

User's Manual

IR People Counter

FP111 (WiFi Version)

Statement

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Notice

- The parameters used in the screenshots shown in this manual are only used as setting examples for reference and may not be completely consistent with the actual situation. Please set the parameters according to your actual needs.
- The housing is prohibited from being disassembled during operation. Anti-disassembly reminder: Be careful when manually disassembling the housing of the device to avoid damage to the device. This is a Class A product. In a living environment, this product may cause radio interference. In this case, the user may need to take practical measures to deal with the interference.
- Due to different software versions, the screenshots shown in this manual may not be exactly the same as the web interface of the product you purchased. Please configure your product according to the actual web interface.
- If you find that there is a shortage or damage to any accessories, please contact your local dealer in time. The product pictures/screenshots in this manual are for reference only and are intended to help users install and configure the product. Please refer to the actual product/actual interface for details.



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Table of Contents

1. Product Introduction	4
1.1 Product Introduction	4
1.2 Product Features	4
2. Product Structure	5
2.1 Packing List	5
2.2 Product size	6
2.3 Product Power Supply	6
2.4 Appearance and Function	7
3. Networking Configuration	10
3.1 Configuration Notes	10
3.2 Web Page Networking Configuration	10
3.3 Mobile Phone Networking Configuration	13
4. Installation Instructions	16
4.1 Installation Instructions	16
4.2 Factors Affecting Accuracy	16
4.3 Installation Method	16
5. Installation Steps	17

1. Product Introduction

1.1 Product Introduction

The IR people counter (WiFi version) is mainly based on infrared blocking counting. The infrared receiving module automatically identifies the walking direction of pedestrians by the infrared blocking direction and generates a count. It is widely used in shopping malls, retail stores, public transportation, scenic spots, libraries, museums, restaurants, factories, supermarkets, parks, buildings, toilets, etc.

1.2 Product Features

- ◆ **Accurate Counting in Multiple Scenarios:** Supports accurate counting of single people walking normally, passing quickly, and elderly people walking slowly.
- ◆ **Simple Installation Experience:** Supports WiFi 2.4G/5G networks. After configuration, just paste the pairing code and use it. There is no entry level to operation.
- ◆ **Flexible Power Supply Options:** Supports Type-C interface power supply and battery charging; comes standard with 4 18650 batteries, which can be used continuously for up to one year.
- ◆ **Convenient App Management:** Once the device is connected to Bluetooth, you can upgrade to the latest version with a single click in the app. If a device malfunctions, you can also perform a one-click self-diagnosis.
- ◆ **App Data Query:** In standalone mode, you can query multi-dimensional data (hourly data for the last 720 hours, daily data for the last 730 days, weekly data for 100 weeks, monthly data for the last 120 months, and annual data for the last 10 years) through the mobile app, and support exporting to CSV files.
- ◆ **Remote Data Control:** View data anytime on the remote platform, eliminating the need for on-site visits. Multi-timeframe statistics are supported (with a free cloud platform, data can be viewed every 5 minutes, half an hour, hour, day, week, month, and year), and reports can be generated or exported to Excel.
- ◆ **Flexible Operating Modes:** The device can freely switch between standalone and networked modes to meet the needs of different scenarios.
- ◆ **Open Interconnection:** Third-party integration protocols are available, allowing data to be pushed to any server.

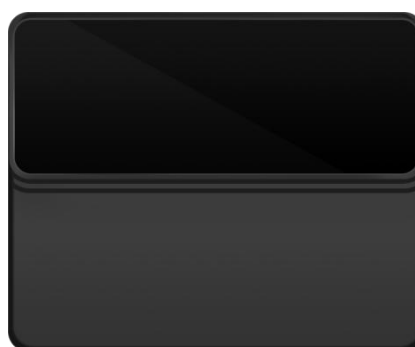
- ◆ **Convenient Remote Operation:** Multiple key parameters are automatically synchronized with the cloud, allowing users to remotely configure the device through the cloud platform for more efficient management.
- ◆ **Secure Data Upload:** Data transmission is stable and reliable, eliminating the risk of privacy leaks and supporting resumable transmission even after network disconnection.
- ◆ **Strong Anti-Interference Capability:** Supports normal operation with ESA alarms and other infrared bands.

2. Product Structure

2.1 Packing List



Receiver*1



Transmitter*1



18650 batteries *4



3M adhesive *4



Charger *1

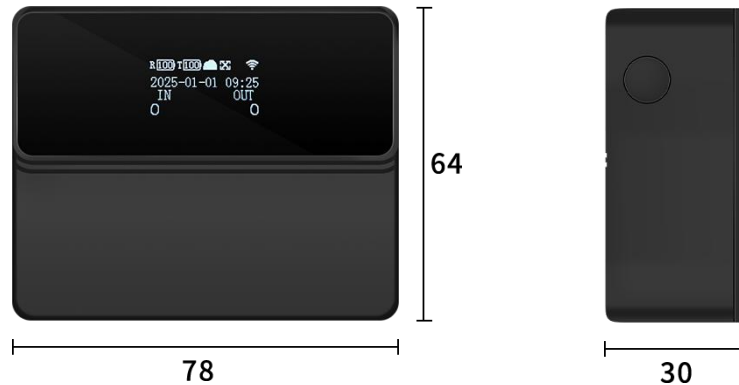


Quick Guide *1

⚠ If any of the above items are damaged or lost, please contact your supplier in a timely manner.

2.2 Product Size

Unit: mm



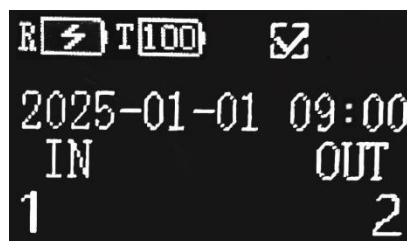
2.3 Product Power Supply

Product power supply mode: supports Type-C interface and 18650 battery.

⚠ The device only supports 18650 batteries, and the indicator light will turn on if the battery is reversely connected.

