



Intelligent Face Recognition Terminal

Product Manual



FCV4907

Disclaimer

Please read all contents in this document carefully before using the product to ensure its safe and effective operation. Do not disassemble the product or remove the seal label on the device without authorization; otherwise, Suzhou Fanxi Technology Co., Ltd. shall not be liable for product warranty or replacement.

Pictures in this manual are for reference only. If any picture is inconsistent with the actual product, the actual product shall prevail. Suzhou Fanxi Technology Co., Ltd. reserves the right to revise this document at any time without prior notice for product upgrades and updates.

The risk of using this product is borne by the user. To the fullest extent permitted by applicable laws, Suzhou Fanxi Technology Co., Ltd. shall not be liable for any damages or risks arising from the use or inability to use this product, including but not limited to direct or indirect personal injury, loss of business profits, business interruption, loss of business information or any other economic loss.

All rights of interpretation and modification of this manual are reserved by Suzhou Fanxi Technology Co., Ltd.

Table of Contents

Disclaimer	2
1、 Product Information	5
1.1 Product Introduction	5
1.1.1. Product Features	5
1.2 Dimensions and Appearance	6
1.2.1. Dimension Drawing	6
1.2.2. Appearance Introduction	7
1.3 Product Parameters	7
2、 Wiring and Installation	9
2.1 Wiring	9
2.1.1. Wiring Requirements	9
2.1.2. Interface Description	9
2.2 Installation	12
2.2.1. Installation Requirements	12
2.2.2. Installation Methods	13
3、 Device Function Operation	16
3.1 Firmware Function Architecture	16
3.2 Face Recognition	17
3.2.1. Usage Notes	17
3.2.2. Face Enrollment	18
3.2.3. Face Recognition	19
3.3 Fingerprint Recognition	20
3.3.1. Fingerprint Enrollment	20
3.3.2. Fingerprint Recognition	21
3.4 Card Recognition	21

3.4.1. Card Enrollment	21
3.4.2. Card Recognition	22
3. 5 Network Configuration	22
3.5.1. Ethernet	22
3.5.2. Wi-Fi	23
3. 6 Access Record Query	25
3. 7 Webserver	26
3.7.1. Webserver Login	26
3.7.2. Webserver Functions	27
4、 SaaS System	28
5、 FCC Warning Statement	29
6、 Contact Us	30

1、Product Information

1.1 Product Introduction

FCV4907 is an intelligent face recognition terminal with fingerprint function, supporting **face recognition, fingerprint, card swipe, password and remote door opening**.

It is equipped with an 8-inch LCD touch screen, runs on Linux operating system, and has 8GB storage capacity(expandable to 16GB/32GB). It supports multiple communication methods including RS485, Wiegand 26/34, Ethernet and WIFI.

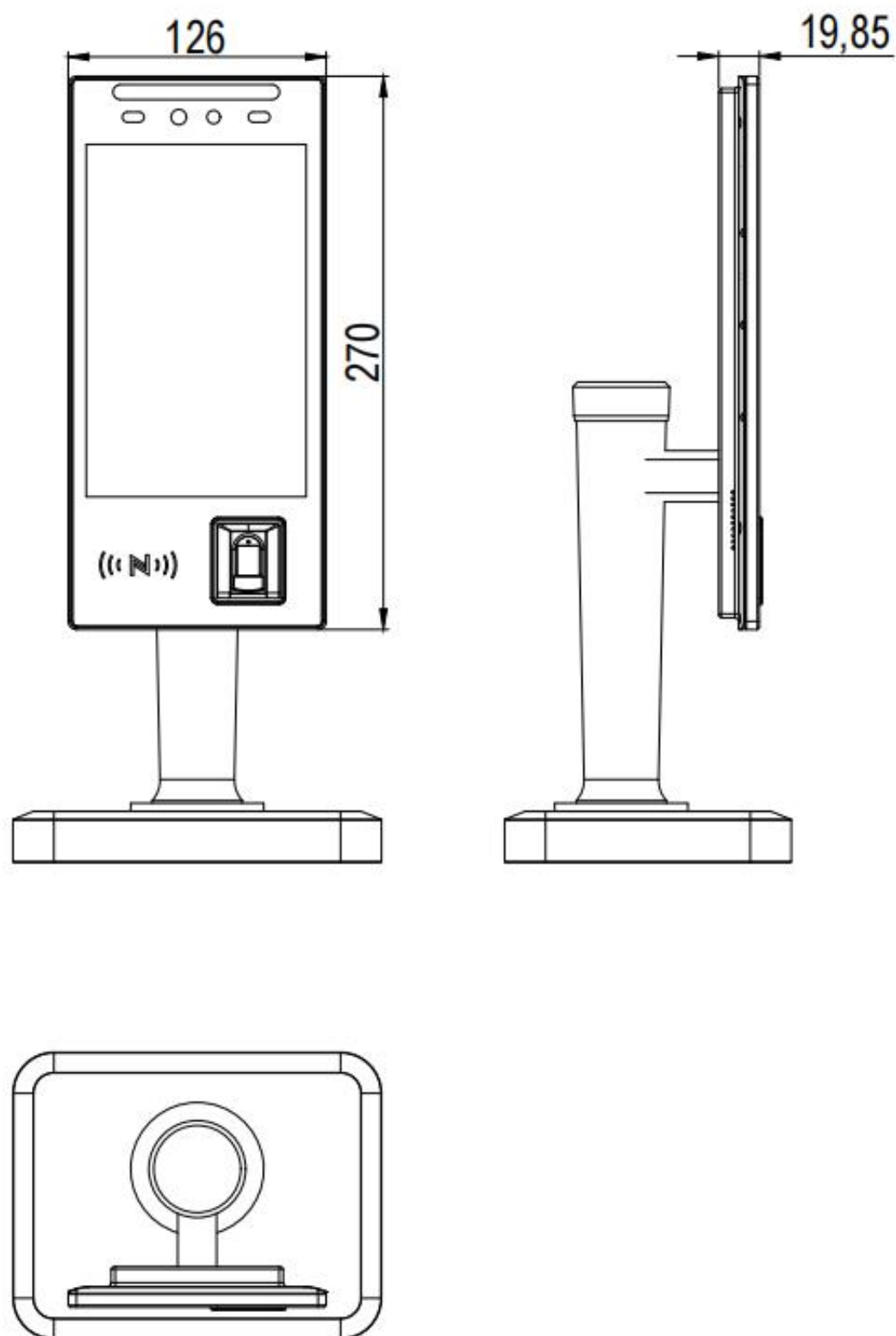
1.1.1. Product Features

- ◆ ARM Cortex-A7 MP2, main frequency up to 1 GHz
- ◆ 8-inch high-brightness HD LCD touch screen (1280*800) with real-person voice broadcast
- ◆ Recognition accuracy over 97% in full database, recognition time $\leq 0.3s$ per person, recognition distance 0.3m–1.5m
- ◆ Supports up to 50,000 face templates, 50,000 cards, 5,000 fingerprints, and 50,000 logs.
- ◆ Effective recognition even with mask, glasses or hat; supports mask detection
- ◆ Built-in silent liveness detection, effectively preventing photo, video and mask spoofing
- ◆ Supports TCP/IP, MQTT, and HTTP protocols.
- ◆ Supports multiple signal inputs: external alarm input, exit button input.
- ◆ Supports output of QR code content, card ID and face ID via RS485 and Wiegand plaintext
- ◆ Built-in high-precision clock chip and RTC battery, maintaining time after power failure
- ◆ ESD protection: contact 8KV, air 12KV.
- ◆ IP65 waterproof and dustproof rating for models without temperature measurement module
- ◆ Supports logo customization, protocol customization and OEM service
- ◆ Supports turnstile, 86-box, flat-wall and pillar mounting

