Manuals+ — User Manuals Simplified.

FWA02-NAVA Express Systems and Peripherals

Inhand FWA02-NAVA Express Systems and Peripherals User Guide

Contents

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Product Usage Instructions

- Use the provided power adapter with a voltage input range of 9-48V.
- Avoid direct sunlight and strong electromagnetic interference.
- Ensure the installation position can support the weight of the equipment.
- Slide the SIM card cover downward to access the slot.
- Insert the 4FF SIM card(s) as needed.
- For Verizon users, locate the ICCID on the back for embedded SIM activation.
- Connect all 5G antennas to the SMA connectors. Wi-Fi antennas are built-in.
- Follow the provided guide for desktop installation.
- Follow the provided guide for wall-mounted installation.
- After installation, access the internet using either SIM card dial-up or wired networking as instructed in the manual.
- Utilize the InCloud Manager for remote device management by registering/login and adding devices to the platform.
- Reset/restore remotely or perform hardware restore as needed.
- Access log and diagnostic data as required for troubleshooting purposes.
- Refer to the LED indicators for status and diagnostic information.

FAQ

- **Q:** What is the power input range for the 5G FWA02?
- **A:** The power input range is DC 9-48V.
- **Q:** How many external 5G antennas are included with the device?
- **A:** The number of external 5G antennas varies with the model. Refer to the specifications for details.

Overview

- This manual is for the installation and operation of the 5G FWA of InHand Networks.

- Before installation, please confirm the product model and accessories in the package and purchase a SIM card from the operator that supports the local network.
- Please refer to the actual product for specific operations.

Packing List

Part Name	Quantity	Description
FWA02	1	5G FWA02
Ethernet Cable	1	1m Ethernet Cable

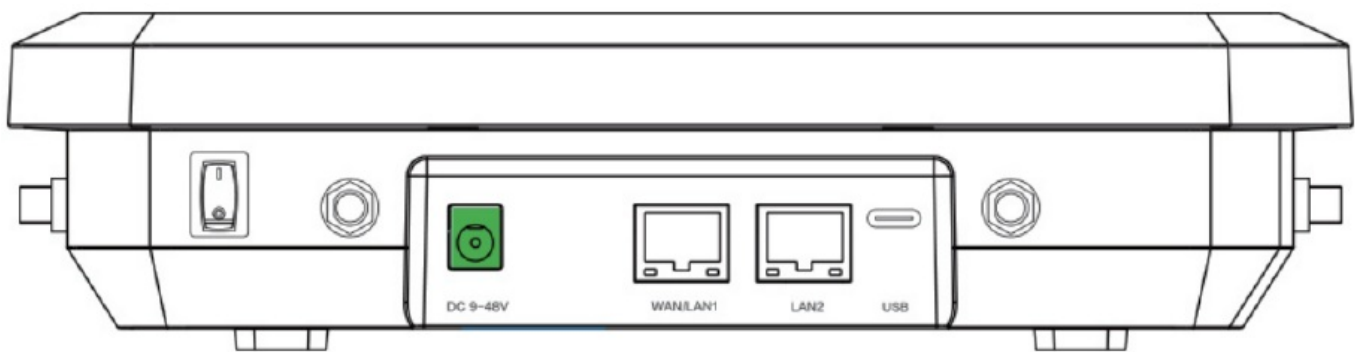| Power Adapter	1	DC Power Adapter
5G Antenna	6	FWA02-NAVA 6*External 5G Antenna
	4	FWA02-NATM 4* External 5G Antenna
	6	FWA02-EUNR 6* External 5G Antenna
QSG	1	Quick Installation Guide
Installation accessories	1	Wall-mounted installation and Desktop installation

Panel Introduction

Fig. 2 Device panel

- Power Switch
- DC 9~48V: Power in
- WAN/LAN1: Ethernet Port
- LAN2: Ethernet Port
- USB: Type-C interface supporting USB2.0 protocol

Equipment Installation

Precautions for installation

- Power Supply: Please use the power adapter included in the package. FWA02 supports a voltage input range of 9-48V. Please pay attention to the voltage level.
- Environmental requirements: Working temperature: -10℃~50℃; Storage temperature: -40℃~85℃.
- Avoid direct sunlight and keep the FWA02 away from heat sources or strong electromagnetic interference.
- Confirm that the installation position is strong enough to support the weight of the equipment and its installation accessories.

Insert SIM Card

5G FWA02 supports dual nano SIM cards.

1. Insert a 4FF SIM card (or two as needed) : Slide the SIM card cover downward to remove it, then insert the SIM cards) accordingto the following diagram.
2. To remove the SIM, press the middle of the SIM inward and it will pop outward from the SIM slot.
   For Verizon users, there is an embedded SIM card built-in. Please find the ICCID on the back if you want to activate the embedded SIM instead of 4FF SIM.
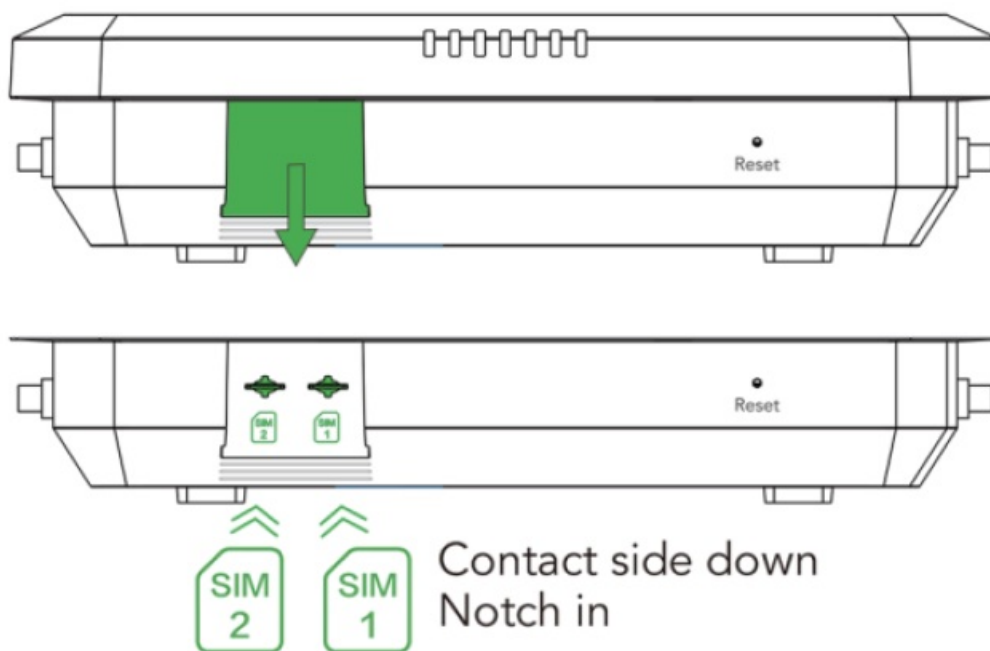