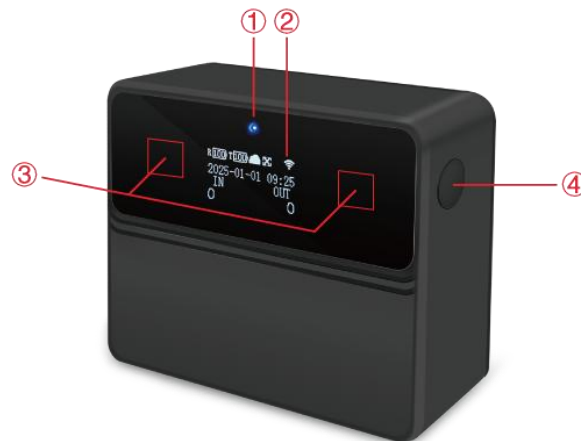
When the device is plugged into a USB port, it will display in three states: Charging, Completed, and Constantly Powered.

1. Charging: The battery icon will display a lightning bolt.
2. Charging Completed: The battery icon will display the number 100.
3. Constantly Powered: The battery icon will display the number 100.



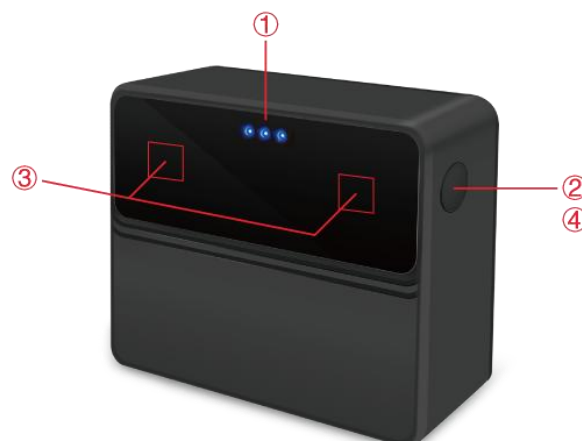
Charging interface

2.4 Appearance and Function



Receiver

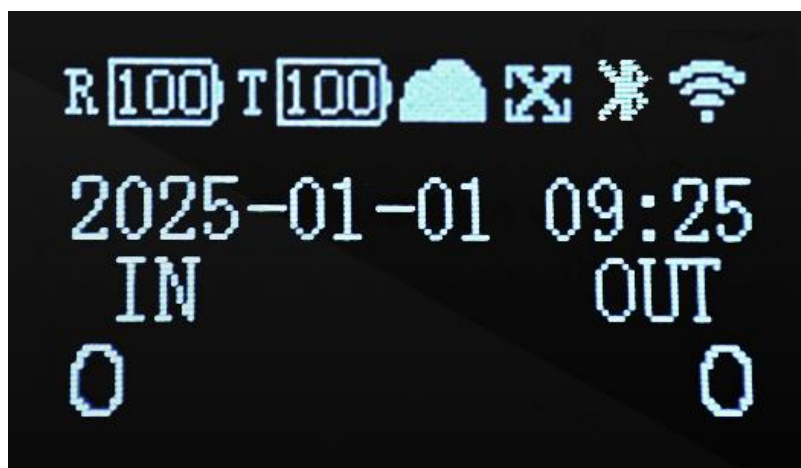
Name	Explain
①LED indicator light	Blue indicator light: The indicator light flashes when the receiver does not receive the transmitter signal or the battery is low.
②OLED display	Press the button: Trigger the OLED screen to light up. If there is no operation for more than 10 seconds, the display will automatically turn off.
③Infrared receiver module	Receive the infrared signal sent by the transmitter.
④Button	A short press wakes up the display. A long press for 3 seconds turns on Bluetooth, and the Bluetooth icon flashes. A long press for 10 seconds restarts the device.



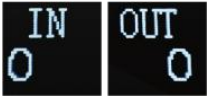
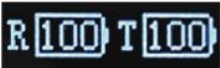
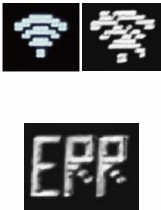
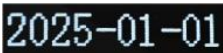
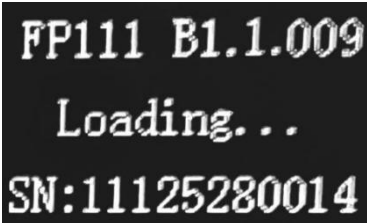
Transmitter

Name	Explain
① Status indicator	Blue indicator light: When the battery is low, the indicator light flashes.
② Button	Press once, and one indicator light will illuminate, indicating the first gear position. Press once, and two indicator lights will illuminate, indicating the second gear position. Press once, and three indicator lights will illuminate, indicating the third gear position.
③ Infrared transmitter module	Transmits infrared wireless signals.
④ Transmitter power switch (factory default: low power consumption, generally no need to change)	Level 1: Low Power: Default setting. Level 2: Medium Power: Press the button once to switch to Level 2, and both indicators will flash. Level 3: High Power: Press the button again to switch to Level 3, and all three indicators will flash.
Note: The higher the power, the longer the transmission distance and the shorter the device standby time.	

1st gear <Close distance>	Indoors: 1-10m	Outdoors: 1-6m
2nd gear <Medium distance>	Indoors: 1-12m	Outdoors: 1-8m
3rd gear <Long distance>	Indoors: 1-15m	Outdoors: 1-9m