Application Scenarios: Suitable for shopping malls, factories, teaching buildings, scenic spots, etc. Users can conduct secondary development according to the **Communication Protocol** provided by our company to meet customized requirements for various special scenarios.

1. 2 Dimensions and Appearance

1.2.1. Dimension Drawing



1.2.2. Appearance Introduction



1.3 Product Parameters

System Parameters	Operating System	Linux
	Built-in Storage	8GB (expandable to 16GB/32GB)
	CPU	ARM Cortex A7 MP2 1GHz
Network Parameters	Ethernet	1× 10/100M auto-negotiation port
	Wireless Network	2.4G Wi-Fi
Physical Interfaces	Ethernet Port	1× RJ45
	RS-485	1 channel
	Wiegand	WG26/WG34
	IO Input	2 channels
	Relay	1× 30V 1A
Appearance	Material	Aluminum alloy shell + organic glass
Display Parameters	Screen Size	8-inch LCD touch screen
	Resolution	800*1280
Camera	RGB Camera	Field of View: D=63°, H=56°, V=37°
		Aperture: F2.0
		Resolution: 1920*1080

		Focal Length: 4.35 mm	
	IR Camera	Field of View: D=68°, H=60°, V=40°	
		Aperture: F2.2	
		Resolution: 1616*1232	
		Focal Length: 2.56 mm	
Audio Parameters	Speaker	1× 4Ω 2W	
Electrical Parameters	Power Supply	9~24V DC (recommended 12V DC)	
	Power Consumption	16W	
Environmental Parameters	Ingress Protection	IP66 (non-temperature measurement & non-4G version)	
	ESD Protection	Contact 8kV, Air 12kV	
	Operating Temperature	-20℃~55℃	
	Operating Humidity	10% ~ 90% (non-condensing)	
Function Parameters	Face Recognition	Algorithm	1:N dynamic face detection (anti-photo, anti-video spoofing) Supports mask detection & hardware IR liveness detection
		Face Capacity	50,000
		Recognition Time	< 0.3s
		Recognition Distance	0.3~1.5m
		Recognition Performance	Pass Rate: ≥97% (at 50,000 templates) False Acceptance Rate (FAR): ≤0.01% (at 50,000 templates)
	Card Reading	Antenna Frequency	13.56MHz
		Antenna Size	48mm*39mm
		Reading Distance	0~5cm (depends on card type)
		Supported Card Types	S50、S70、FM1208、FM1216-137、MIFARE CLASSIC EV1 4K(S70)、mifare desfire ev2 d42、UL、FM12081K+7K、NTAG216、ultralight c、UL EV1、DESFIRE EV2 D41、Ultralight EV1、Mifare Desfire ev2 d82
		Image Pixel	208*288
		Resolution	508 dpi
		Capacity	1000 templates
		Matching Mode	1:1 verification & 1:N identification
		Fingerprint Template	498 bytes (extraction time < 0.45s)
		Sensor	Capacitive area array sensor, press type
		Capacity	5,000 templates
		Recognition Performance	Total recognition time < 1s
			False Acceptance Rate (FAR) < 0.001% (Security Level: 3)
			False Rejection Rate (FRR) < 1% (Security Level: 3)