Fig. 3-1 Install the SIM cards

3. Put the SIM card cover back in place.

Attach Antennas

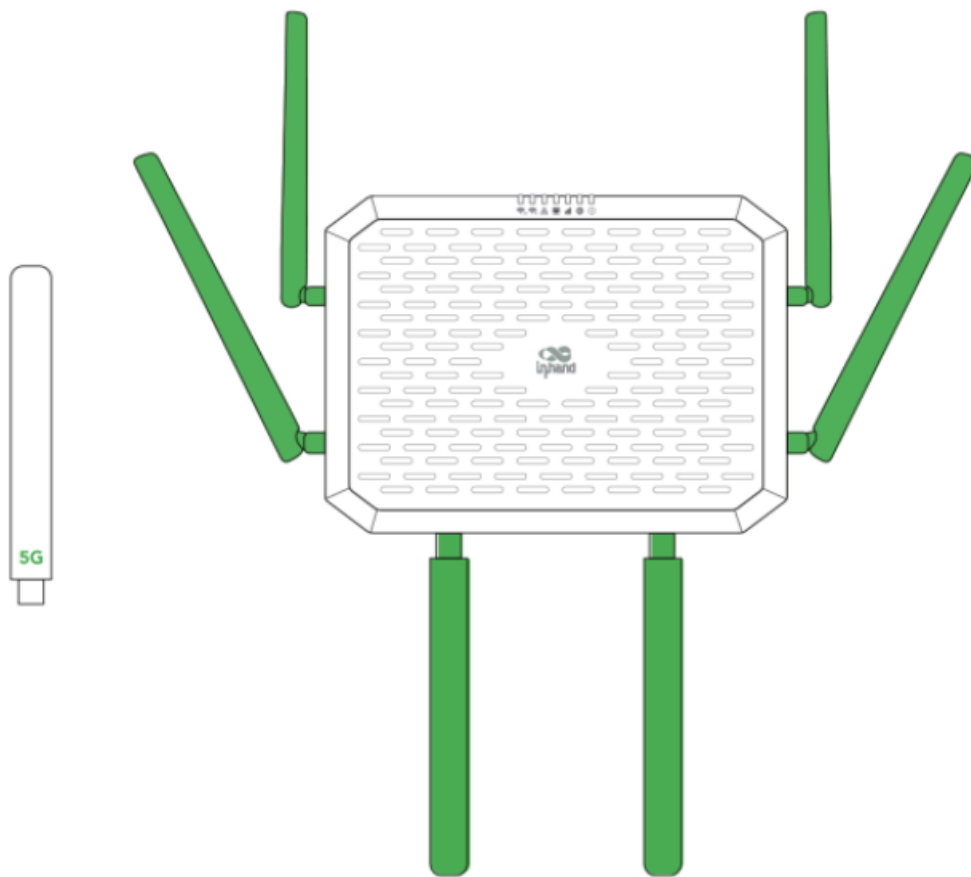- Attach all the 5G antennas to the SMA connectors. The 4 Wi-Fi antennas are built in.

Fig. 3-2 Install the Antennas

Install the 5G FWA02

Desktop Installation

1. Ensure the selected desktop area is free from obstructions to provide adequate space for the device.
2. Verify the correct installation of the SIM card, antennas and power cable.
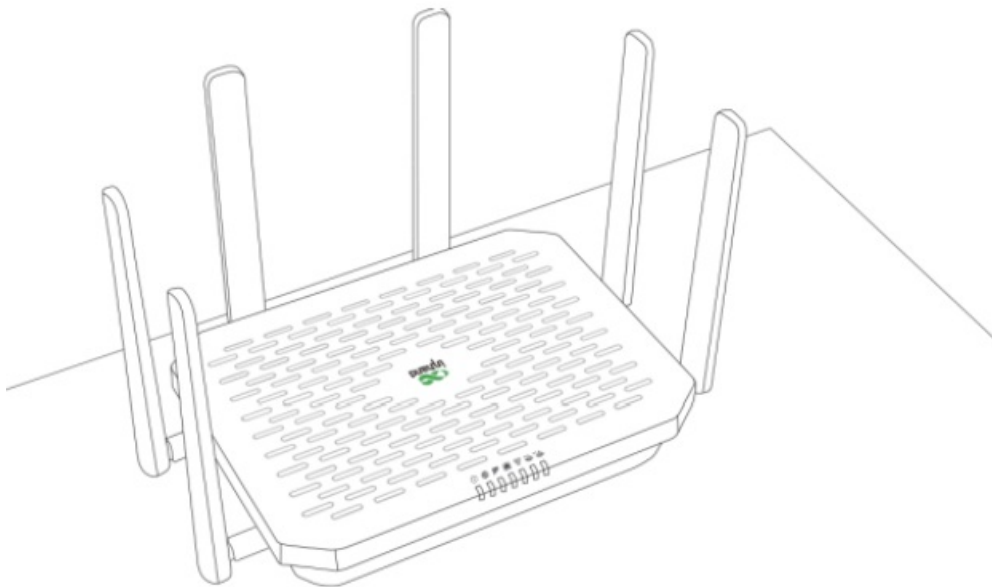3. Place the device steadily on the tabletop.

Fig. 3-3-1 Desktop Installation

Wall-mounted Installation

1. Use a drill or an appropriate tool to pre-drill holes at the marked positions on the wall. Ensure that the hole dimensions are suitable for the expansion screws you are using. Insert the expansion screws into the pre-drilled holes and gently tap or rotate them with the appropriate tool until the expansion screws are securely fastened to the wall.
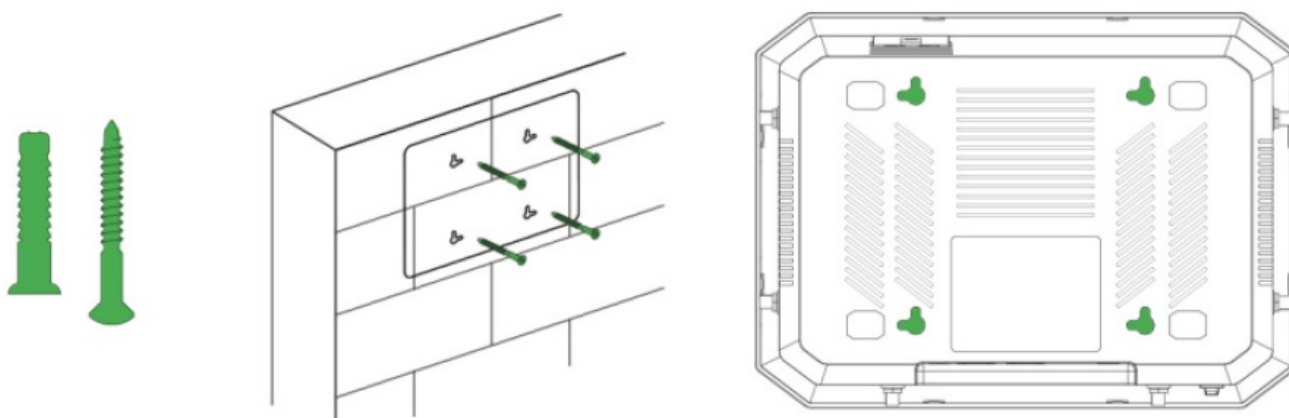

