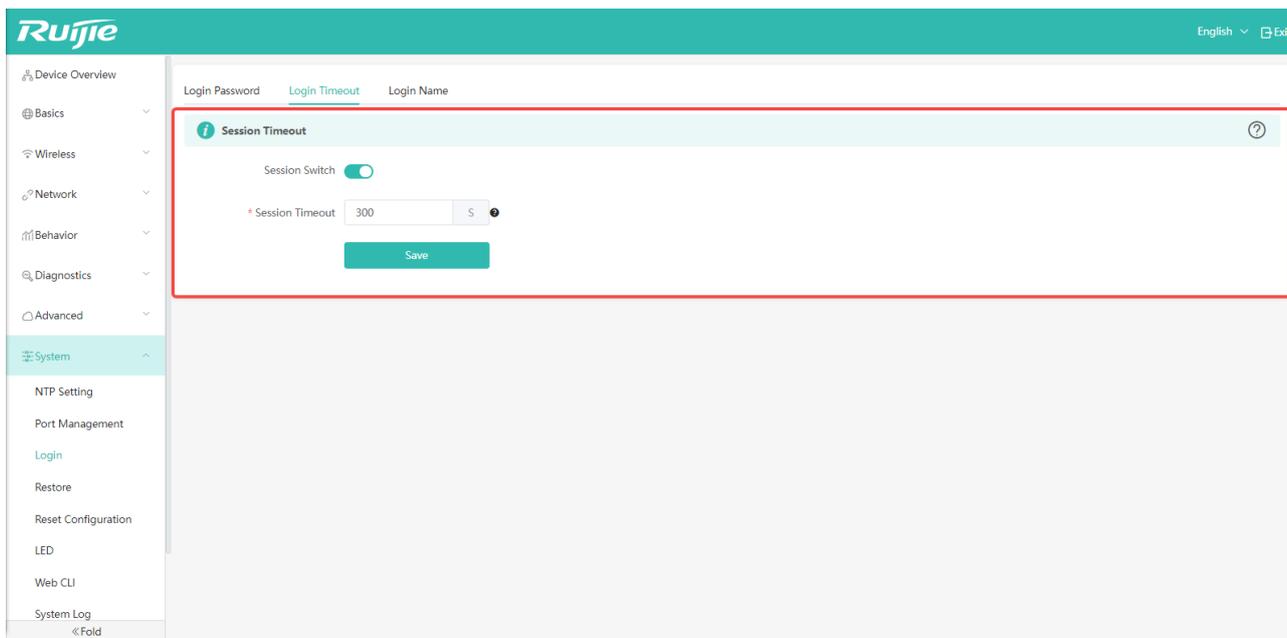


| Items | Description | Defaults/Options |
|--------------|------------------------------------|------------------|
| Old Password | Enter the original password: admin | Default: admin |

| | | |
|------------------|--|--------------|
| New Password | Enter a new password. | Default: N/A |
| Confirm Password | Enter the password you set for confirmation. | Default: N/A |

6.3.2 Session Timeout

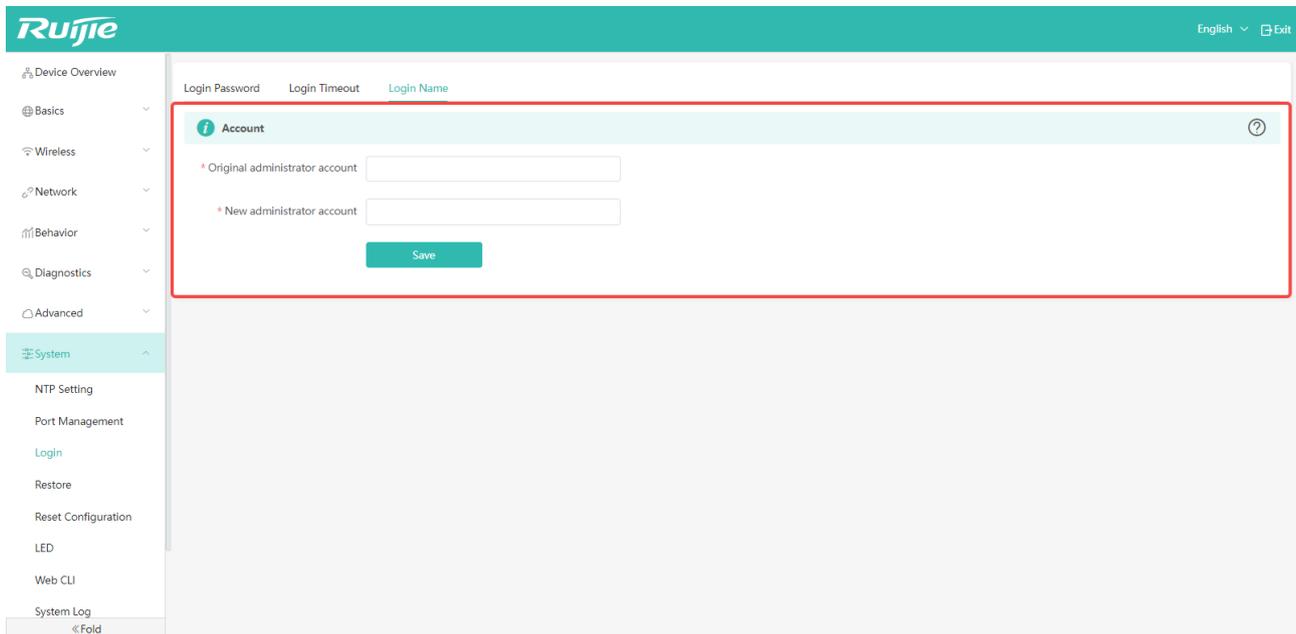
In this page, you can set the Web session timeout. After the timeout is configured, Web will automatically log out when it is in standby state for a long time.



| Items | Description | Defaults/Options |
|-----------------|--|---|
| Session Switch | Enable or disable the login timeout function. | Default: Enabled. Options: Enabled/Disabled |
| Session Timeout | When the session timeout is enabled, specify the time value. If no operation is performed on the Web management system for the time that exceeds the configured time, the system will be logged out. | Default: 300 seconds Options: 300-7200 seconds |

6.3.3 Account Name

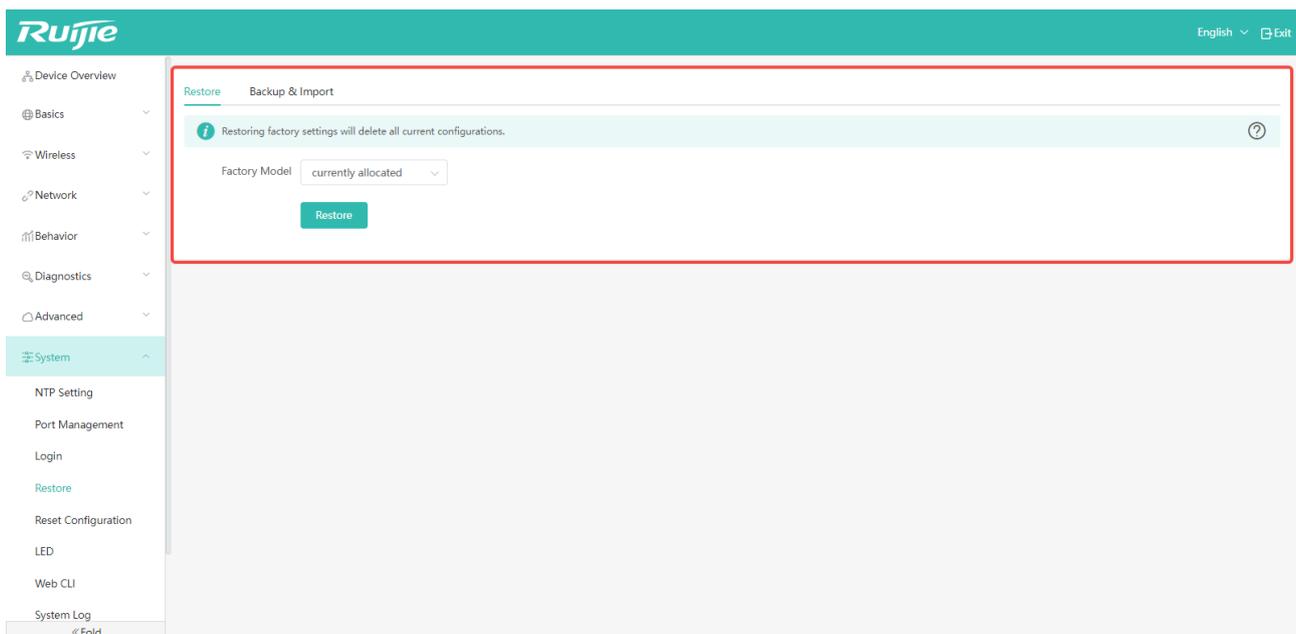
By default, the account name is admin. You can change the account name in the following page.