Product Screen

Pattern	Explain
	IN represents the number of people entering, and OUT represents the number of people leaving.
	R represents the power level of the receiving end, T represents the power level of the transmitting end, and lightning represents charging.
	The platform connection status icon displayed on the device screen has three states: successful data upload, device not linked to the platform, and data upload failure. A cloud with an upload arrow indicates data is uploading. An X indicates data upload failure (check your WiFi network/server configuration).
	√ indicates successful pairing with the transmitter X indicates the device is out of focus
	The WiFi icons represent successful and failed connections. The WiFi strength of the connection is divided into four bars, with four bars indicating the strongest WiFi signal and one bar indicating the weakest. ERR: If the "Module Not Responding" icon appears in the "Signal" position on the screen, communication between the MCU and the module is not working properly. If "No Signal" appears in the "Signal" position, the WiFi signal between the module and the router is very weak or not connected.
	If the Bluetooth icon flashes, it means Bluetooth is on. If the Bluetooth icon does not flash, it means the device is connected. Turn Bluetooth on and off (1) Turn Bluetooth on When the device's Bluetooth is not on and the device screen does not display Bluetooth, long press the right button for 2s to 8s and the Bluetooth icon will appear on the device screen. Release the button and the device will turn on Bluetooth. (2) Bluetooth connection and disconnection judgment Bluetooth disconnected state: When Bluetooth is on and not connected, the Bluetooth icon on the screen will be displayed in a 1s cycle. Bluetooth connected state: When Bluetooth is on and connected, the Bluetooth icon on the screen will be constantly lit. (3) Turn Bluetooth off When the device's Bluetooth is on (the screen displays the Bluetooth icon), long press the right button for 2s to 8s and the icon on the screen will go out. Release the button and the device will turn off Bluetooth.
	If the server time is not synchronized, the default value is 2025-01-01. If the server time is successfully synchronized, the server time is displayed.
	Power-on interface: The device automatically powers on after powering on. The blue indicator light will illuminate for 1 second before turning off, and the screen will display the power-on interface. FP111 is the device model, B1.1.009 is the device version number, and SN:XXX is the device's unique identification code.



Sleep interface: The device will not be counted during non-business hours. The non-business hours display icon is between "IN" and "OUT" in the third row.

3. Networking Configuration

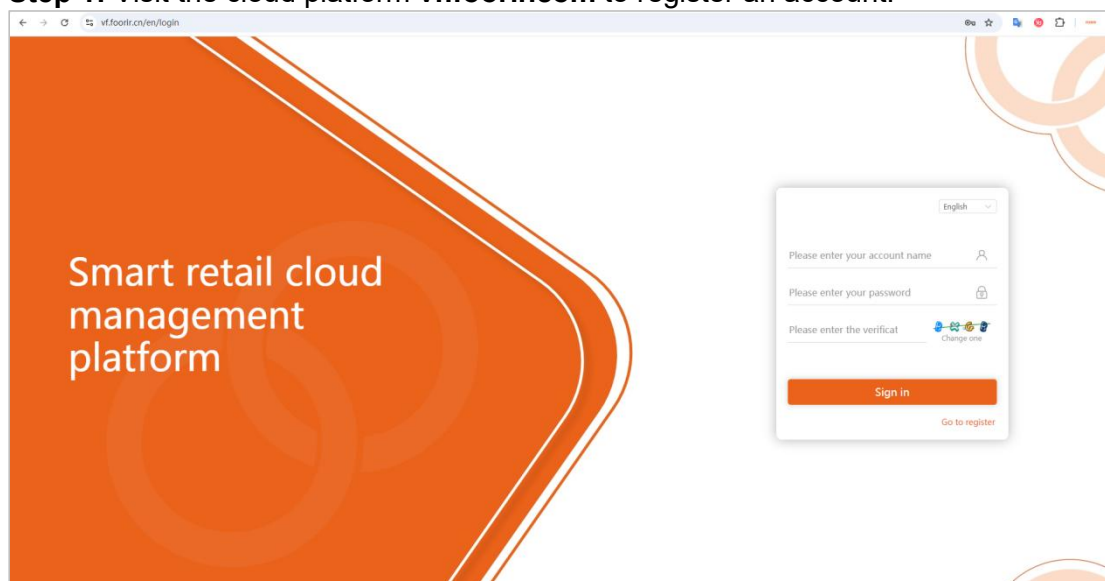
3.1 Configuration Notes

- ❖ **Network configuration: It consists** of web page network configuration and mobile phone network configuration.
- ❖ Perform networking configuration before device installation
- ❖ Before configuration, you need to go to the web page to bind the device. **For specific steps, refer to the web page network configuration**
- ❖ configuring mobile phone network , you need to fill in the accurate server address and port
- ❖ If the device is pushed to a third-party server, please skip the web configuration step

⚠ If there are any rules, restrictions, or DNS-related settings on the network , the device may not be able to successfully connect to the server.

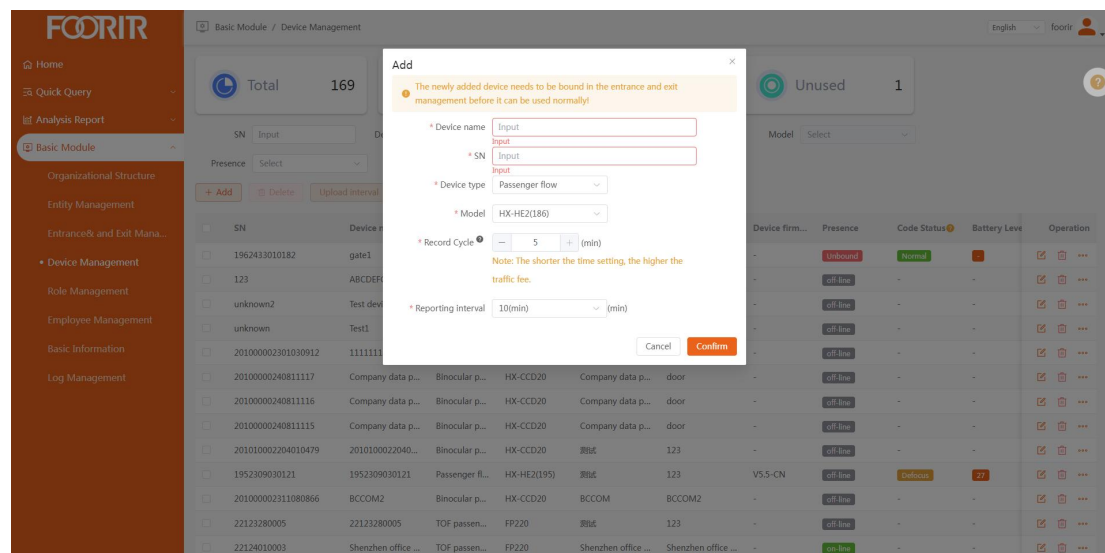
3.2 Web Page Networking Configuration

Step 1: Visit the cloud platform **vf.foorir.com** to register an account.