2、Wiring and Installation

2.1 Wiring

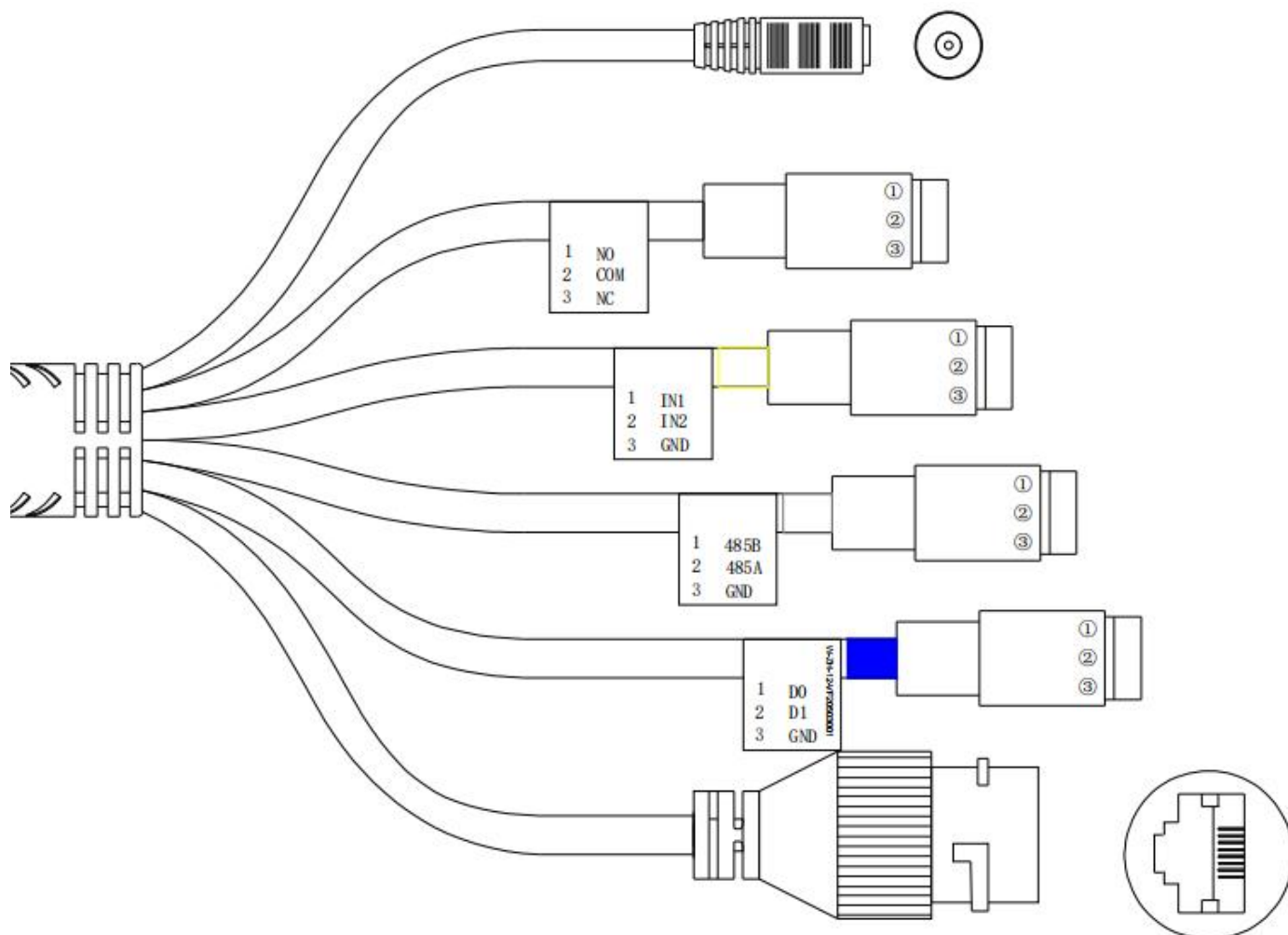
2.1.1. Wiring Requirements

1. Insulation treatment must be applied to unused pins!
2. Any device damage caused by short circuit due to lack of insulation shall be borne by the user.

2.1.2. Interface Description

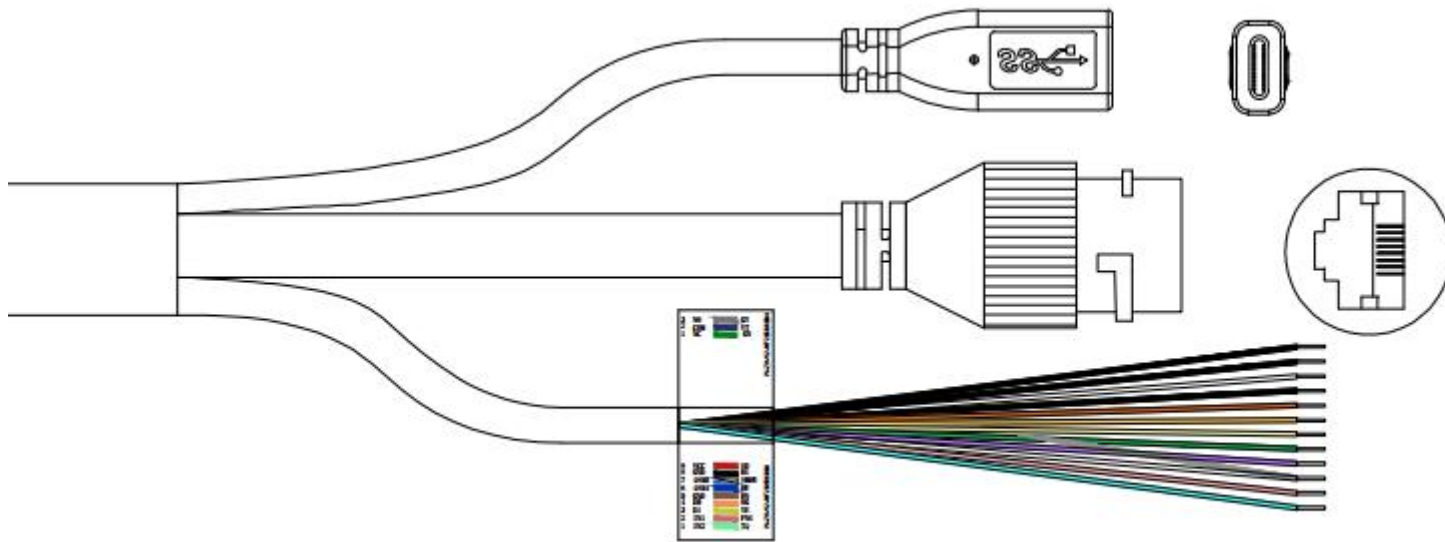
(1) External Cable for Torch Holder Version

Six wiring terminals are led out from the face recognition device. Please wire according to the labels on the terminals.



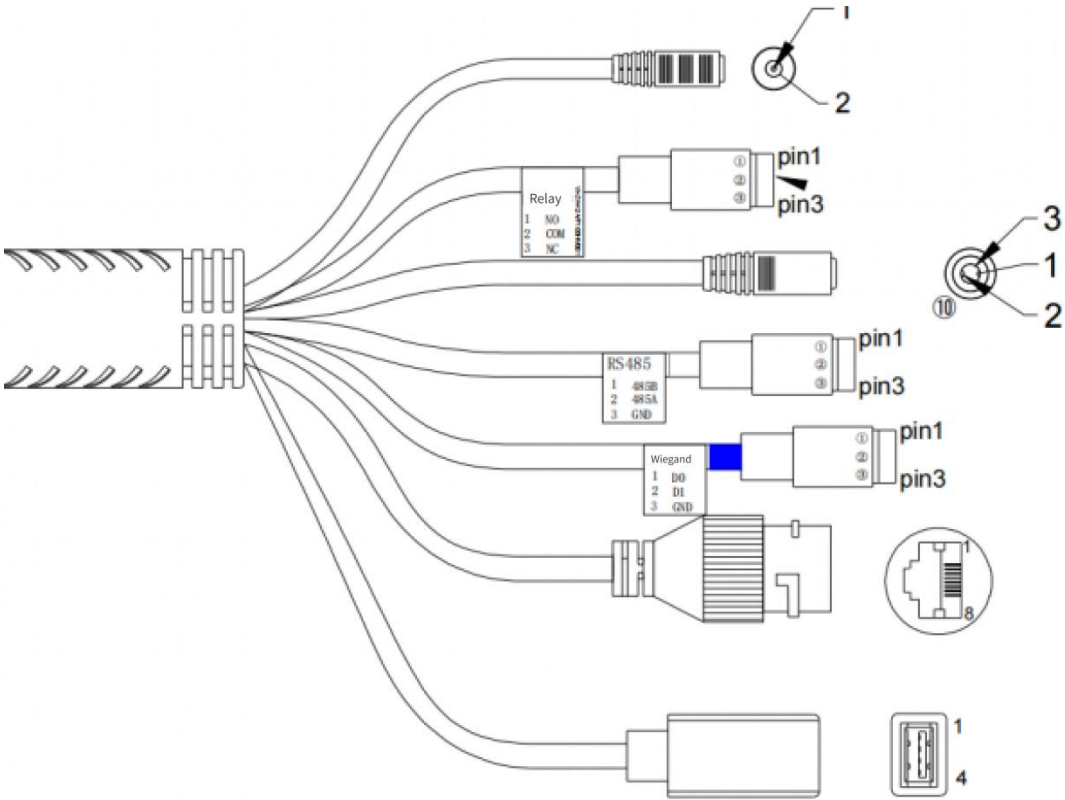
Port Name	Pin No.	Pin Definition
Power Interface	DC Connector	12V DC Power Supply
Relay Interface	1	NO: Normally Open
	2	COM: Common Terminal
	3	NC: Normally Closed
Alarm Input	1	IN1: Alarm Input 1
	2	IN2: Alarm Input 2
	3	GND: Ground
RS485	1	485B: RS485 Negative (-)
	2	485A: RS485 Positive (+)
	3	GND: Ground
Wiegand	1	D0: Wiegand Data 0
	2	D1: Wiegand Data 1
	3	GND: Ground
Network Interface	RJ45	Connect Ethernet Cable