6.4 Configuration Management

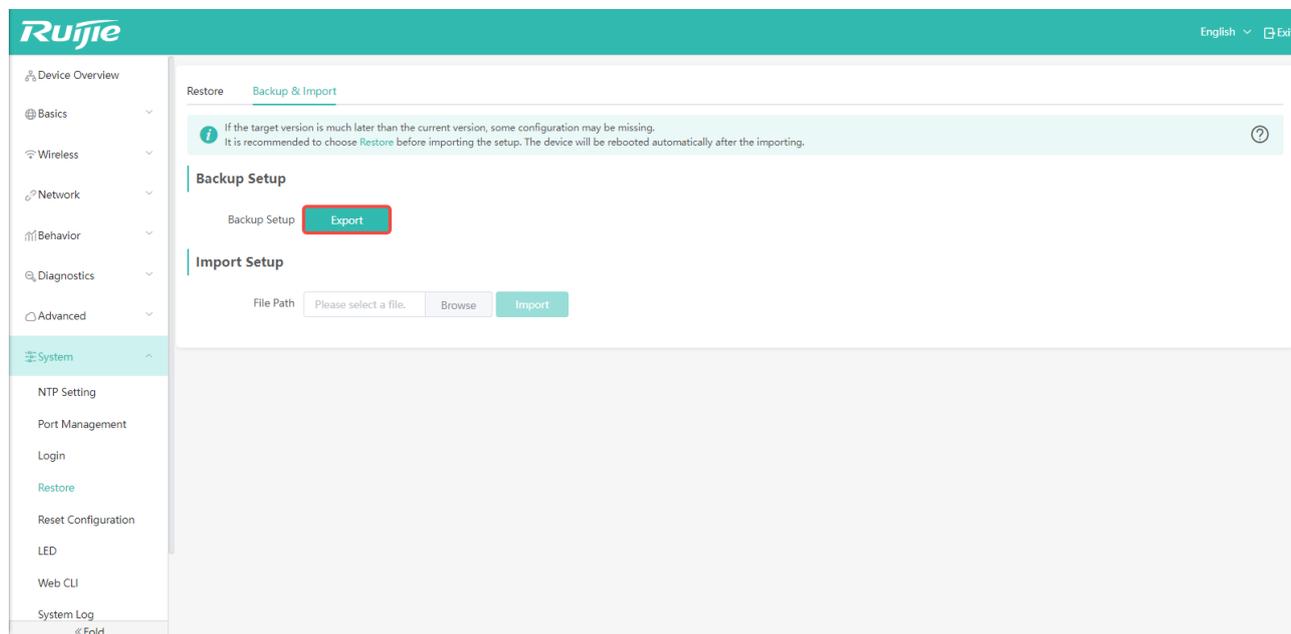
6.4.1 Restore

If you need to restore the system, please click "System" -> "Restore" to restore the device.

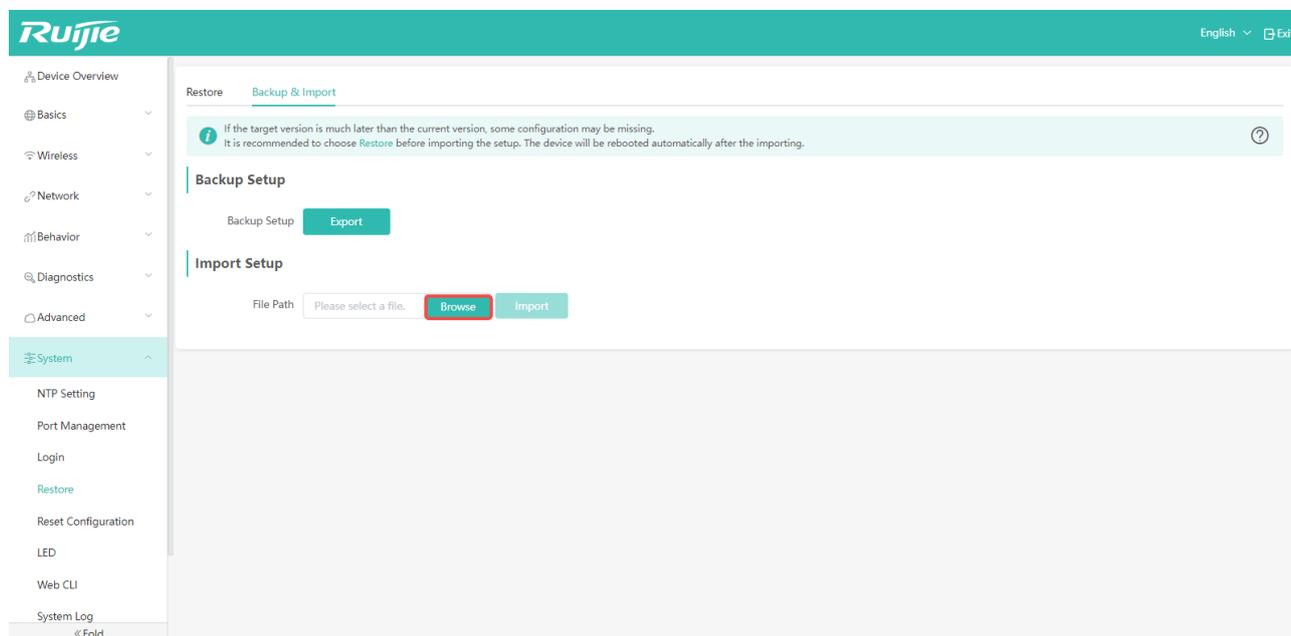


6.4.2 Backup and Import

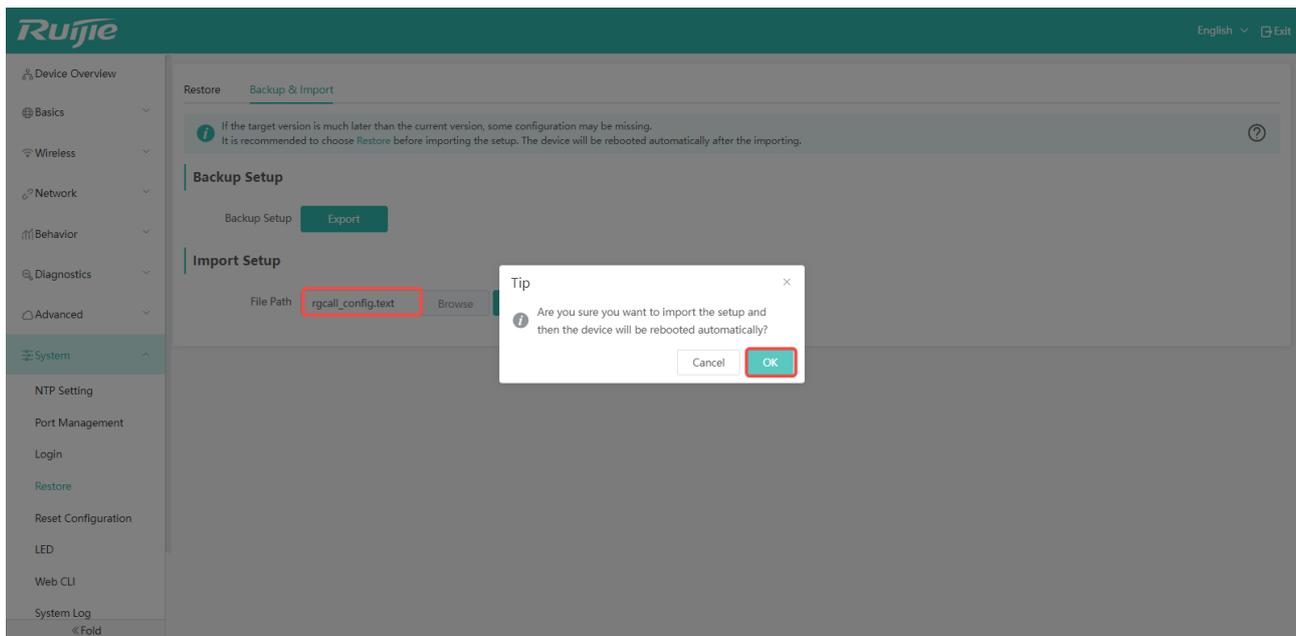
- If you want to keep the current configuration settings after restore the system, please click "Restore" -> "Backup & Import" -> "Export" to export the current configuration file of the device.