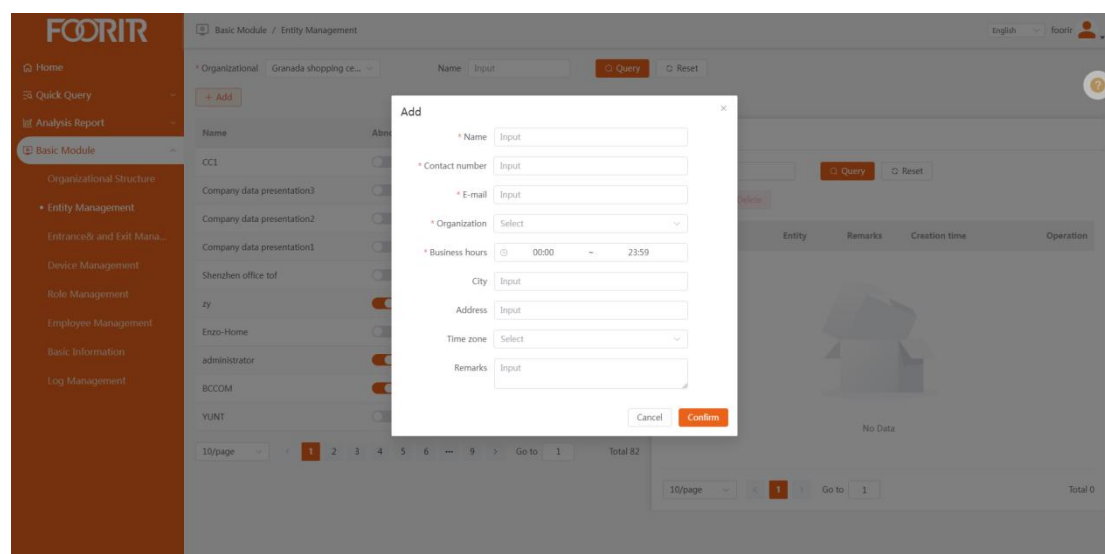


Step 2: Add a device, select "Basic Module- > Device Management- > Add Device"

- ⚠ The device name is recommended to fill in the device installation location
- ⚠ The serial number is the unique identification code of the device and must be filled in strictly according to the serial number displayed on the device
- ⚠ Check the serial number : refer to < **Boot interface SN** > and the label on the back of the receiver.

**Step 3: Create an entity , select "Basic Module- > Entity Management- > Add Entity"**

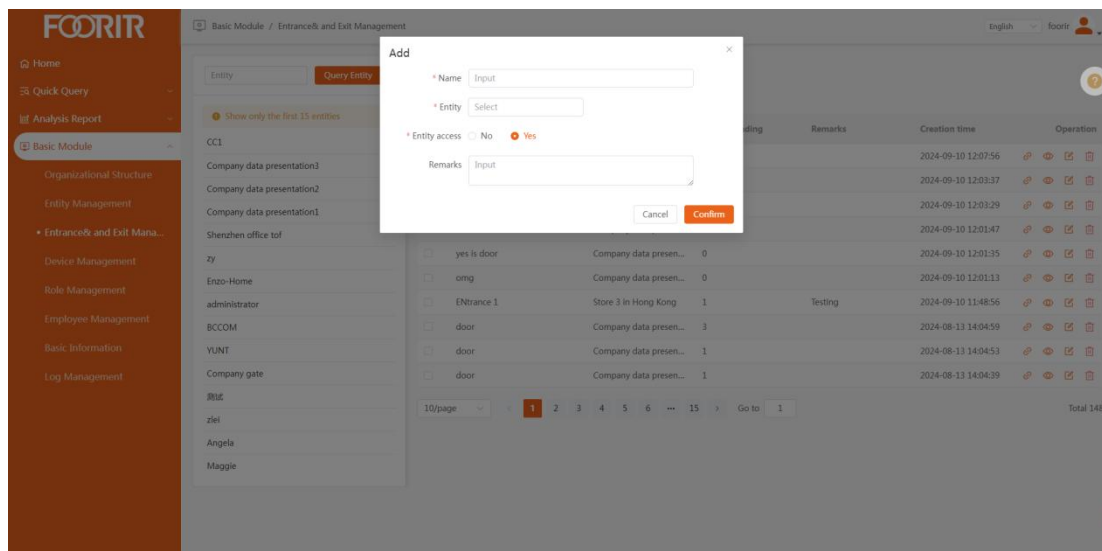
- ⚠ Email: used to push abnormal status of the device
- ⚠ Organizational structure: Select the default structure
- ⚠ Business Hours: Used to synchronize device working hours, counted during business hours and not counted outside business hours.
- ⚠ Time zone: used to synchronize device time. It is selected according to the local time zone.