(2) 86-box Mounting External Cable



PIN#	Wire Color	Pin Definition	Pin Description
PIN1	Red	VCC	Positive Power Supply
PIN2	Black	GND	Ground
PIN3	White+Blue	485B	RS485 Data B (Negative)
PIN4	Blue	485A	RS485 Data A (Positive)
PIN5	Brown	GND	Ground
PIN6	Orange	DO	Wiegand Data 0
PIN7	Yellow	D1	Wiegand Data 1
PIN8	Green	IN1	Alarm Input 1
PIN9	Violet	IN2	Alarm Input 2
PIN10	Grey	ON	Relay Normally Open
PIN11	Pink	COM	Relay Common Terminal
PIN12	Turquoise	NC	Relay Normally Closed

(3) Audio Cable

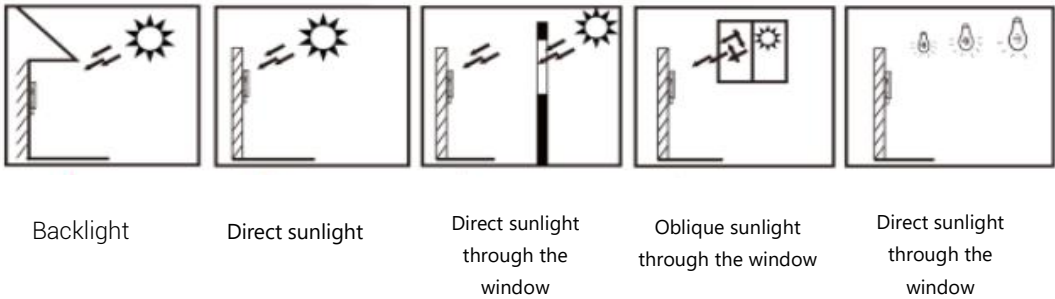


Port Name	Pin No.	Pin Definition
Power Interface	DC Connector	12V DC Power Supply
Relay Interface	1	NO: Normally Open
	2	COM: Common Terminal
	3	NC: Normally Closed
Headphone Jack	3.5mm	For external audio
RS485	1	485B: RS485 Negative (-)
	2	485A: RS485 Positive (+)
	3	GND: Ground
Wiegand	1	D0: Wiegand Data 0
	2	D1: Wiegand Data 1
	3	GND: Ground
Network Interface	RJ45	Connect Ethernet Cable
USB Port	USB-A Female	For data transmission

2. 2 Installation

2.2.1. Installation Requirements

1、Avoid backlighting, direct sunlight, direct sunlight through windows, oblique sunlight through windows, and close-range lighting. All the above conditions will affect face recognition performance.



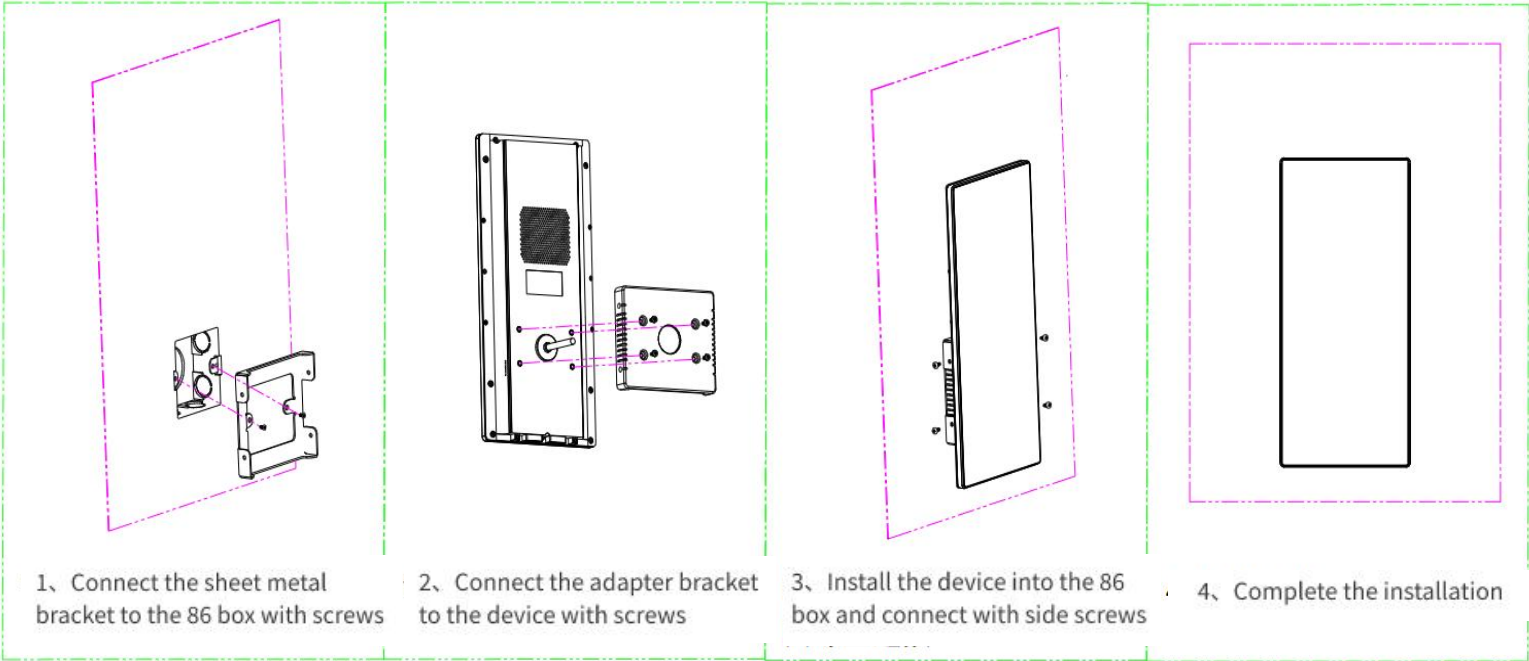
2、The display surface and recognition window are made of tempered glass, which features excellent light transmittance, compression resistance and impact resistance.However, scratches

from objects with higher hardness must still be avoided, as they will affect display and touch performance.