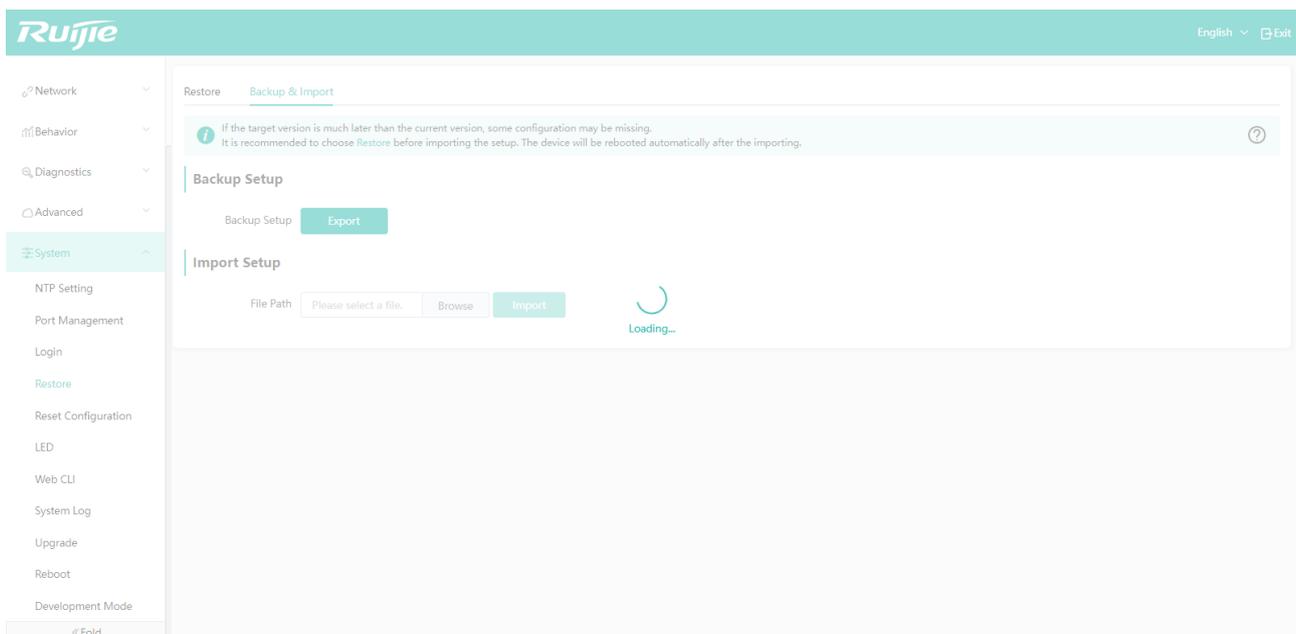
- After the device is restored, if you want to reuse the previous configurations, please click "Browse" in the Import Setup page to select the previous configuration file.



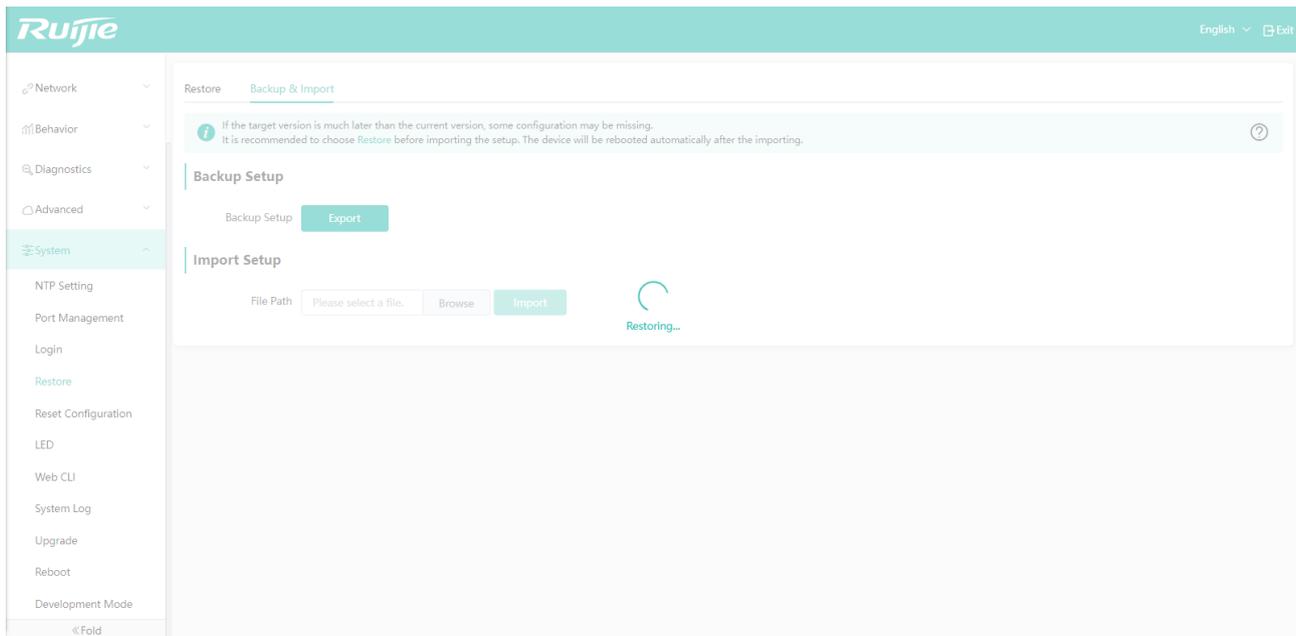
- Click "Import" to import the previous configurations. Then, click "OK" to confirm the operation.



- Load the configurations. Please wait.



- After the configuration is completed, the device will restart. Please wait.



The screenshot shows the Ruijie web-based configuration interface. The top navigation bar includes the Ruijie logo and language options (English, Exit). The left sidebar lists various system management options: Network, Behavior, Diagnostics, Advanced, System (selected), NTP Setting, Port Management, Login, Restore, Reset Configuration, LED, Web CLI, System Log, Upgrade, Reboot, and Development Mode. The main content area is titled "Restore Backup & Import" and contains a warning message: "If the target version is much later than the current version, some configuration may be missing. It is recommended to choose Restore before importing the setup. The device will be rebooted automatically after the importing." Below this, there are two sections: "Backup Setup" with an "Export" button, and "Import Setup" with a "File Path" input field, "Browse" and "Import" buttons, and a "Restoring..." progress indicator.

- After the restart is complete, log in to the Web system again.



Welcome to use Ruijie RG-HA3515-DG
Gigabit Dual-Band Wi-Fi 6 Router

Login

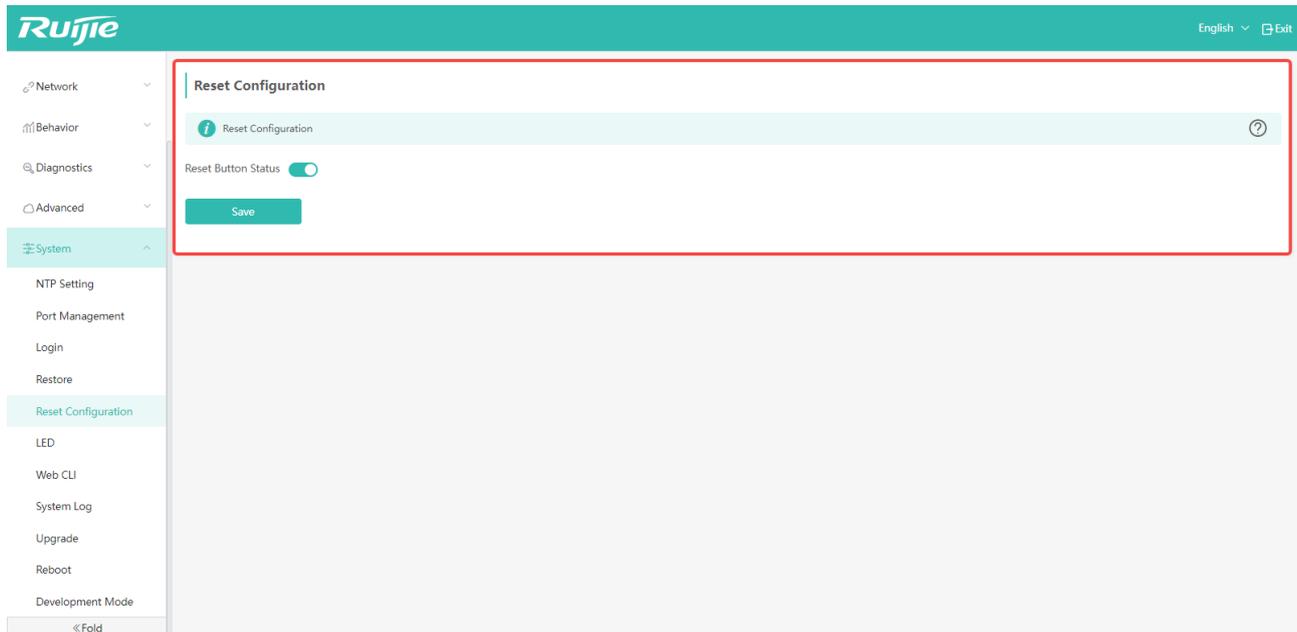
[Forget the account or password?](#)

Support Chrome, Firefox, Microsoft Edge browser © 2000-2023 Ruijie Networks Co., Ltd
Official Website: <https://www.ruijie.co.jp>

 The related operations of device login have been described in detail in Section 2.1.