Fig. 3-3-2-a Pre-drill holes

2. The mounting holes at the bottom of the device are L-shaped. Align the mounting holes and push down gently to complete the fixation.
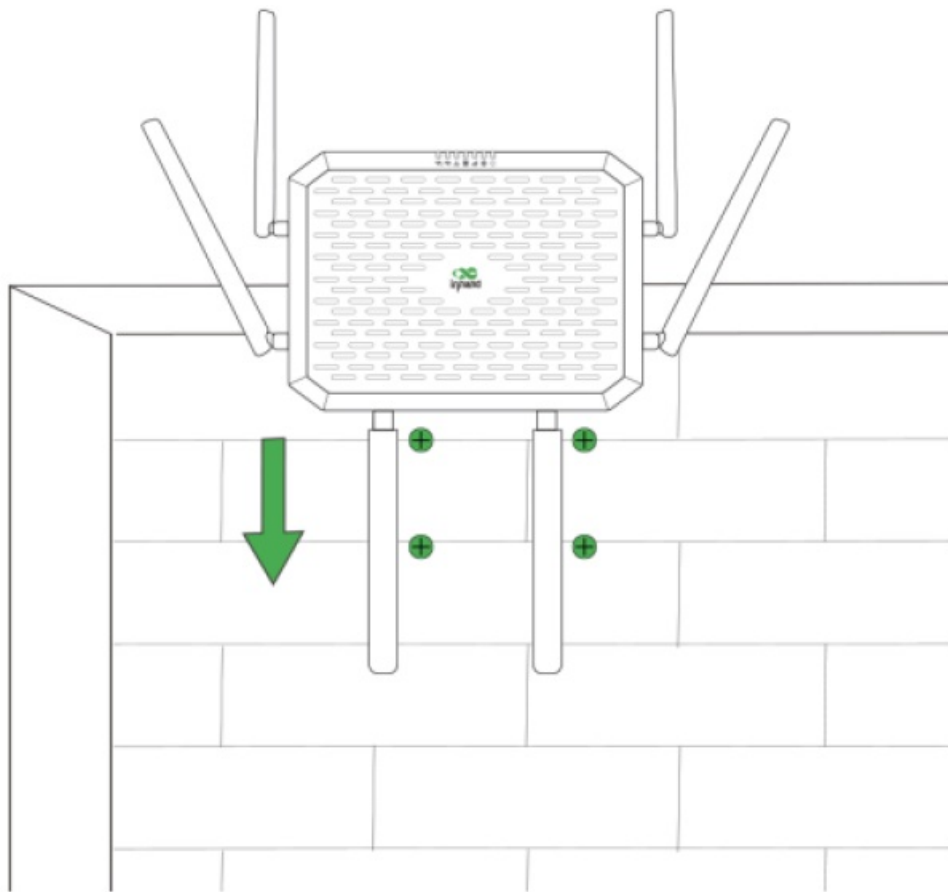
Fig. 3-3-2-b Push the device

Power Cable Installation

- Insert one end of the power adapter into the power outlet and the other end into the device's power interface, then flip the power switch.
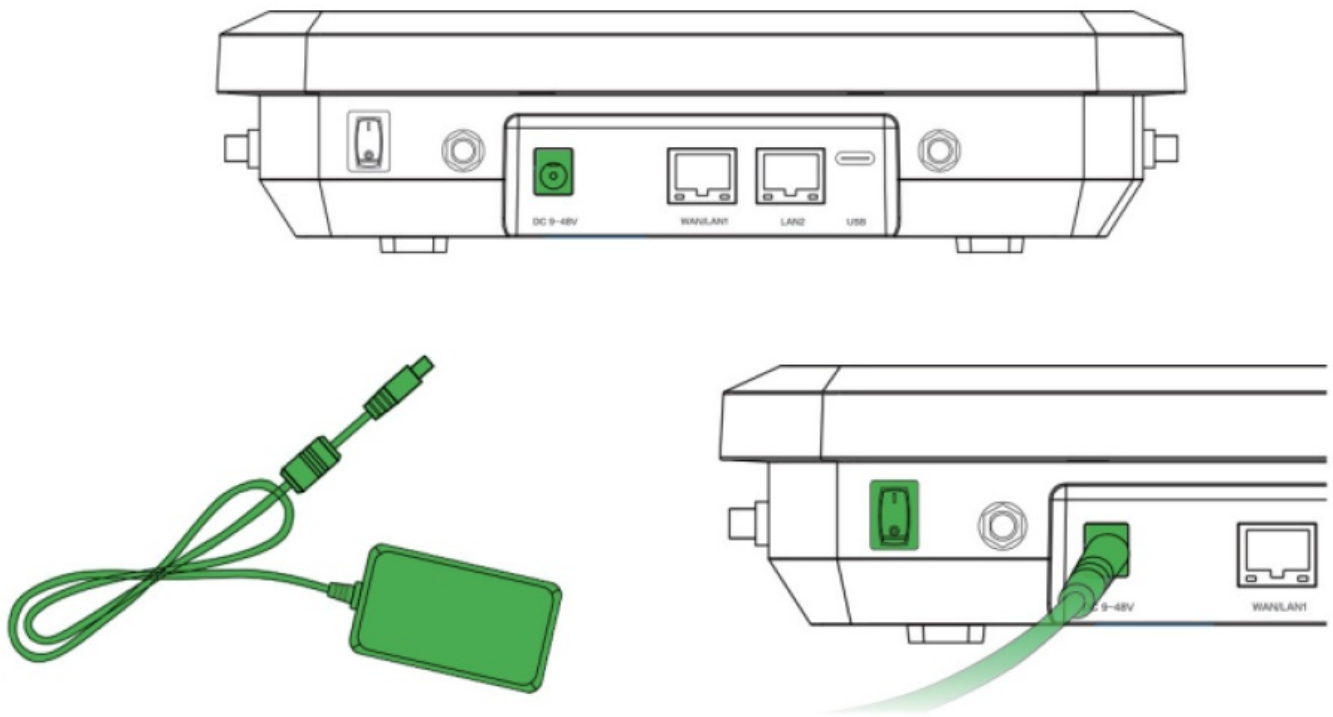- If the power switch is on, the Power LED ⏻ will turn on.

Fig. 3-4 Power on the device

Inspection after Installation

Check the Device Installation

- desktop installation: ensure that the device won't fall due to cable dragging.
- wall-mounting: make sure it is securely mounted.

Check the Power Supply

1. Confirm that the power cord is in good contact and meets safety requirements.
2. Turn on the power switch to supply power to the device and confirm the device can work normally.

Access the Internet

- 5G FWA02 supports two ways of accessing the Internet: cellular and wired.

SIM Card Dial-up
Connect via APP

1. Insert the SIM card while the device is powered off, then connect the antennas to the device, and log in to the InCloud APP.
2. Log into the InCloud APP. Clicking the "Device" directory below to enter the [Device] page and click the menu button in the upper right corner, after select [Add Device]. You can scan the QR code on the FWA02 to add the device.
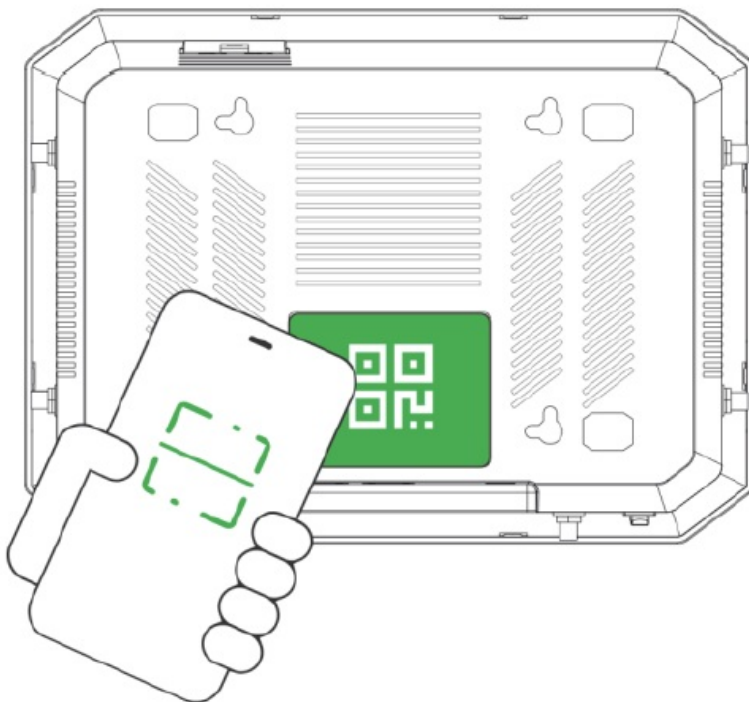
Fig. 4-1-1 Scan the QR Code to add the device

3. Once you successfully scan the QR code, proceed to configure the device's name, serial number, and description information.