Step 4.1: Create an entrance and exit, select "Basic Module- > Entrance and Exit Management- > Add Entrance and Exit"

⚠ **Belonging entity: Select the created entity**

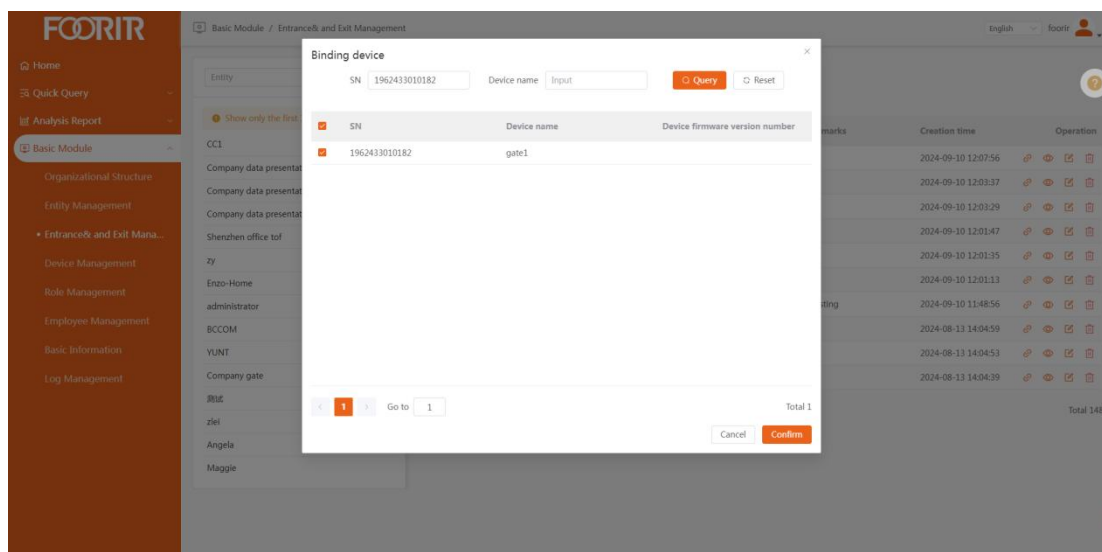
⚠ **Physical entrance and exit: Select "Yes"**



Step 4.2: Bind the device, select the entrance and exit to be bound, click the binding icon at the back, enter the binding page, check the device to be bound, and click "Confirm"; the web networking configuration is completed.

⚠ **After completing this step, you can configure the mobile phone network.**

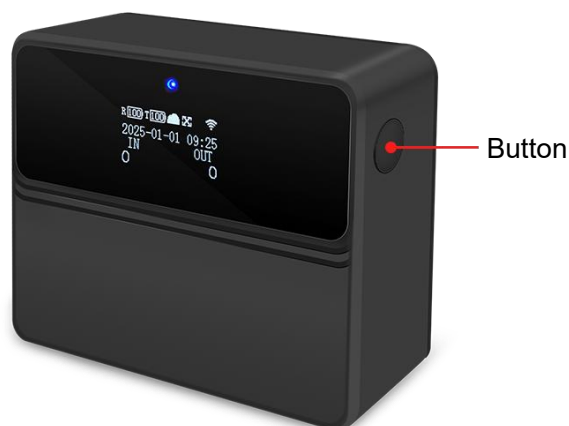
☐	Name	Entity	Device binding	Remarks	Creation time	Operation
☐	A	CC1	1		2024-09-10 12:07:56	  



3.3 Mobile Phone Networking Configuration

Step 1: Activate Bluetooth.

Tap this button to activate Bluetooth on your device.

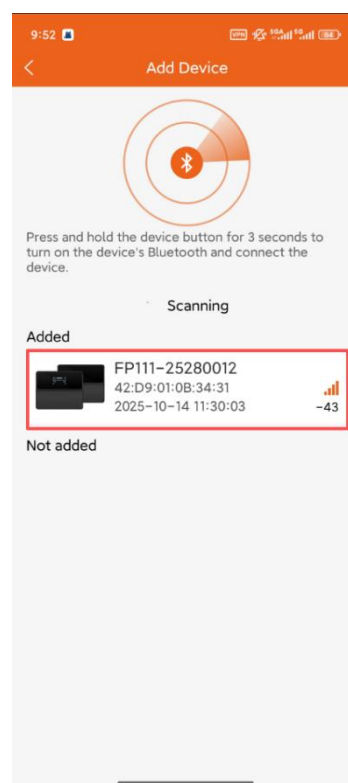
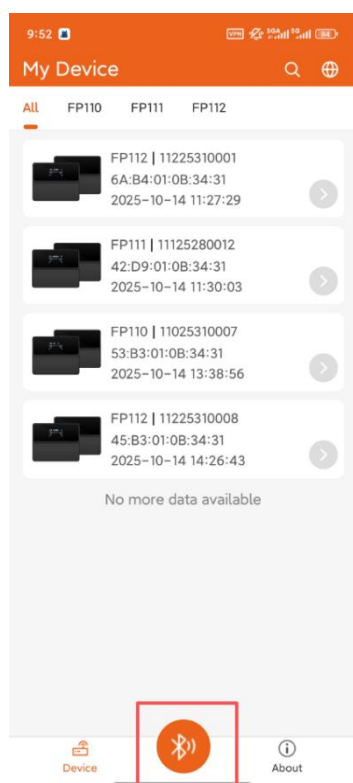


Step 2: Search and add a device.

Scan for Bluetooth devices and find your device in the list.

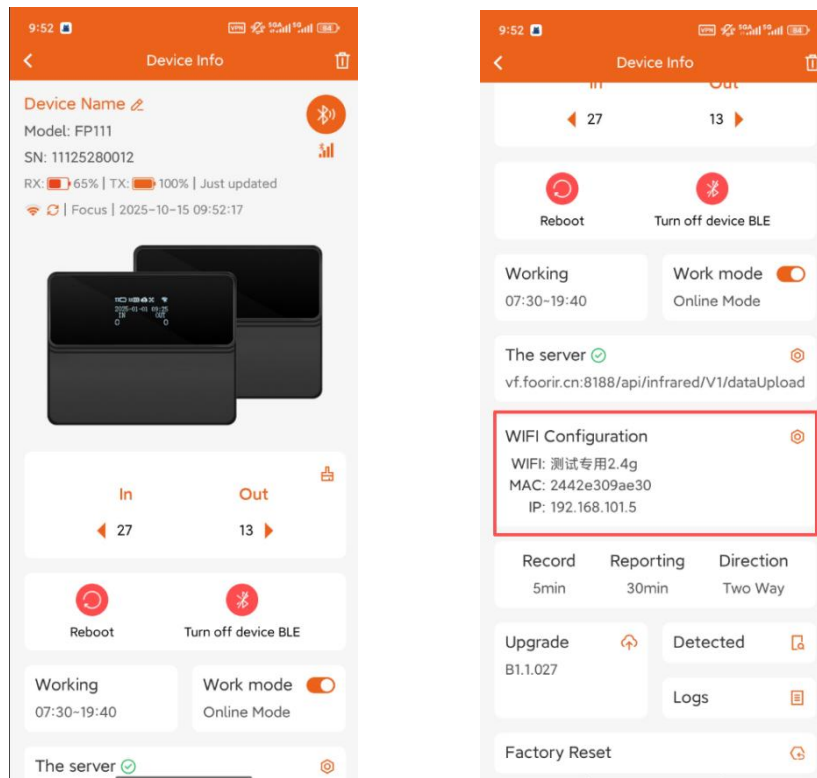
The device name format is: model number + the last 8 digits of the serial number (which can be found on the device label).