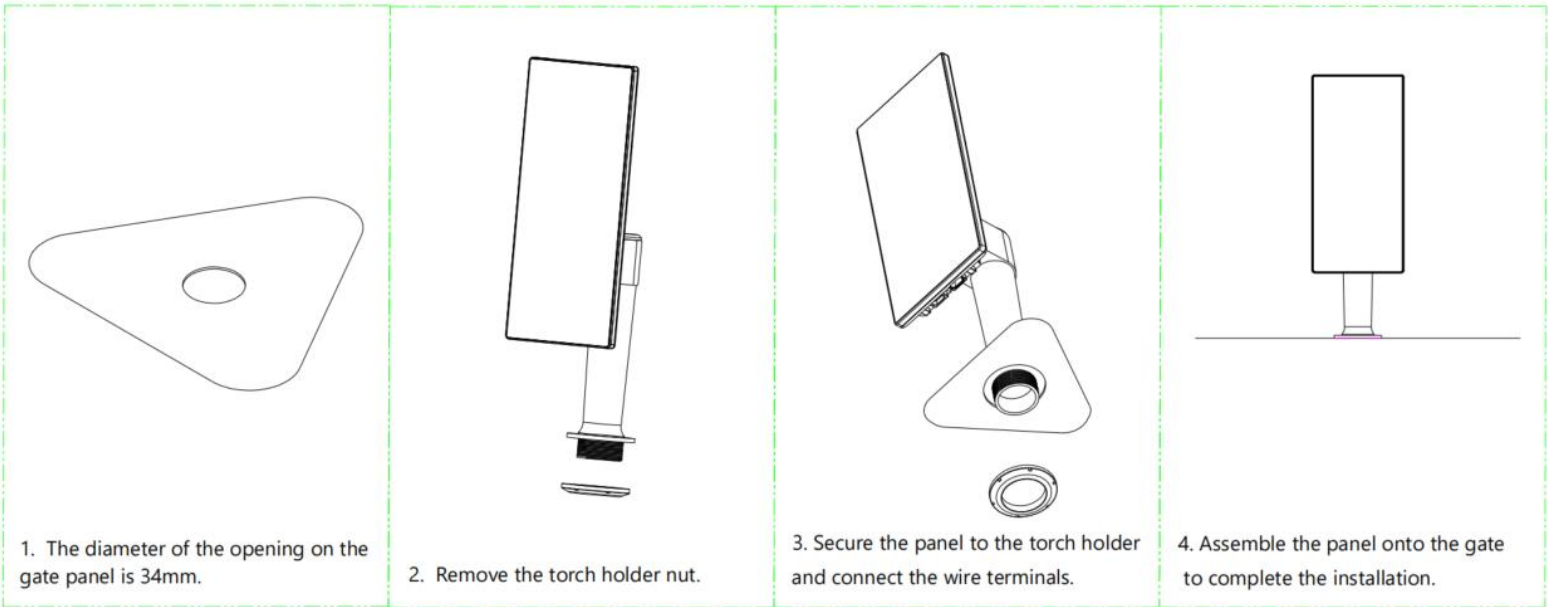
3、The RFID card reading antenna is located at the bottom of the device. During installation, keep the area within 10 cm free of metal and magnetic materials; otherwise, card reading performance will be severely degraded.