4. If the device fails to connect to the network after adding it, you can click "Configure local device" to set up the device for cloud connectivity. The 5G FWA02 is configured with default Https access and Wi-Fi AP functionality.

Connect Via PC

1. You are supposed to power off the device first, then insert the SIM card into the card slot, connect the 5G antenna to the device, and establish a wired connection between the 5G FWA02 and your PC using an Ethernet cable.

2. Open a web browser and type the device's default address 192.168.1.1 into the browser's address bar. After entering the default username and password (adm/123456), you will access the device's web management interface.
   If your browser displays a security warning, navigate to hidden or advanced options and select "Proceed to website."
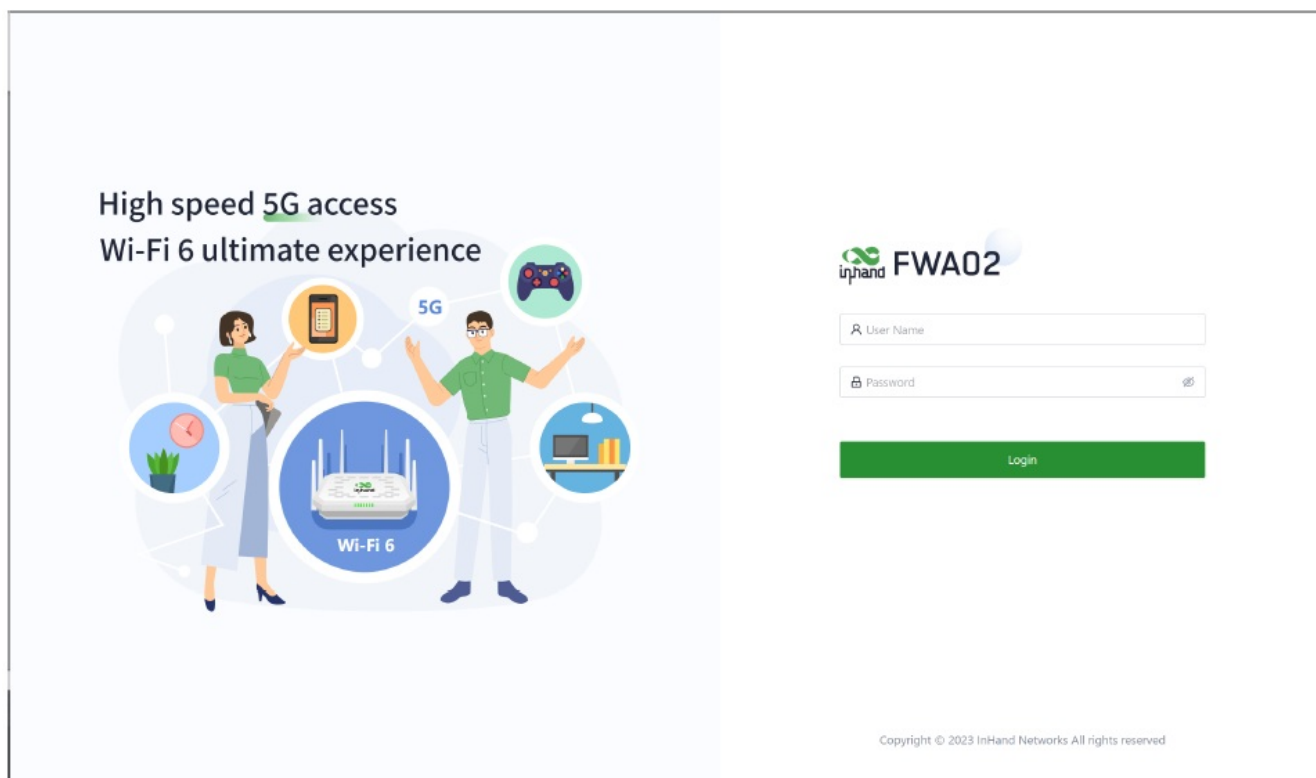
High speed 5G access
Wi-Fi 6 ultimate experience

5G

Wi-Fi 6

FWA02

R User Name

A Password

Login

Fig. 4-1-2-a Web Login

3. Go to the "Internet" section in the left navigation bar. Click the "Edit" button next to the "Cellular" option to configure the dial-up parameters. The device comes with the dial-up function enabled by default. If it doesn't establish a connection within a few minutes, re-enable the dial-up option.

Priority	Name	Status	Interface Type	IPv4 Type	Actions
	WAN	Enable	WAN	DHCP	Edit Delete
	Cellular	Enable	Cellular: SIM1	Auto	Edit Policy

Note: Modifying the configuration of the internet interface or adjusting the priority may cause the device network to be interrupted!
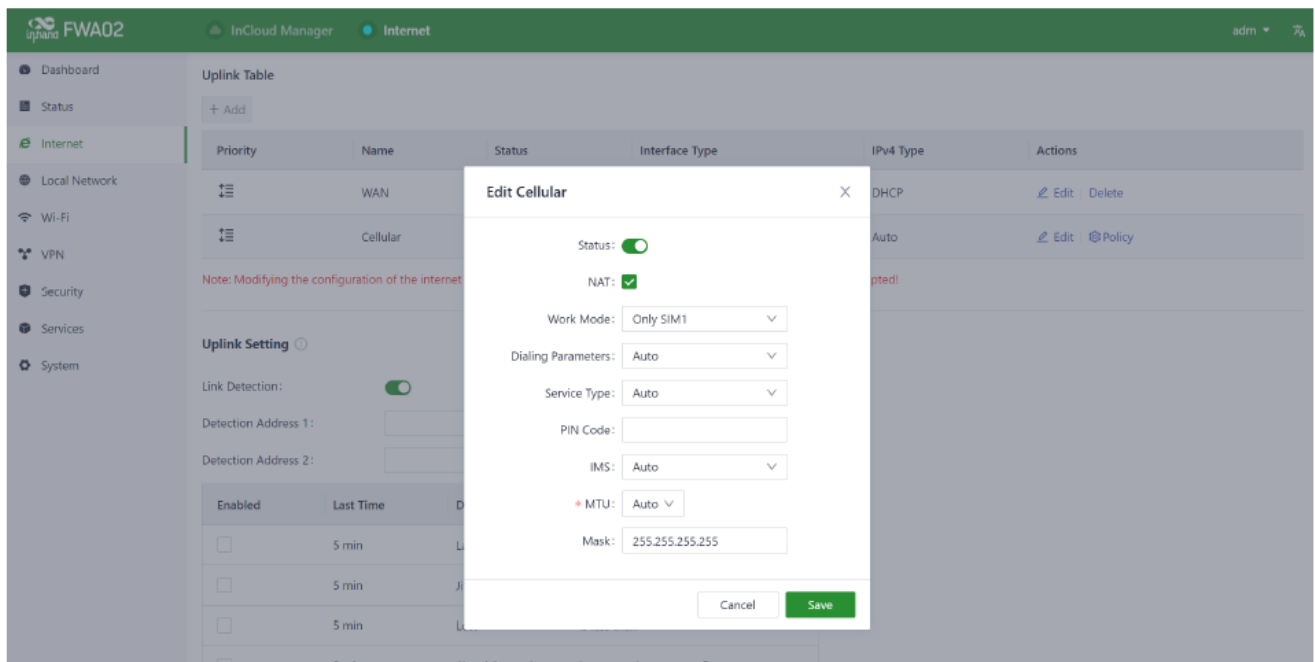
Fig. 4-2-1-b Uplink table