Select the device to add it.

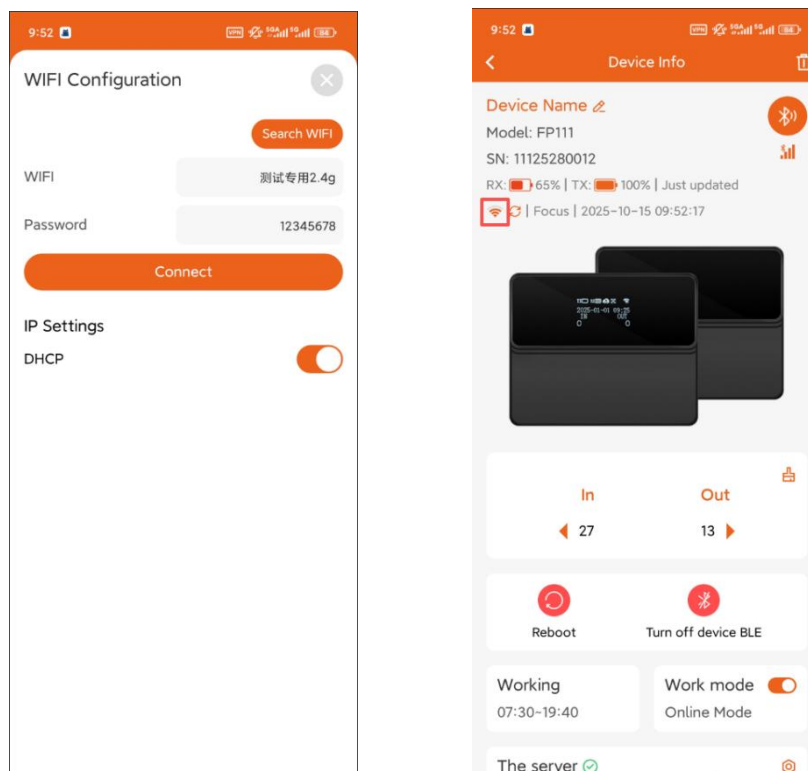


Step 3: WiFi Configuration.

Go to the device configuration page and scroll down to the "WiFi Configuration" area.

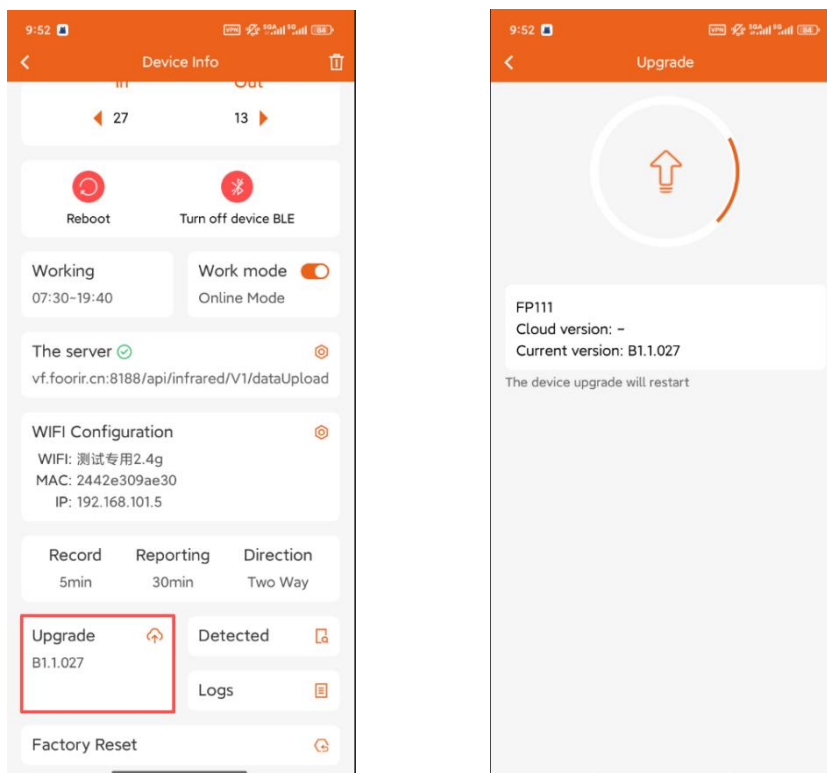


Select the WiFi network you want to connect to, enter the password, and confirm it. Check the WiFi connection status.