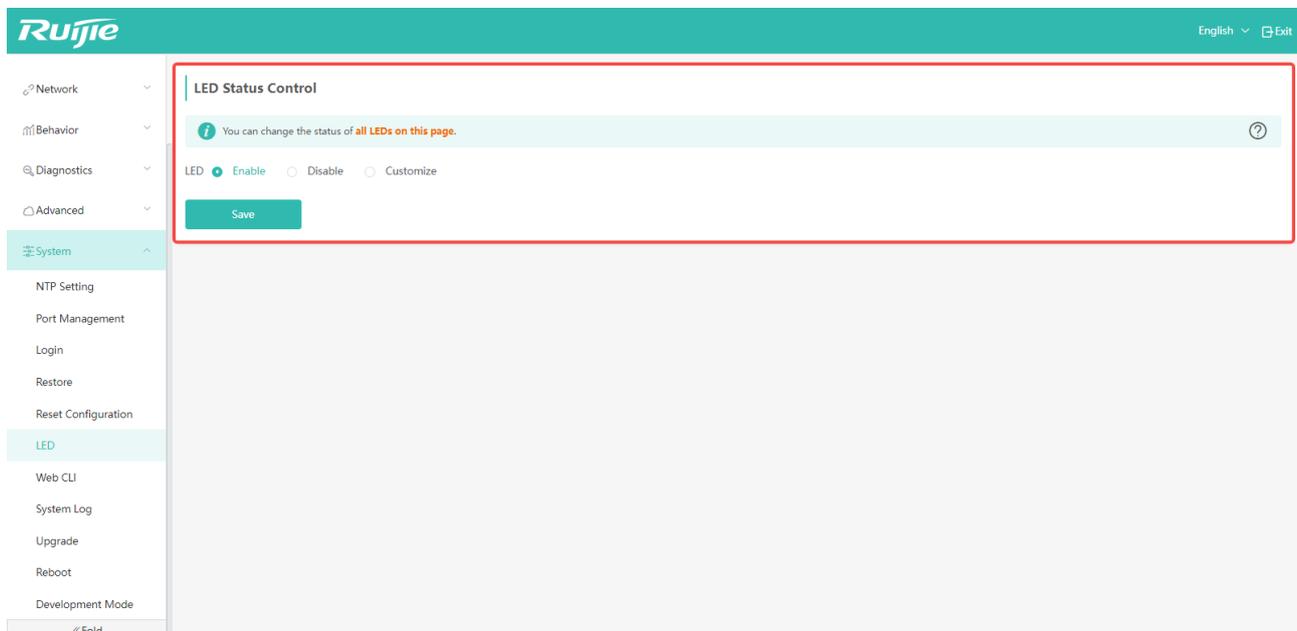
6.5 Reset Settings

In this page, you can determine whether the reset button can be used or not. It is enabled by default.



6.6 LED Settings

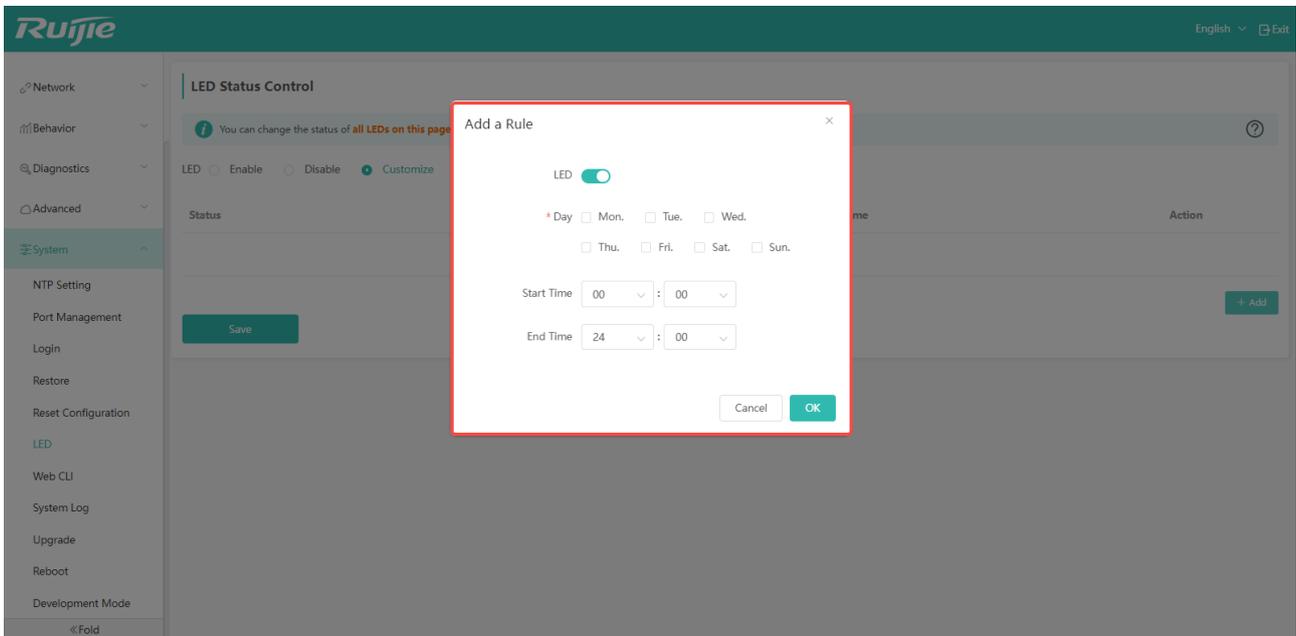
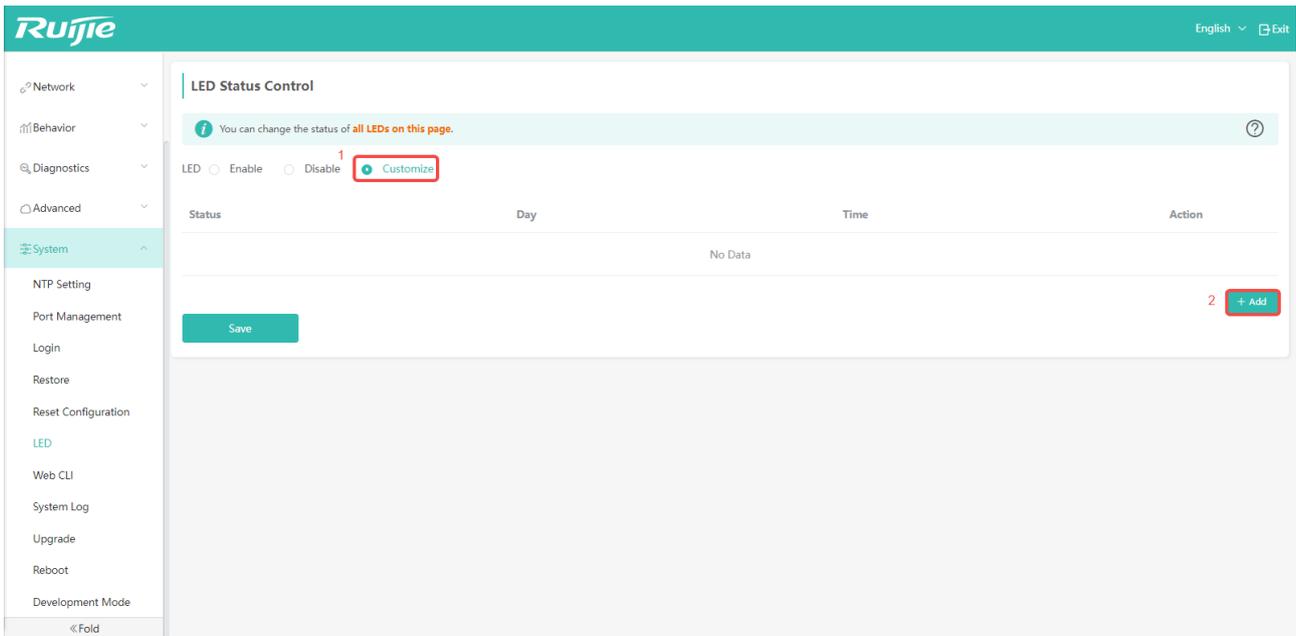
In this page, you can enable or disable LEDs. Also, you can schedule the LED to be enabled or disabled at a specific time period.



- If you want to LEDs to light at a scheduled time, follow the following steps:

Step 1: Click "Customize".

Step 2: Click the "Add" button to go to the setting page.