Fig. 4-2-1-c Configure the APN parameters

4. To verify the dial-up status, go to the "Interface Status" section located in the "Dashboard." The device has successfully connected to the Internet when the "Cellular" icon turns green. You can click on the "Cellular" icon to access information like signal strength, IP address, and data usage.
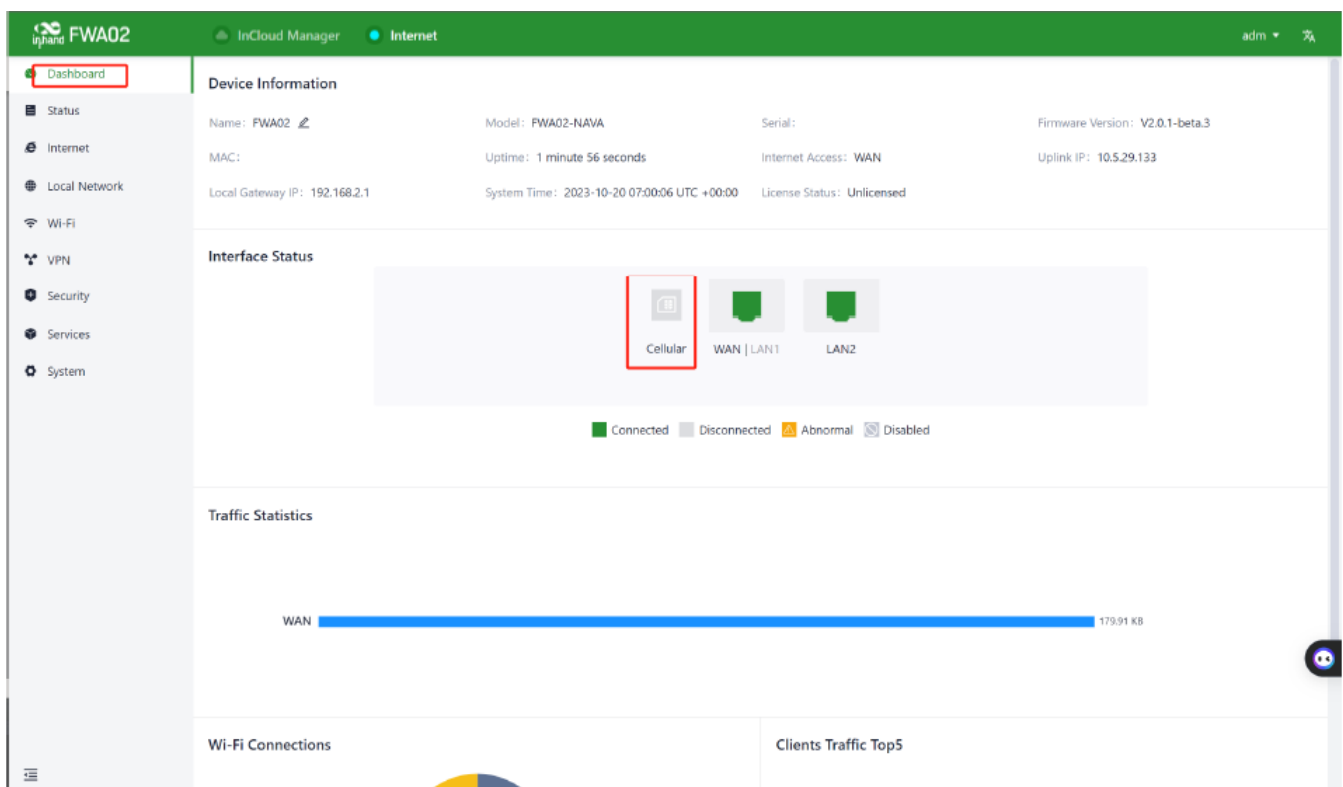

Fig. 4-2-1-d Check the cellular interface

Wired Networking
Connect via APP

1. Insert the SIM card while the device is powered off, connect the antennas to the device, and log in to the InCloud APP.

2. Navigate to the "Device" section below to access the [Device] page, then click the menu button in the upper right corner and select [Add Device]. Then scan the QR Code on the 5G FWA02 to add the device.
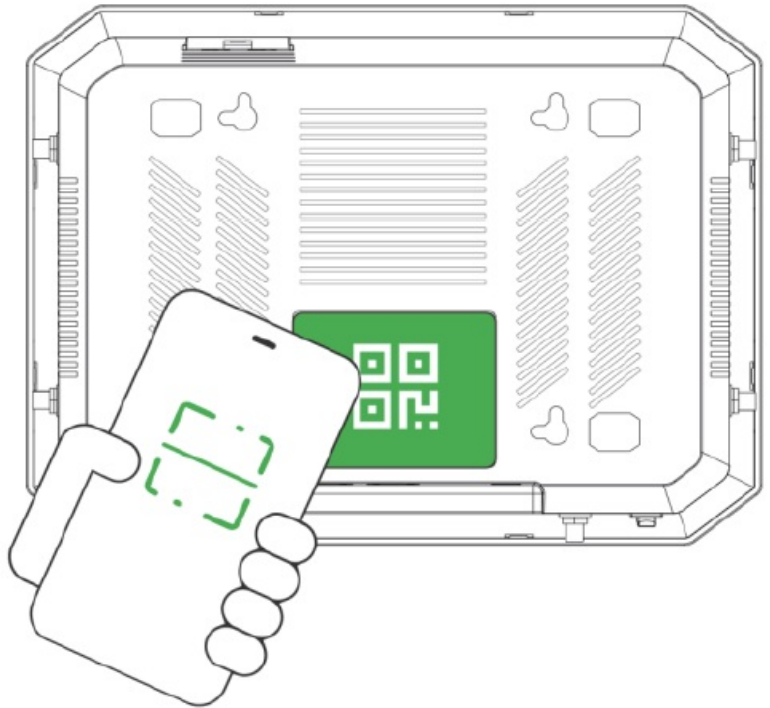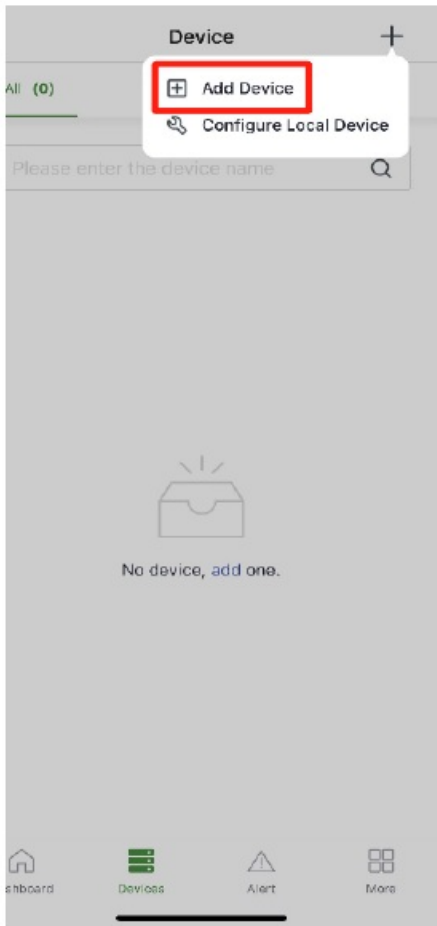

Fig. 4-2-1 Scan the QR Code to add the device

3. Once you successfully scan the QR code, proceed to configure the device's name, serial number, and description information.
4. If the device fails to connect to the network after adding it, you can click "Configure local device" to set up the device for cloud connectivity. The 5G FWA02 is configured with default Https access and Wi-Fi AP functionality.
5. Scan the QR code on the unit's nameplate, and the app will establish a Wi-Fi connection with the FWA02 automatically.
6. Once the connection is established, the app will log in to the device, and you will be directed to the network configuration interface. Confirm the information and click 'Submit.'