2.2.2. Installation Methods

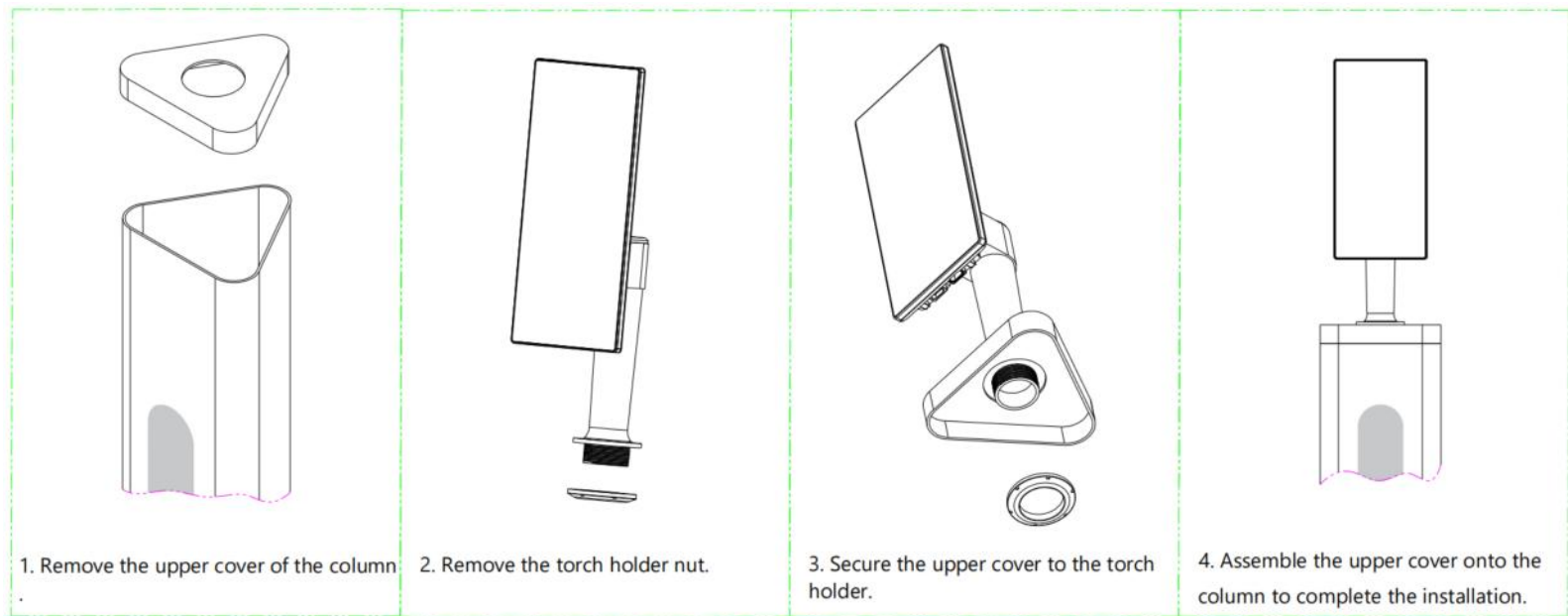
(1) 86-box mounting scenario



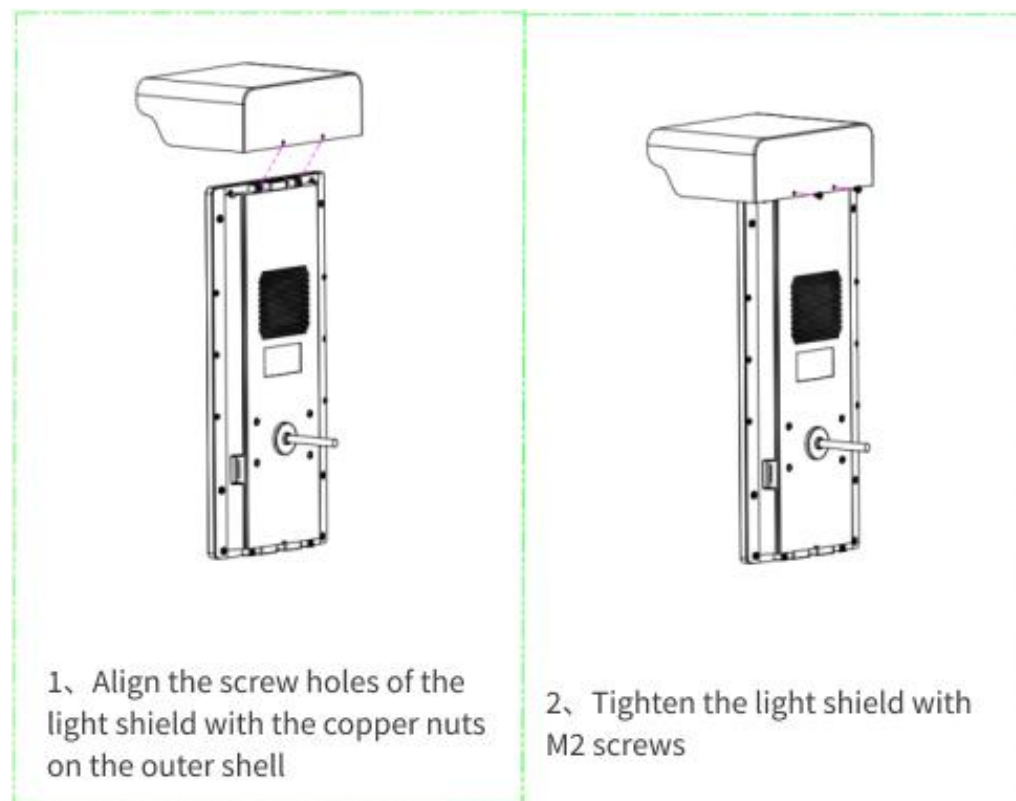
(2) For torch holder installation scenarios



(3) Pillar mounting scenario



(4) Installation Method of Light Shield



Device User Guide

3、 Device Function Operation

This product can be used **directly offline locally**, configured online via the built-in **Webserver**, used with a **SaaS System**, or integrated with the **customer's own system**.

The application scenarios for each method are described below:

Device Side: Ideal for quick setup right after unboxing. No network connection required. Users can directly enroll user information, bind face and other credentials locally on the device for door access. Basic device settings can also be configured on the device.

Webserver: After the device is connected to the network, you can manage user enrollment, view access records, and configure the device via a web browser. It is equivalent to accessing the device's internal configuration and whitelist information through a web interface.

SaaS System: After the device is connected to the network, you can use the **Feocey Office** SaaS platform to:

- enroll users
- view comprehensive access records
- manage users and devices in batches
- perform advanced device configuration

Suitable for large-scale scenarios with many devices and users.

3.1 Firmware Function Architecture

After turning on the device, press the function menu button on the right. After password verification, you will enter the settings menu, which includes the following functions (common

functions in bold):

Local Users: Add, delete, edit and query users and credentials; administrator settings

Network: Wi-Fi, Ethernet connection; network configuration

Access Ctl: Relay, alarm, MQTT settings

System: UI display and language settings; face, card and other credential verification settings; access log settings; login password settings and other miscellaneous system options

Device Info: View firmware version, capacity, SN, etc.