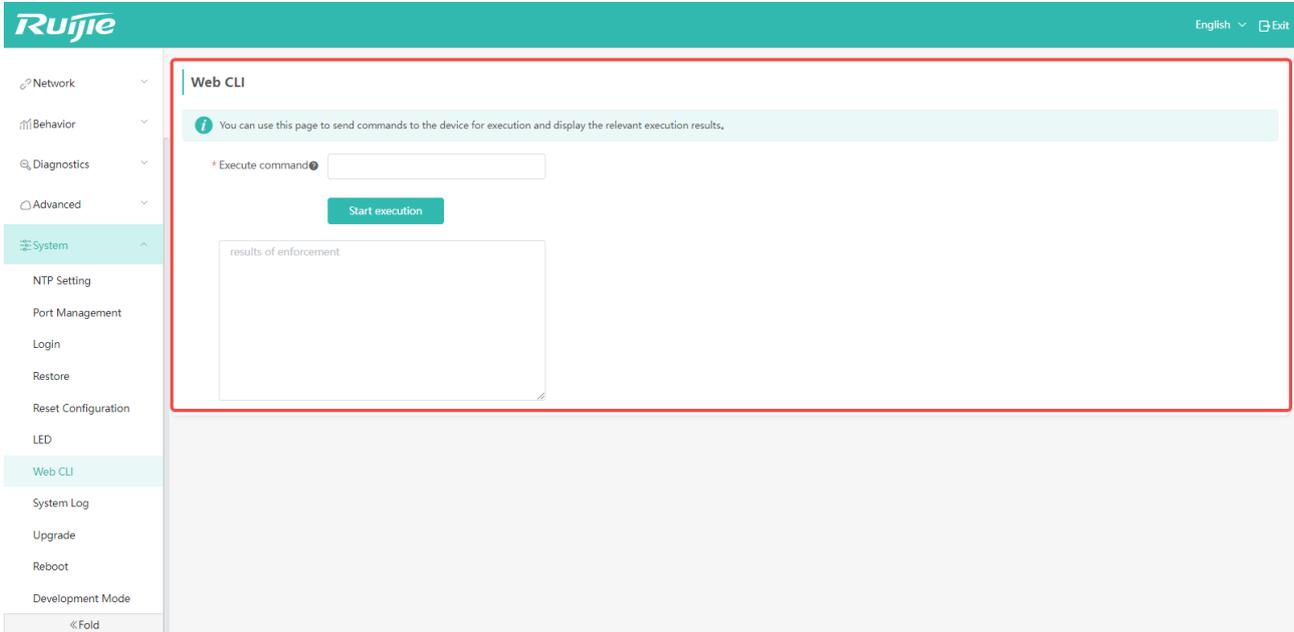


| Items | Description | Defaults/Options |
|------------|---|---|
| LED | If the switch is in on state, it means that the LEDs will turn on in the specified time period. If the switch is in off state, the LEDs will turn off in the specified time period. | Default: Enabled Option: Enabled/Disabled |
| Day | Specify the day(s) of a week. | Default: N/A Options: Any day of the week. |
| Start Time | Specify the start time on the day of a week. | Default: 00:00 Drop down the selection box to select a start time. |
| End Time | Specify the end time on the day of a week. | Default: 24:00 Drop down the selection box to |

| | | |
|--|--|---------------------|
| | | select an end time. |
|--|--|---------------------|

6.7 Web CLI

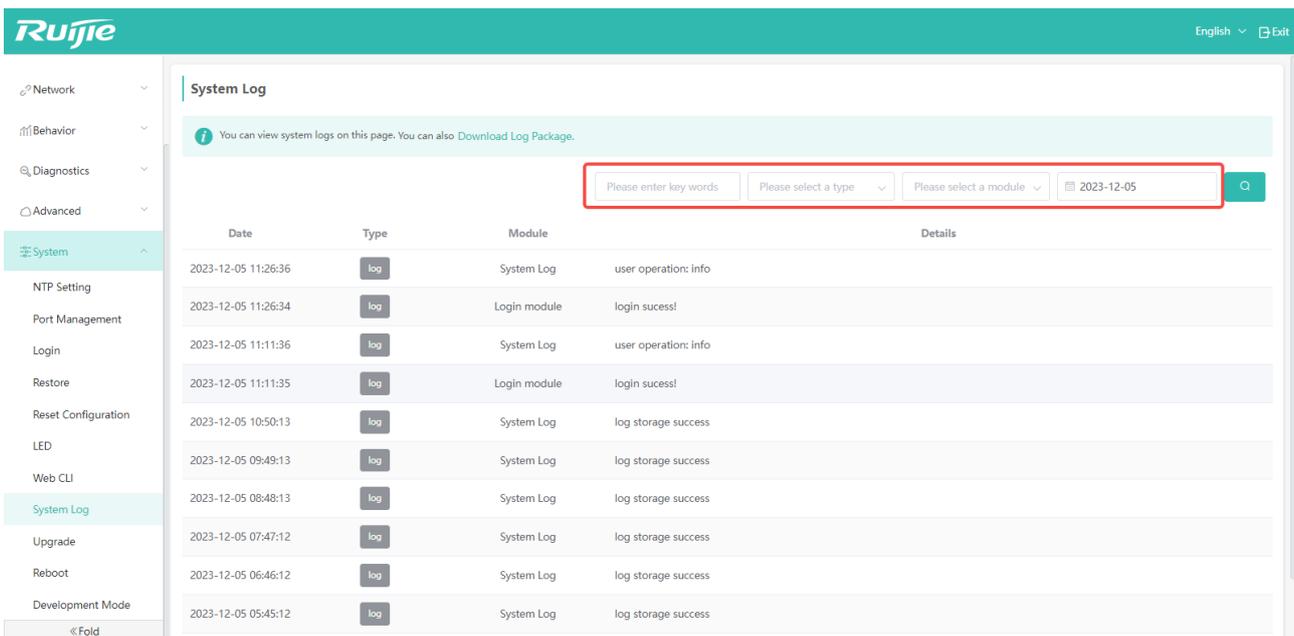
You can run rgcall commands in the page to deliver configurations.



6.8 System Log

Checking system logs is a way for locating fault causes.

When a large number of logs are available, you can enter key words, log types, modules or dates to figure out the logs you need for locating fault causes.