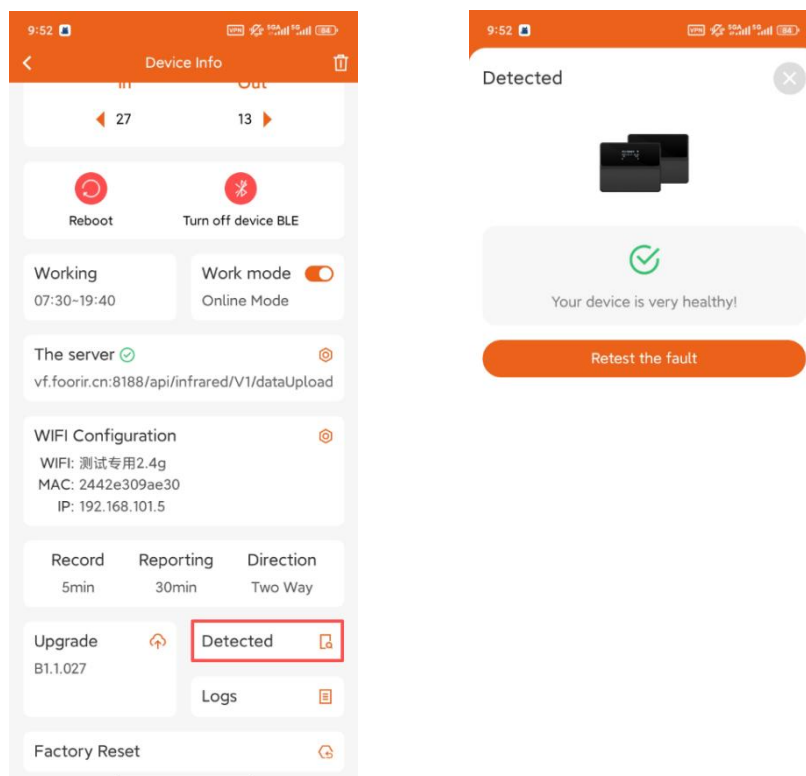


Maintenance 1: Equipment upgrade.

The system will detect whether there is a new version. If there is a new version, you can directly download the firmware from the cloud to the device for upgrading.

**Maintenance 2: Fault Detection.**

After the setup is complete, if the device does not work properly or there is a problem with the data, you can click Fault Detection here to help you identify the problem.



4. Installation Instructions

4.1 Installation Instructions

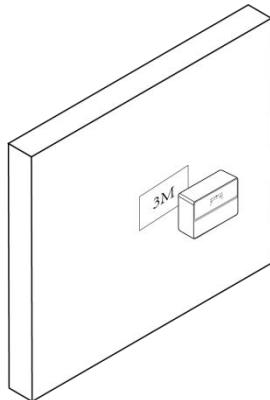
- ❖ At the installation location, first configure the network and then install the device
- ❖ The receiving end is installed on the right hand side of the channel entrance direction
- ❖ There should be no obstructions between devices. If there is glass, the higher the light transmittance, the less impact it has on accuracy.
- ❖ **The recommended installation height is 1.2-1.4m, and the receiving end and the transmitting end should be installed parallel and aligned.**

4.2 Factors Affecting Accuracy

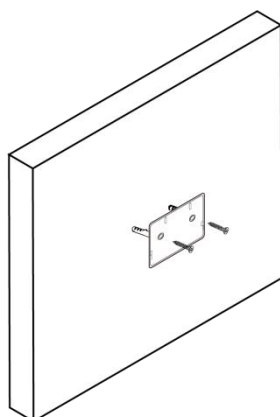
- ❖ The devices cannot be blocked by people or objects for a long time, which will cause the devices to lose focus.
- ❖ If two people pass side by side, there will be omissions.
- ❖ If you hold a large object or push a shopping cart through, there is a chance that it will be recorded incorrectly.

4.3 Installation Method

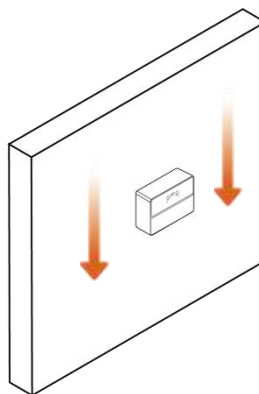
Two installation methods: 3M adhesive or screw fixation



3M Adhesive



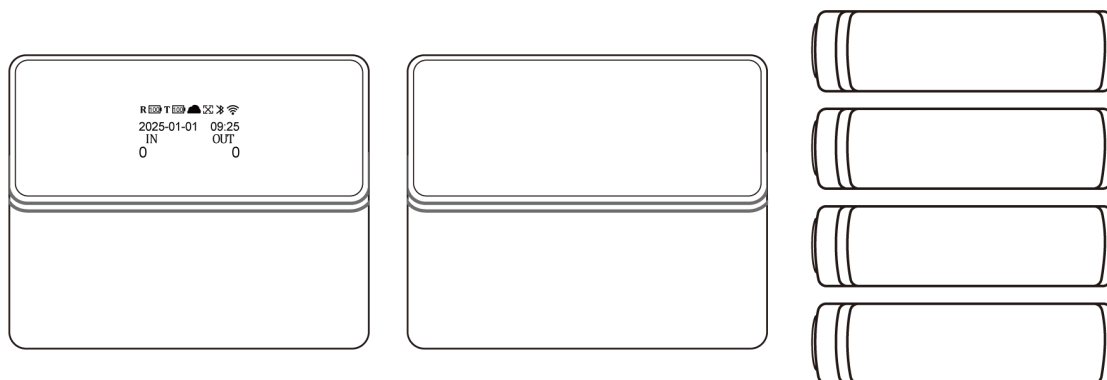
Screw Fixation



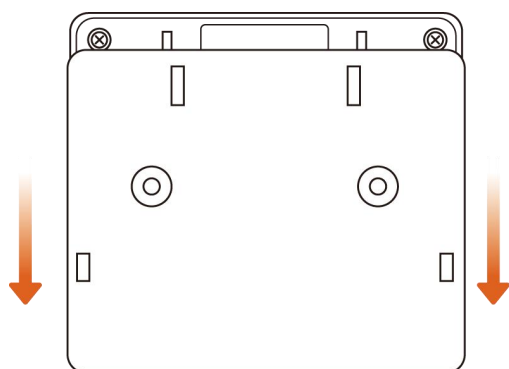
5. Installation Steps

5.1 Installation Method 1

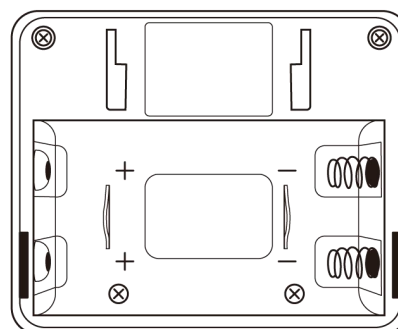
Step 1: Open the box and take out two infrared passenger flow counter devices and four batteries.