Access Logs: View access records

Voice Set: Voice prompt settings

Dev Mode: No action required

3. 2 Face Recognition

3.2.1. Usage Notes

(1) Image Requirements

Image size: 50 – 300 KB

Resolution: Width 512 – 800, Height 640 – 1024

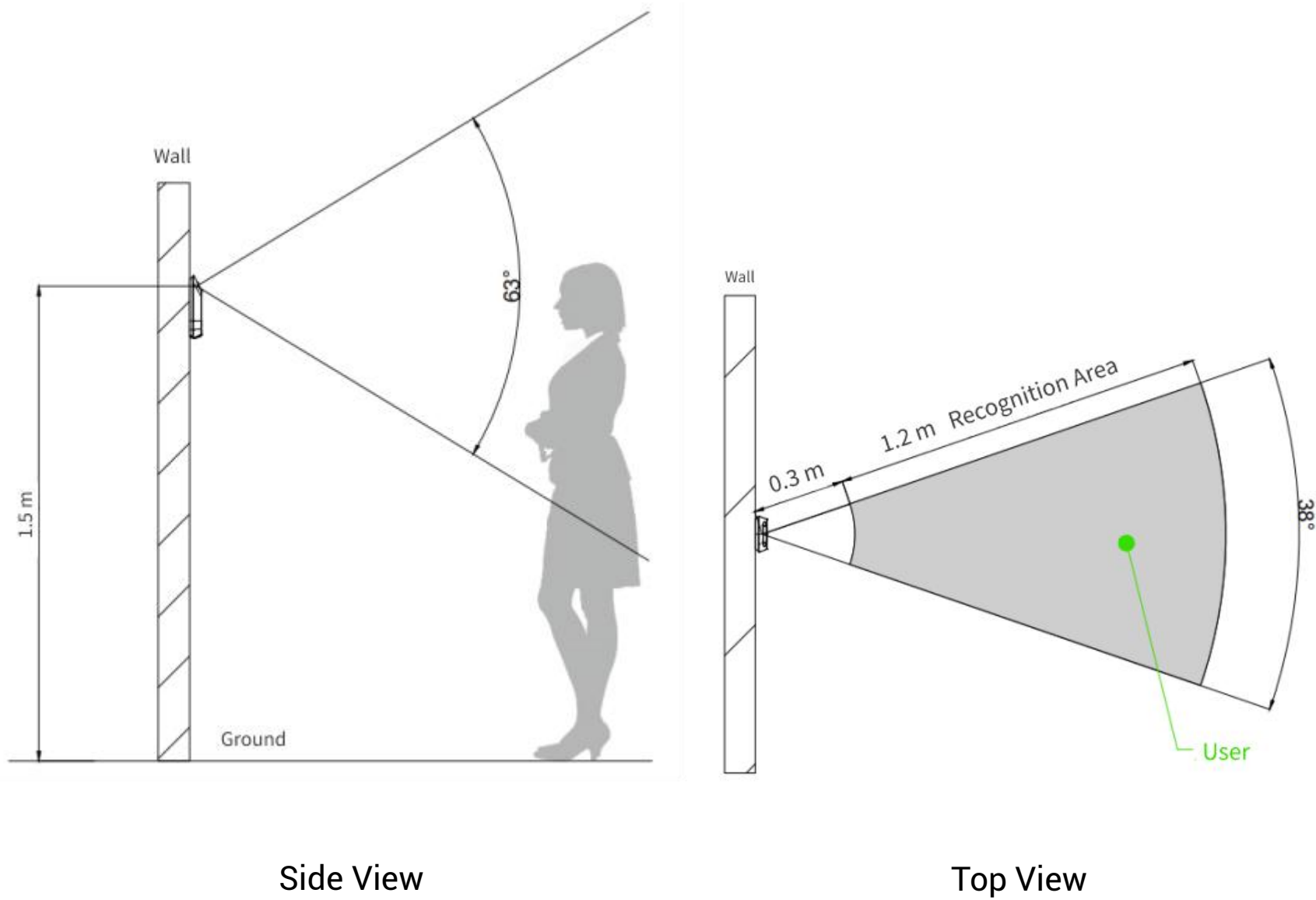
Format: JPG

Photo Requirements:

- Real-life photo, no beauty filters, no heavy makeup
- No obstructions: sunglasses, scarves, masks, etc.

During face registration, please position your face in the center of the registration frame, look directly at the camera, and keep still until the device completes registration.

(2) Schematic Diagram of Recognition Area

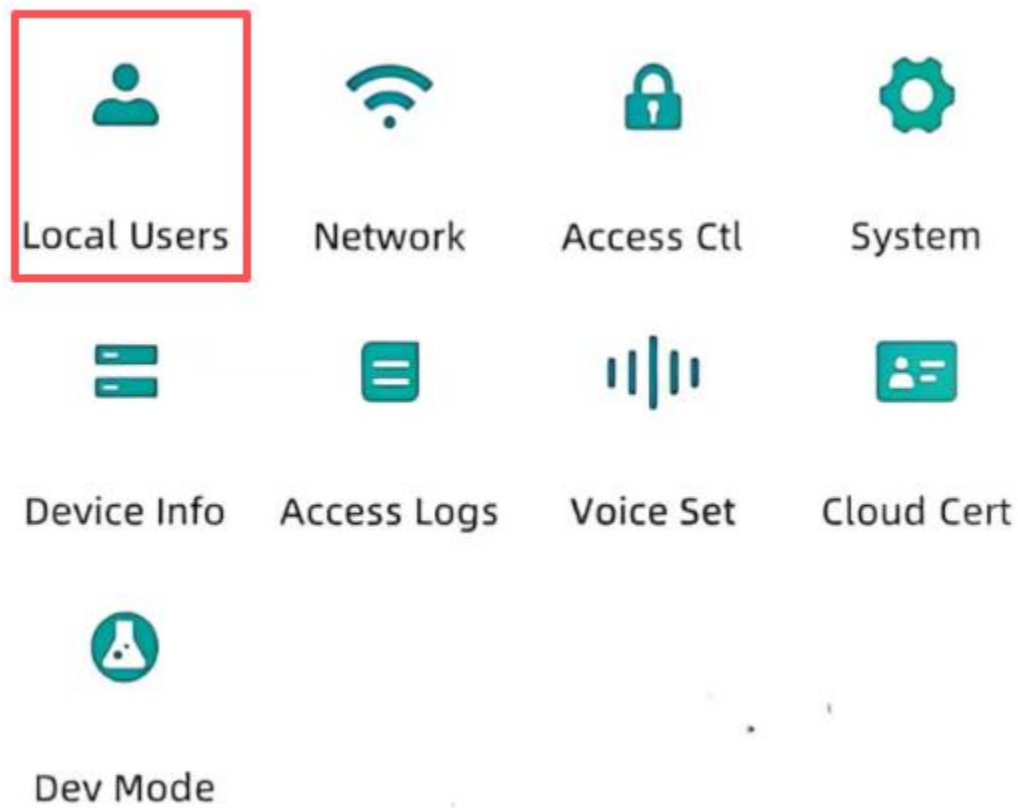


3.2.2. Face Enrollment

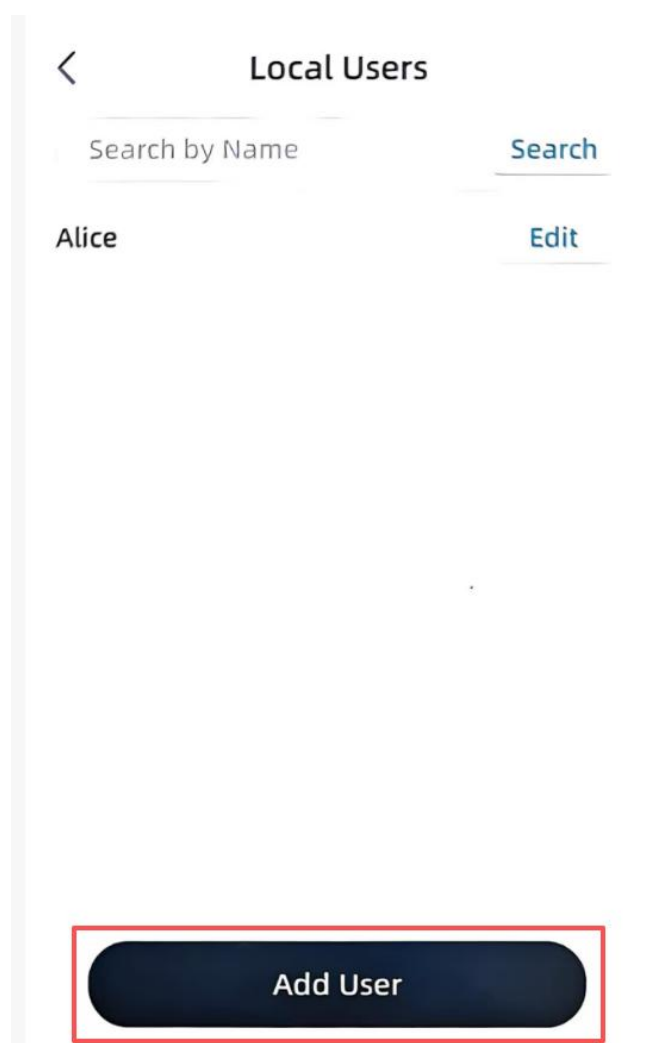
1、Tap the Settings Menu icon on the face recognition interface.



2、After entering the settings menu, select Local Users.



3、 In the user list, tap Add User at the bottom.