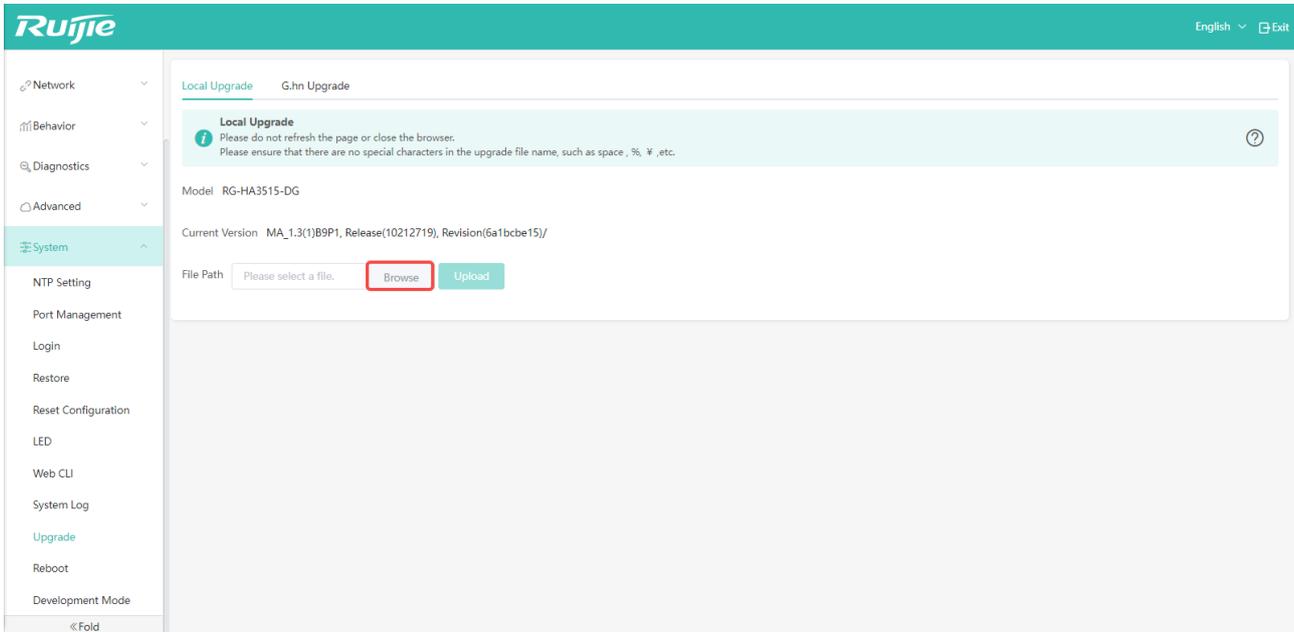


6.9 System Upgrade

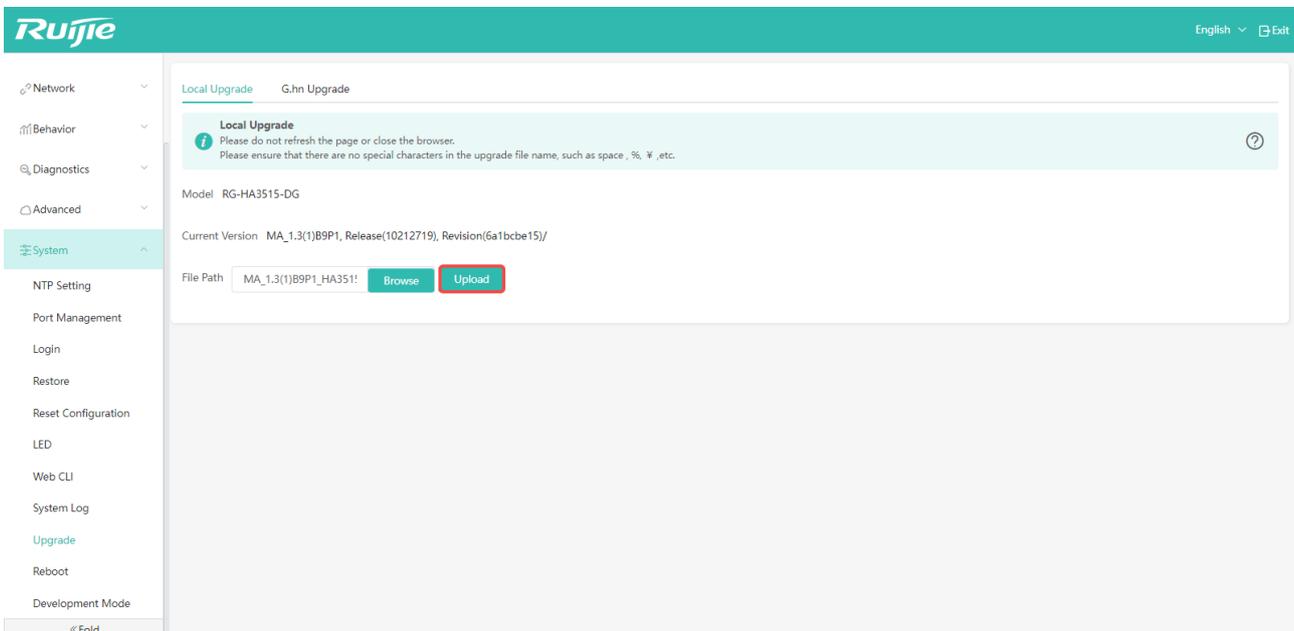
6.9.1 Manual Upgrade

Click "System" -> "Upgrade" to manually upgrade the software version of the device

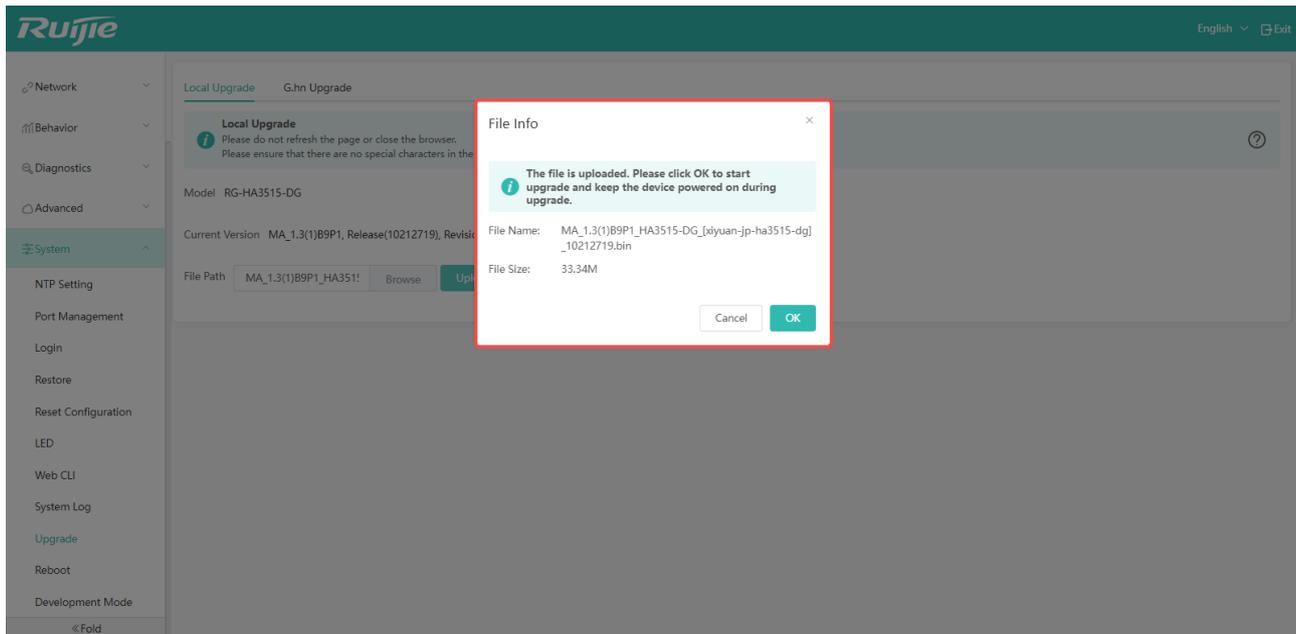
Step 1: Click the "File" button to select an upgrade file.



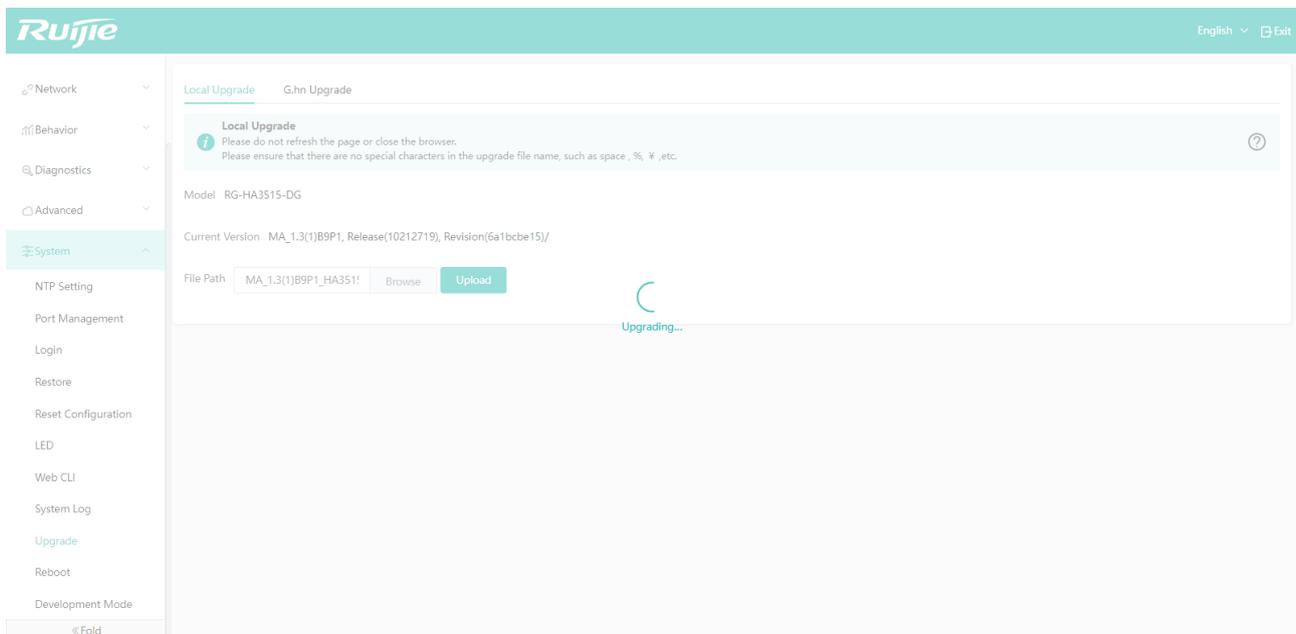
Step 2: After selecting the upgrade file, click the "Upload" button to start downloading the software to the device.