Connect via PC
After powering on the device, connect your PC to the device's LAN port using an Ethernet cable, and perform the following steps on your PC.
The device's LAN port has DHCP Server functionality enabled by default. Once the PC has automatically obtained an IP address, please ensure that your PC and 5G FWA02 are in the same address range.
If your PC fails to obtain an IP address automatically, please configure it with a static IP address using the following parameters:

- IP Address: 192.168.2.x (Choose an available address within the range of 192.168.2.2 – 192.168.2.254).
- Subnet Mask: 255.255.255.0.
- Default Gateway: 192.168.2.1.
- DNS Servers: 8.8.8.8 (or your ISP's DNS server address)

1. Enter the default device address 192.168.2.1 in the browser's address bar. After entering the username and password (adm/123456), access the device's web management interface. If the page shows a security warning, click on the "Hide" or "Advanced" button and select "Proceed" to continue.
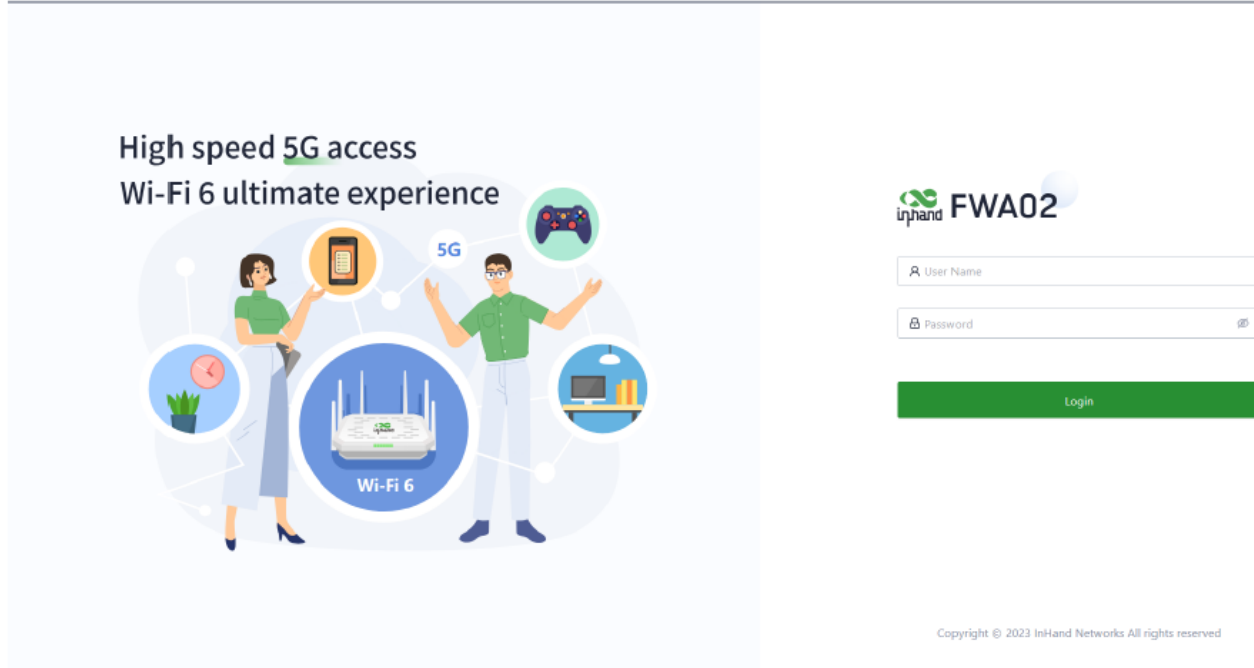

Fig.4-2-2-a Web login interface

2. Check the network in the "Dashboard Interface Status". The device connects to the Internet successfully if the "Cellular" or "WAN" icon turns green. Click the corresponding icon to view interface information such as signal strength, IP address and traffic consumption.

3. If this device cannot connect to a network, click "Internet Uplink Table Edit " to set up network parameters. The device enables the dial-up function and WAN by default, please wait for a few minutes to go online, and reenable the dial-up if it is not dialled.
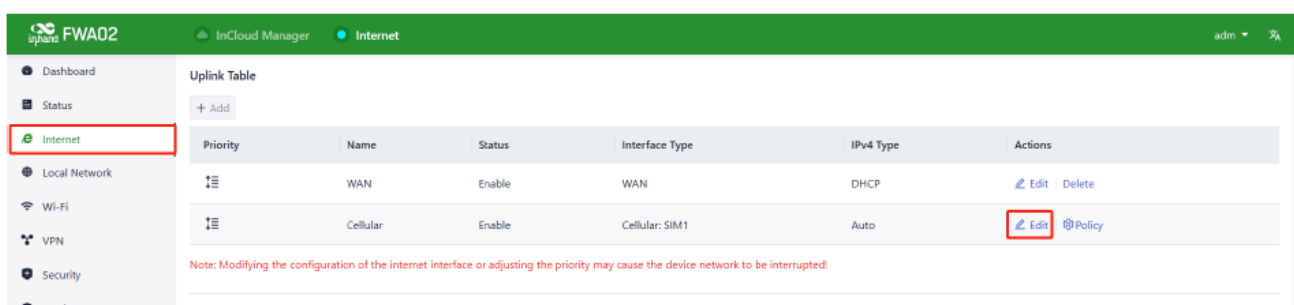

Fig. 4-2-2-b Edit the uplink interface

- DHCP: The DHCP service is enabled on the WAN port by default which means this device cannot connect to the Internet immediately if the upstream device connected to the WAN port does not have the DHCP server enabled.
- Static IP: Users can assign a static IP address obtained from the ISP or upstream network device manually.
- PPPoE: Users can set the PPPoE service on the WAN port and then this device can dial up to the Internet through the broadband service.