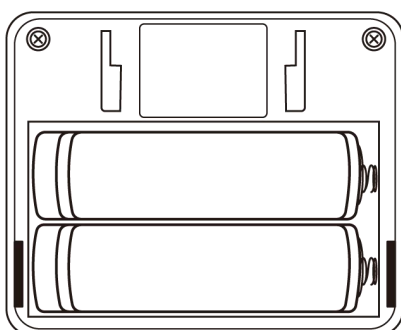
Step 2: As shown in the battery area, install the battery, the device will start automatically, and then close the battery cover..



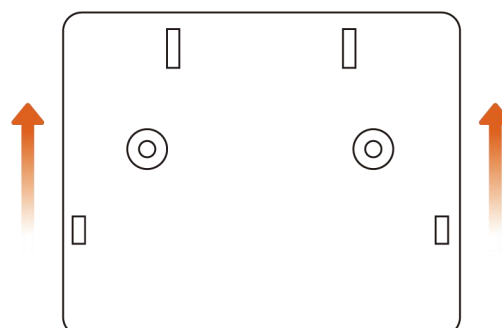
① Slide the back cover down



② Open the back cover



③ Installing the Battery

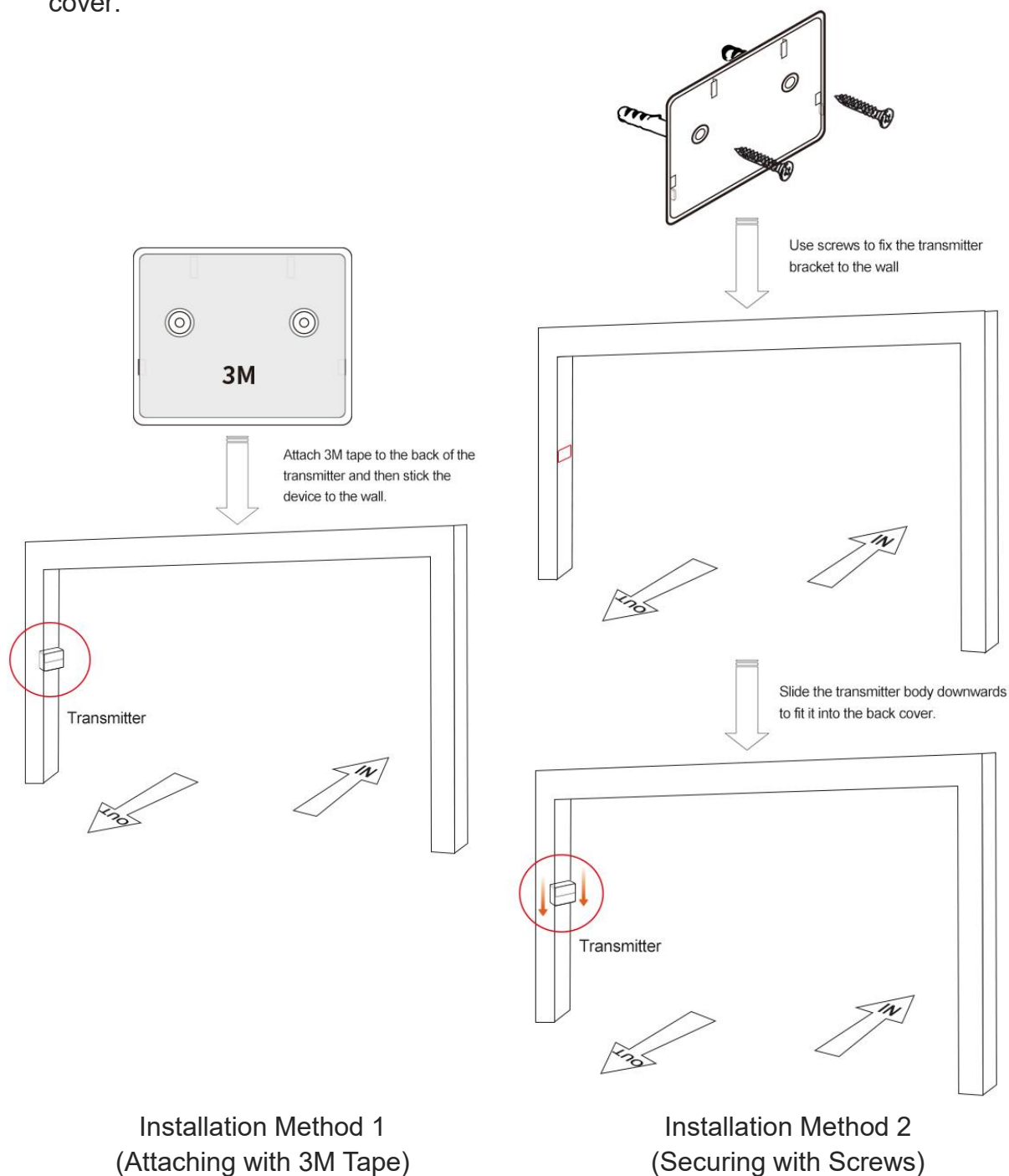


④ Slide the back cover upwards to close it

Step 3:

Installation Method 1 (Attaching with 3M Tape): First, install the transmitter to facilitate receiver pairing. Remove the 3M tape from the packaging and apply it to the back of the device. Then, secure the transmitter to the left side of the door.

Installation Method 2 (Securing with Screws): First, install the transmitter to facilitate receiver pairing. Remove the transmitter's back cover, secure it to the wall with screws, and slide the transmitter downward to mate with the back cover.



Step 4: Pairing is performed at the pre-set installation location. Align the receiver and transmitter parallel to each other, making small adjustments until the "x" changes to a "√" sign, indicating a successful pairing. Mark the pre-installation location for the receiver and then secure it to the wall.