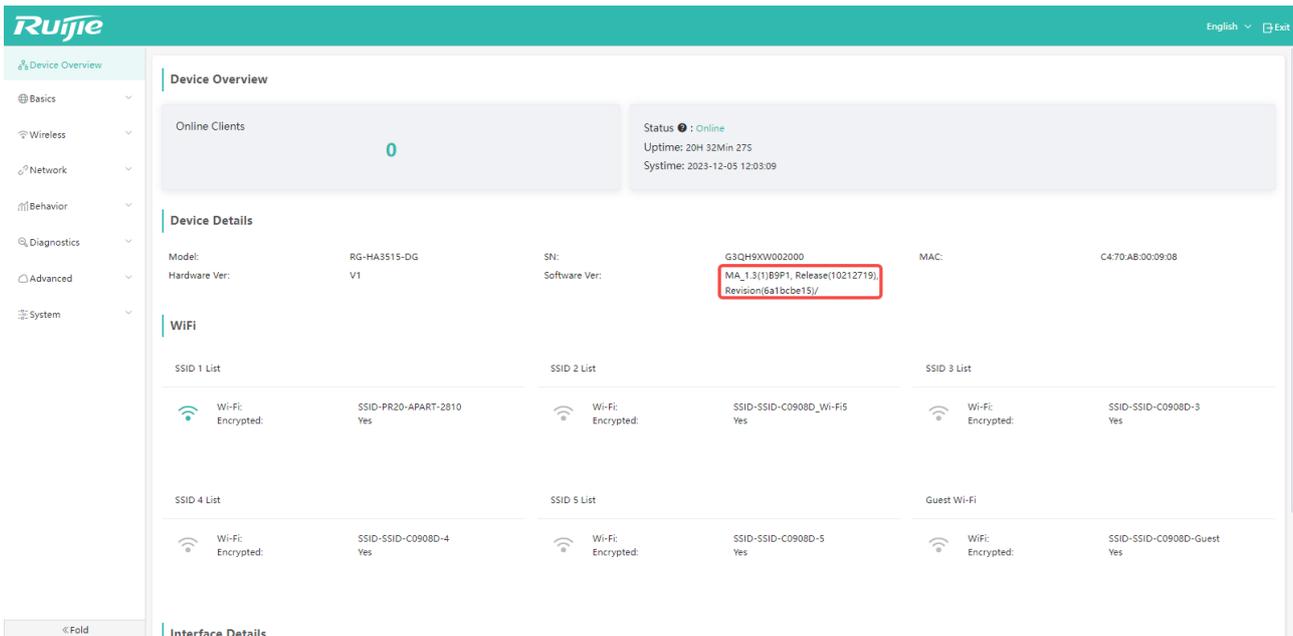
Step 3: Click "OK" to start the upgrade process.



Please wait patiently during the upgrade process.

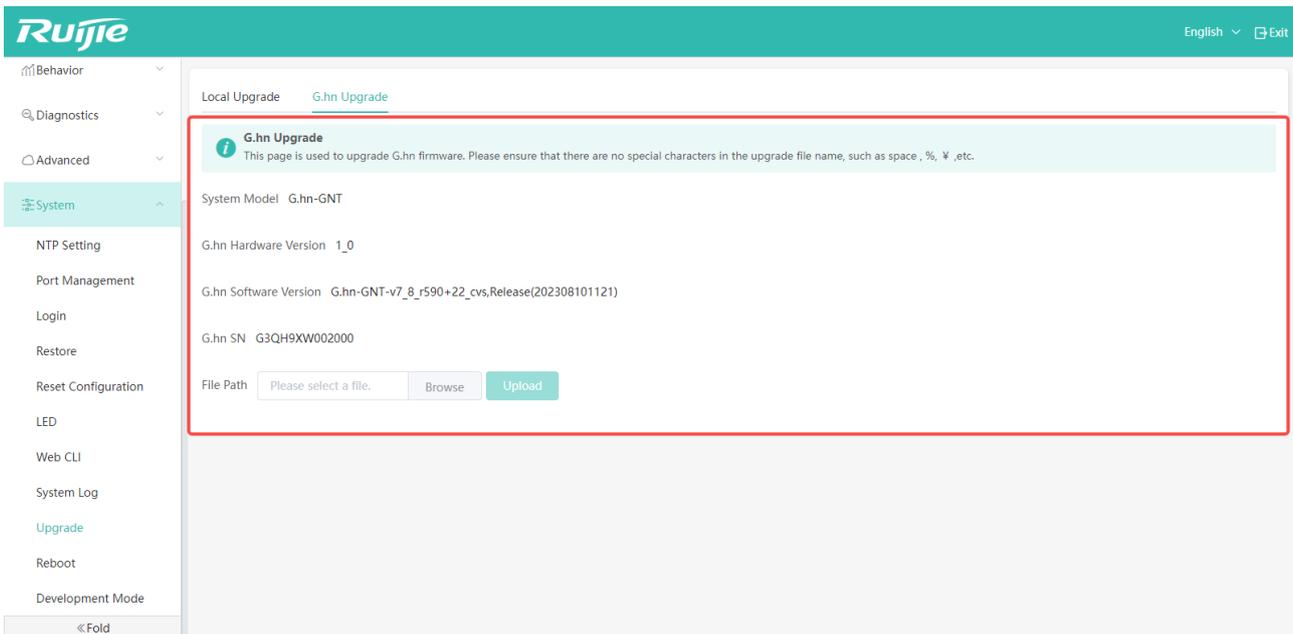


Step 4: After the upgrade is successful, you will return to the login interface. Please use the password to log into the Web management system again, and check the software version in "Device Details" to confirm whether the upgrade is successful.



6.9.2 G.hn Firmware Upgrade

G.hn firmware can be upgraded separately. The upgrade of G.hn firmware is performed by the main program.