Fig. 4-2-2-c Configure the Uplink Parameters

4. Verify network connectivity via the Ping tool on the System/ Tools page.

Fig. 4-2-2-d Check the network connectivity

Remote Manage Platform

InCloud Manager
Register/Login the InCloud Manager

1. Open your web browser and visit InCloud at the following address: **https://star.inhandcloud.com/**. This will take you to the InCloud registration and login page. (We recommend using Chrome)
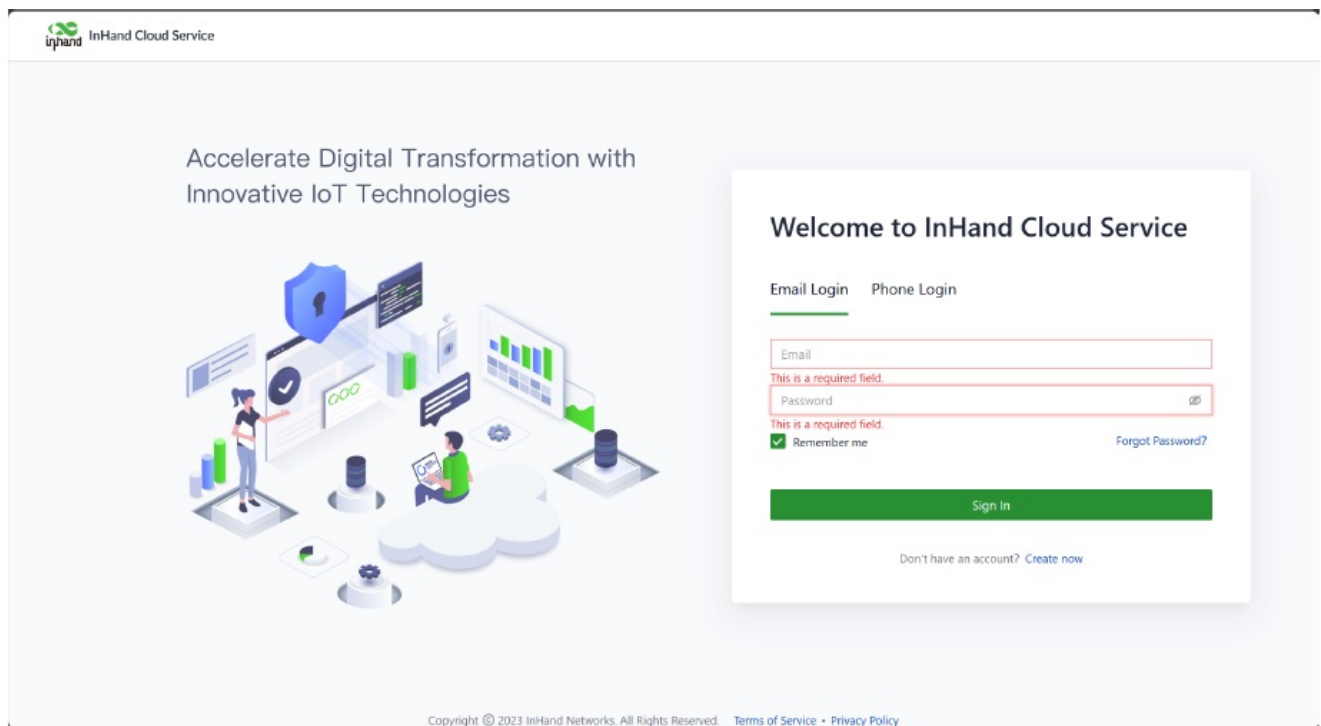
Fig. 5-1-1-a InCloud Manager Login Page

2. After registering, log in to the cloud platform using your registered email. Navigate to the "Security Settings" page where you can change your password and link your mobile phone number. Once your phone number is linked, you can use it for future logins to the cloud platform.
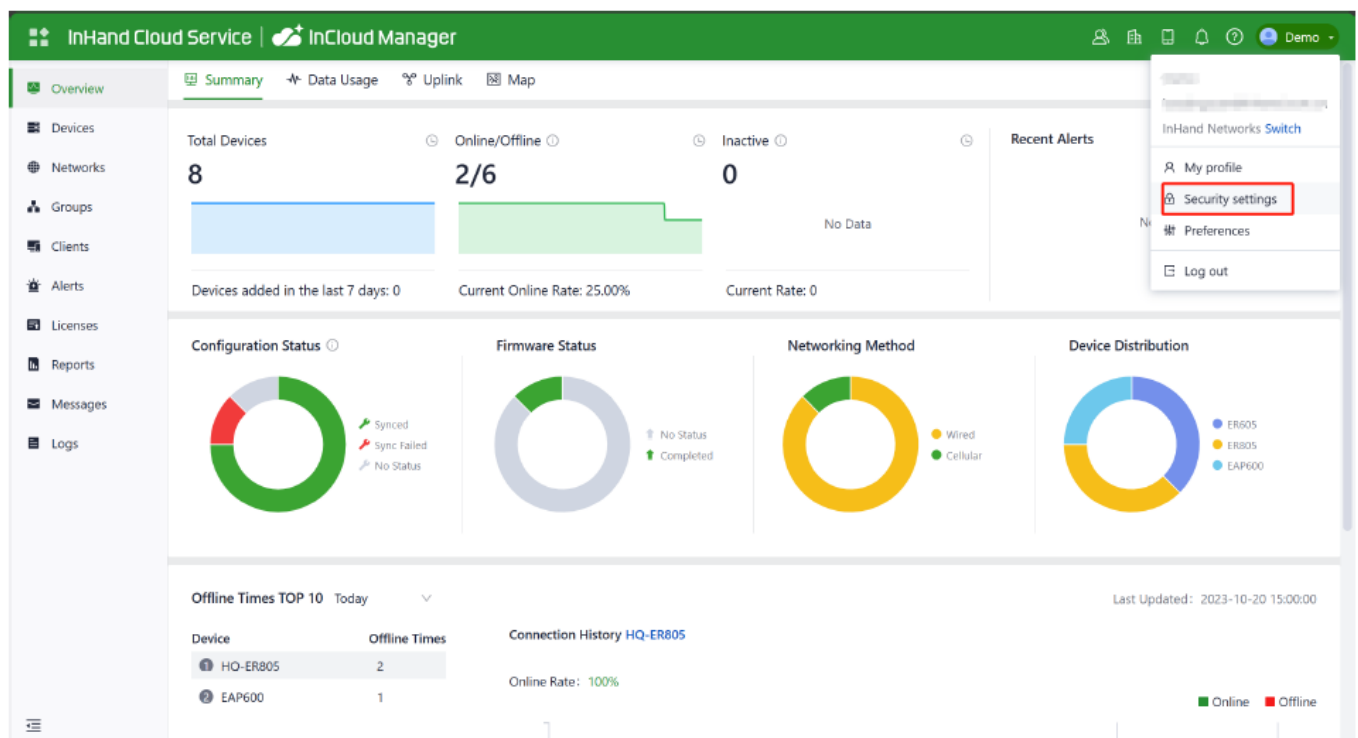

Fig. 5-1-1-b Bind a Mobile Phone Number

Adding Devices to the Platform

Log in to the InCloud Manager platform, then go to "Device" and click "Add" in the navigation menu. Fill in the device's serial number and MAC address to add it.
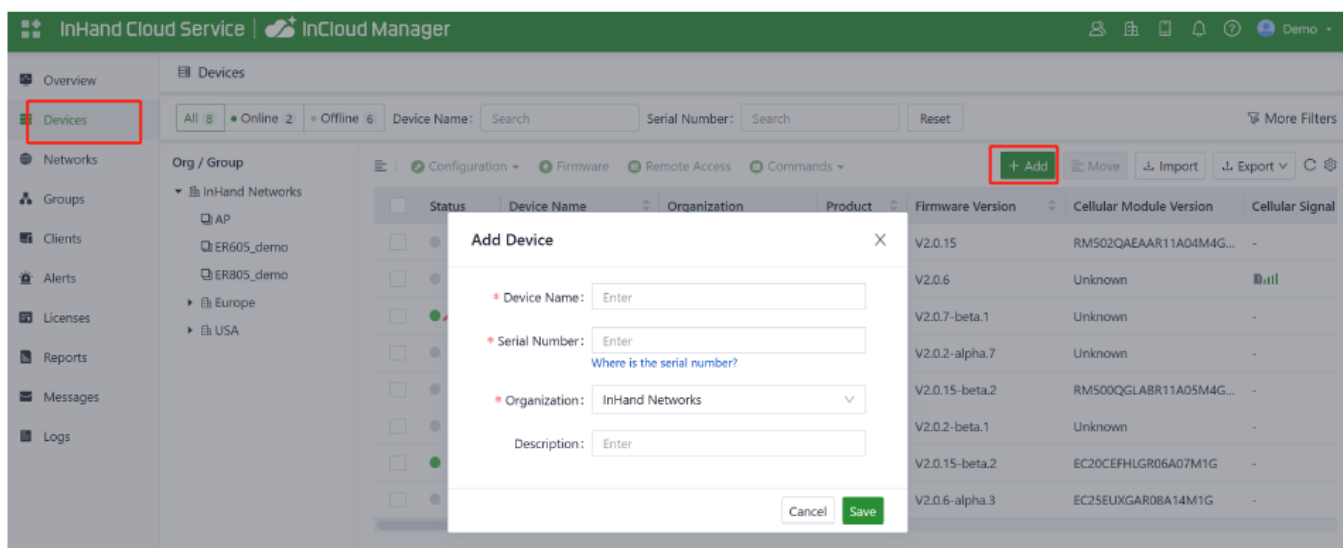
Fig. 5-1-2 Add a Device