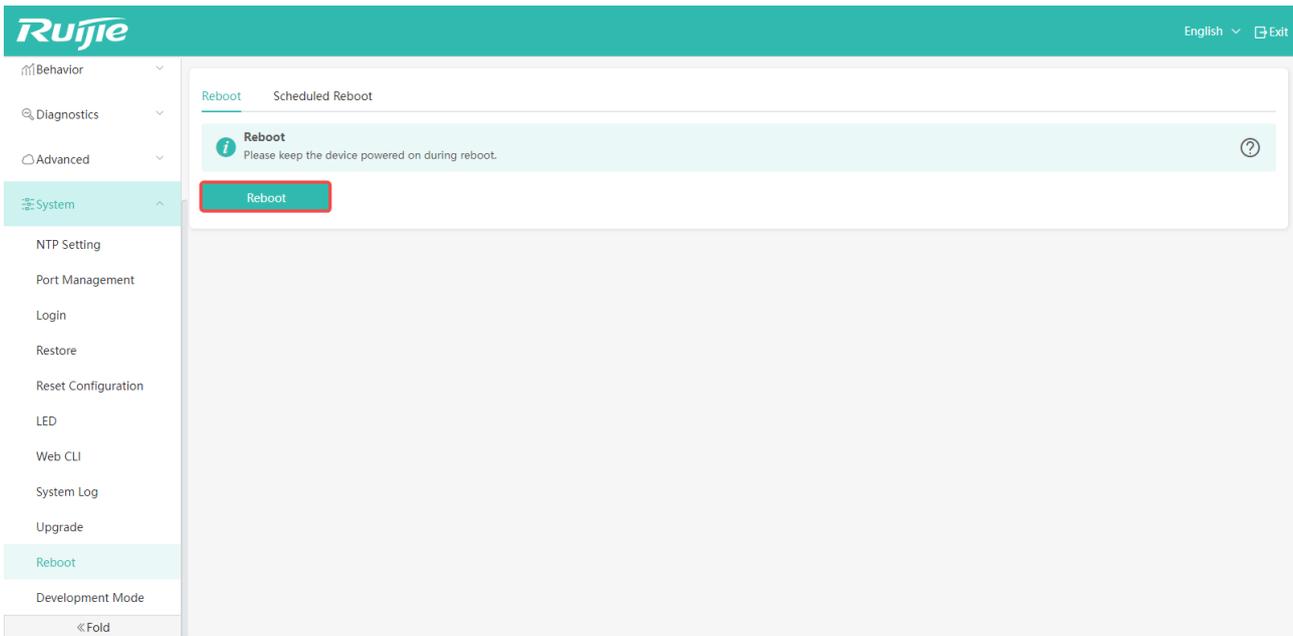


6.10 Reboot

6.10.1 Reboot

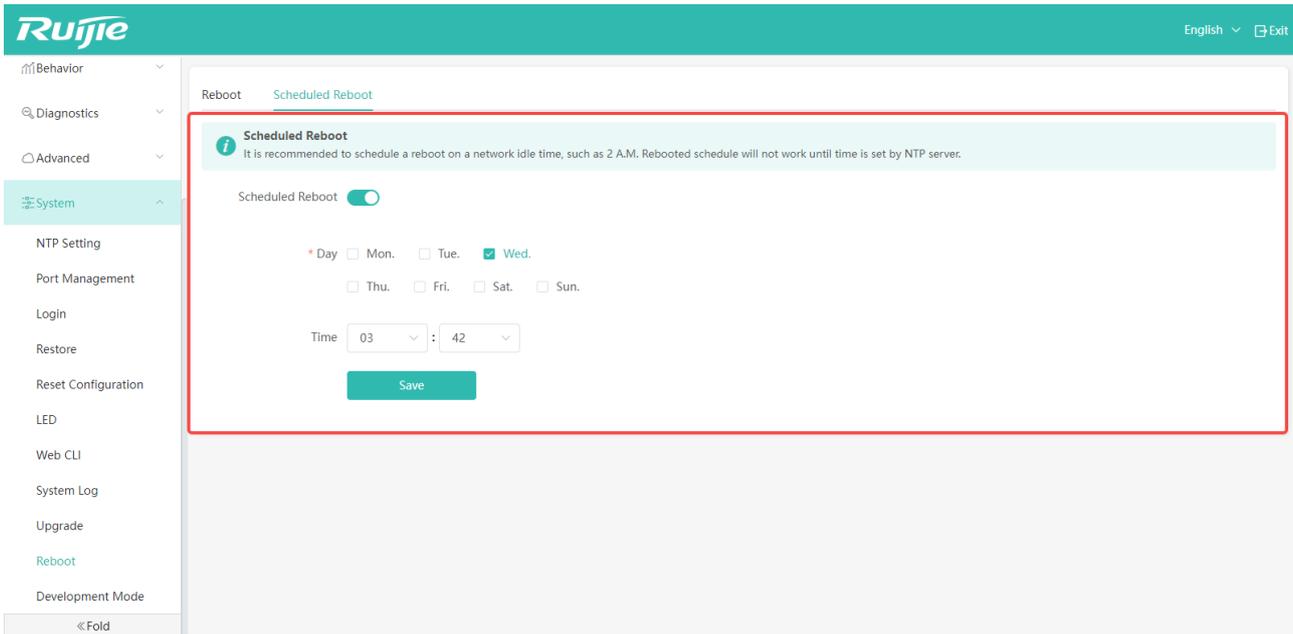
You can click "System" -> "Reboot" to reboot the AP remotely.

If you want to reboot the device directly, click "Reboot" on the page.



6.10.2 Scheduled Reboot

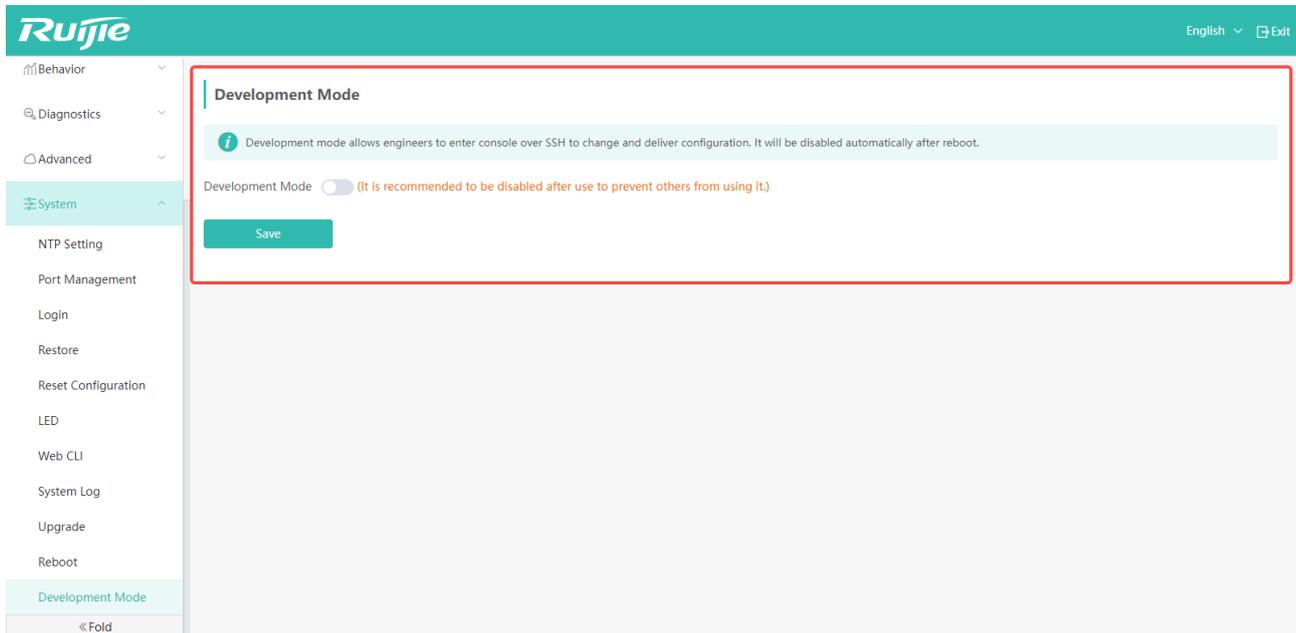
In this page, you can schedule the reboot of the AP to take effect at a specific time in a day of a week.



| Items | Description | Defaults/Options |
|------------------|--|---|
| Scheduled Reboot | Enable or disable the scheduled reboot function. | Default: Disabled. Option: Enabled/Disabled |
| Day | Specify the day of a week to restart the device. | Default: Any day of the week. |
| Time | Set the specific time to restart the device. | Default: A specific time between 3 a.m and 4 a.m. |

6.11 Developer Mode

With the developer mode enabled, you can log in to the device console through SSH to configure the device.



The screenshot displays the Ruijie web-based configuration interface. The top navigation bar is teal with the Ruijie logo on the left and 'English' and 'Exit' on the right. A left sidebar contains a menu with categories: Behavior, Diagnostics, Advanced, System, and a 'Fold' button at the bottom. The 'System' category is expanded, showing sub-items: NTP Setting, Port Management, Login, Restore, Reset Configuration, LED, Web CLI, System Log, Upgrade, Reboot, and Development Mode. The 'Development Mode' sub-item is highlighted in teal. The main content area shows the 'Development Mode' configuration page. It features a teal header with the title 'Development Mode'. Below the header is an information box with a teal background and a white 'i' icon, containing the text: 'Development mode allows engineers to enter console over SSH to change and deliver configuration. It will be disabled automatically after reboot.' Underneath the information box, the 'Development Mode' toggle switch is currently turned off (grey), with a red warning message: '(It is recommended to be disabled after use to prevent others from using it.)'. A teal 'Save' button is positioned below the toggle.

7 Troubleshooting

This chapter mainly introduces countermeasures when you encounter problems that you cannot solve.

7.1 Failing to Connect to Web-GUI

When you cannot connect to the Web-GUI, please confirm the following points:

- (1) Check the connection between the AP and your PC.

Please refer to section 1.4 "Preparation for Web-GUI Connection" to confirm whether the connection is correct.

- (2) Check whether the AP works in routing mode and the PC accesses the AP through the LAN port.

When the AP works in routing mode, the PC cannot access the AP via a WAN port, because the WAN port is a G.hn port. By default, the PC accesses the AP via the LAN port.

- (3) Check whether the PC can ping the AP.
- (4) Check whether your browser can display the Web-GUI interface correctly.

The Web-GUI of HA3515-DG supports Google Chrome, Firefox, Safari and some browsers based on IE kernel. It is strongly recommended that you use Google Chrome to access the Web-GUI again.

7.2 Failing to Log into Web-GUI

If you cannot log in to the Web-GUI, please check the following points:

- (1) Check whether the username and password are correct.

Please log in again with the correct username and password. Default username/password: admin/admin.

- (2) Forget the password.

If you forget the login password, you can use a slender needle to press the Reset button on the AP panel to restore the device to factory settings.

- (3) Check whether the browser you use can display the Web-GUI interface normally.

The Web-GUI of HA3515-DG supports Google Chrome, Firefox, Safari and some browsers based on IE kernel. It is strongly recommended that you use Google Chrome to access the Web-GUI again.

7.3 Communication Failure

When the device connects normally but cannot communicate normally, please check the following things:

(1) Check device status:

When the IP address of WAN port is set to be obtained automatically via DHCP, you can check the interface status by checking whether the AP automatically obtains an IP address or DNS address.

If the address cannot be obtained, the WAN cannot be connected (no Internet service is provided). Please check whether the DHCP server is reachable or whether the IP+ MAC binding have been configured.

(2) Blacklist and Whitelist

Only clients in the whitelist are allowed to access the Web-GUI. If the device cannot communicate normally, check whether the device has been listed in the whitelist. If not, please add the device to the whitelist. Also, check whether the device has been added to the blacklist by mistake.

For details, please refer to section 4.4.1 "Access Control".

7.4 About Device Setup and Usage Support

If you need to analyze the cause of a fault or collect usage status, please refer to section 6.8 "System Log". And provide the saved logs to your service provider for support.