Quick User Guide

Restore to Default Settings
Reset/Restore Remotely

- Log in to the InCloud Manager platform, navigate to "Device," and select "Command" from the menu. Click the "Restore to Factory" button, confirm the action, and the device will reboot and revert to its default settings.
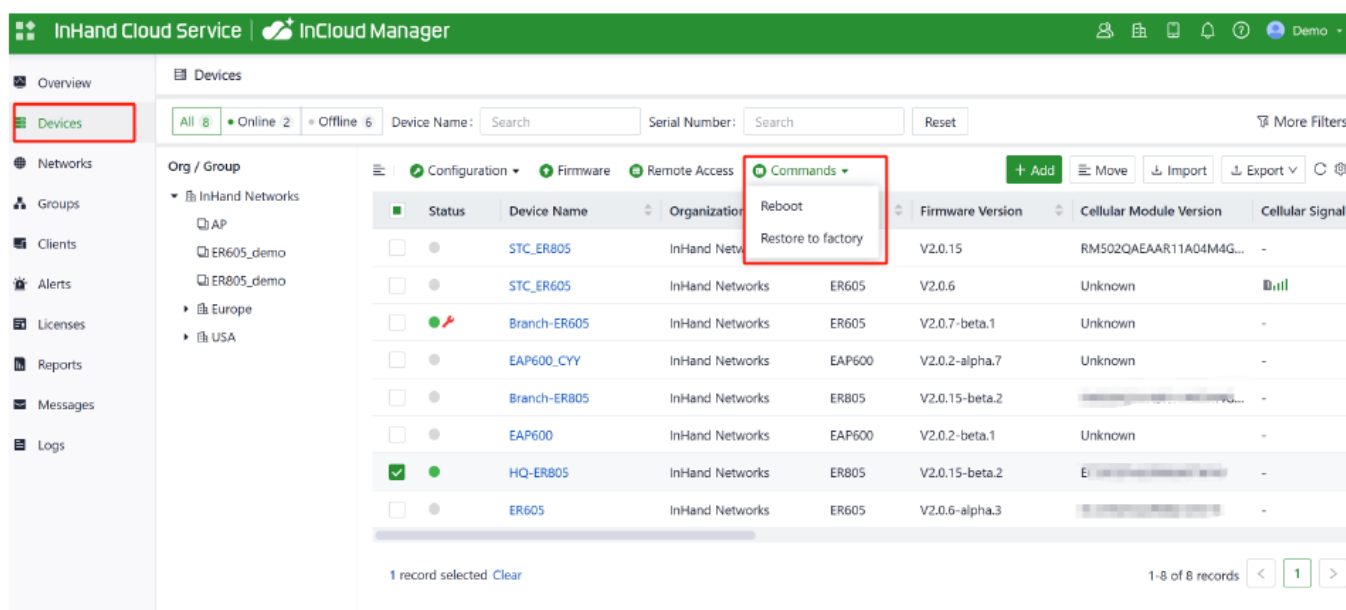

Fig. 6-1-1 Set the Device to Default Settings

Hardware Restore

1. After powering on the device, press and hold the reset button for 30 seconds, and the System indicator is solid blue. Please ignore the process after holding down the SYS indicator for the first time blue after holding the Reset button
2. Release the key and the blue flashes.
3. Press and hold the reset button again, release the solid blue light and enter the system startup phase.

Log and Diagnostic Data

- Login to InCloud Manager, navigate to "Device," select "Device Details," and click on the "Tools" menu in the navigation bar. Then, click the corresponding button to initiate the download of logs and diagnostic data.
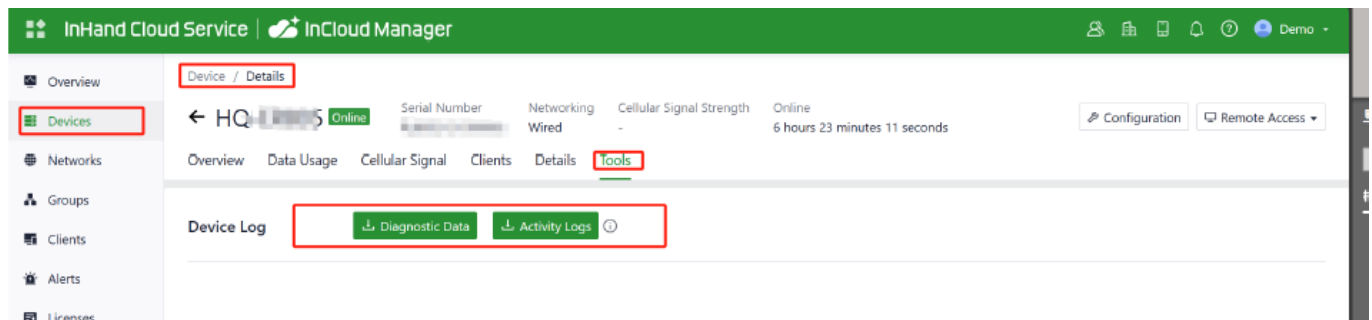

Fig. 6-2 Download the Logs

LED Indicators

Indicator	definitions	
System	Off	– Power off
	Steady in red	– Powering
	Blink in red	– System error
	Steady in green	– System working
	Blink in blue	– firmware updating
Cellular	Blink in red	– Unable to access the cellular network
	Steady in blue	– 4G cellular connection successful
	Steady in green	– 5G cellular connection successful
Signal	Off	– No signal value
	Steady in red	– Signal value is low
	Steady in blue	– Signal value is moderate
	Steady in green	– Signal value is excellent
WAN	Off	– Disconnected
	Steady in green	– Port works properly
	Blink in green	– Data transferring
LAN	Off	– Disconnected
	Steady in green	– Port works properly
	Blink in green	– Data transferring
Wi-Fi 2.4G	Off	– AP mode disabled
	Blink in green	– AP mode enabled

	Steady in green	– The STA device successfully connects to this device
Wi-Fi 5G	Off	– Disconnected
	Blink in green	– 5G AP function enabled
	Steady in green	– Wi-Fi clients connected successfully

https://help.inhand.com/portal/en/kb/articles/5g-fwa02-product-quick-guide

Documents / Resources

Inhand FWA02-NAVA Express Systems and Peripherals [pdf] User Guide
FWA02-NAVA, FWA02-NATM, FWA02-EUNR, FWA02-NAVA Express Systems and Peripherals
, FWA02-NAVA, Express Systems and Peripherals, Systems and Peripherals, Peripherals

References

- **help.inhand.com/portal/en/kb/articles/5g-fwa02-product-quick-guide**
- **star.inhandcloud.com/**
- **User Manual**