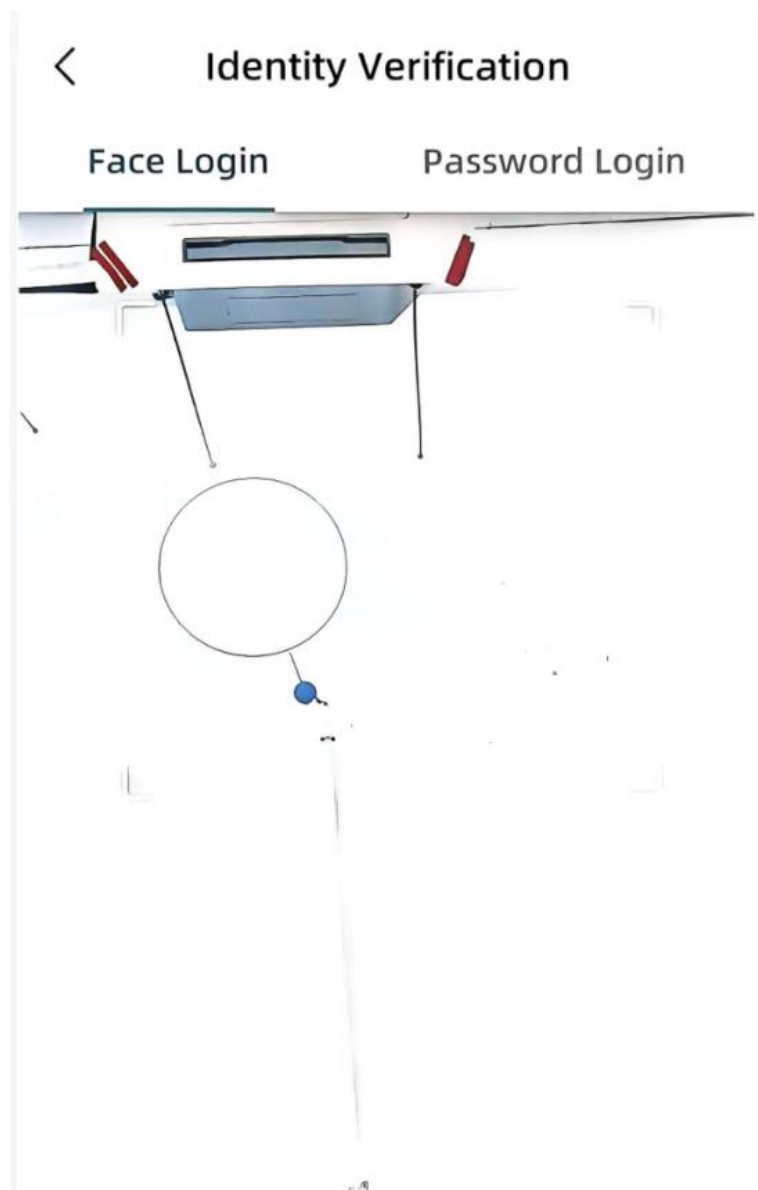


3.2.3. Face Recognition

After successful registration, approach the device at the face recognition interface. Once your

face appears on the screen, recognition will be completed in less than 1 second.

When entering the Settings menu, administrators can use face recognition on the identity verification page to skip entering the password.



3.3 Fingerprint Recognition

3.3.1. Fingerprint Enrollment

- (1) Open the user information page (operation is the same as face registration above),;
- (2) Tap the Enroll button behind fingerprint credential to enter the fingerprint enrollment page. On this page, **you must press the same fingerprint three times to generate one template;**
- (3) **Tap the Save button at the bottom of the user information page to complete fingerprint registration.**

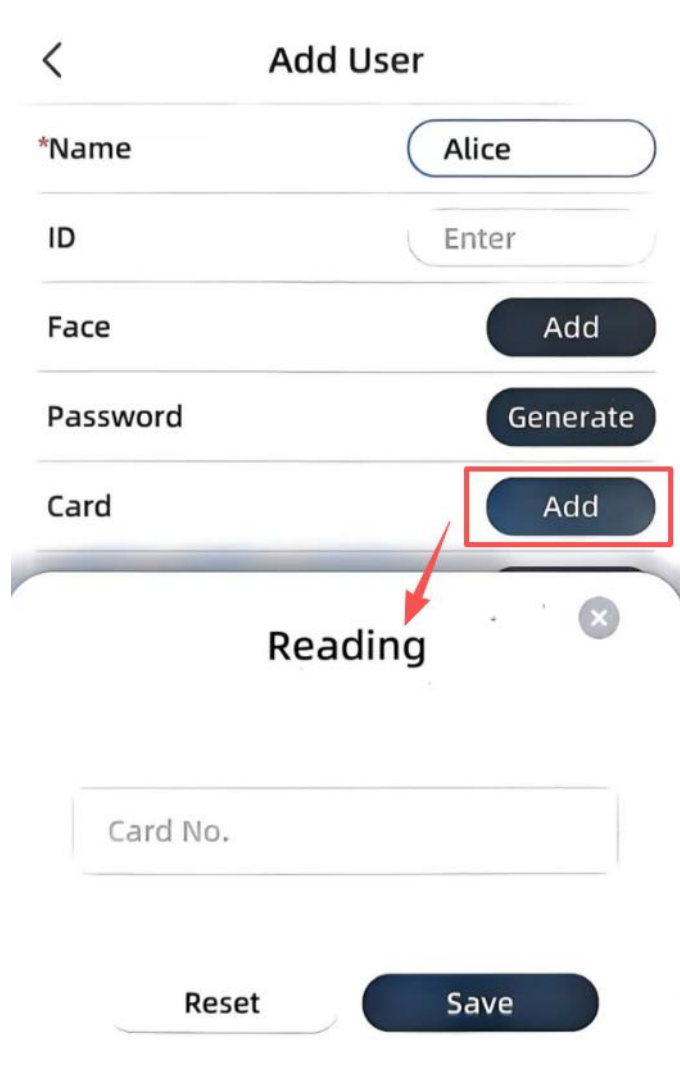
3.3.2. Fingerprint Recognition

On the face recognition interface, press the fingerprint module with the enrolled finger to complete fingerprint recognition.

3.4 Card Recognition

3.4.1. Card Enrollment

(1) Open the user information page (operation is the same as face registration above), and tap the Enroll button next to the card credential to bring up the card enrollment prompt.



(2) When the card reading prompt appears, you can either enter the card number manually in the input field, or place the card on the card reading area at the bottom left of the device to read it directly. After reading the card, click Save, **then click the Save button at the bottom of the user editing page to complete card enrollment.**

3.4.2. Card Recognition

On the face recognition interface, swipe the enrolled card on the card reading area at the bottom left of the device to complete card recognition.

3.5 Network Configuration

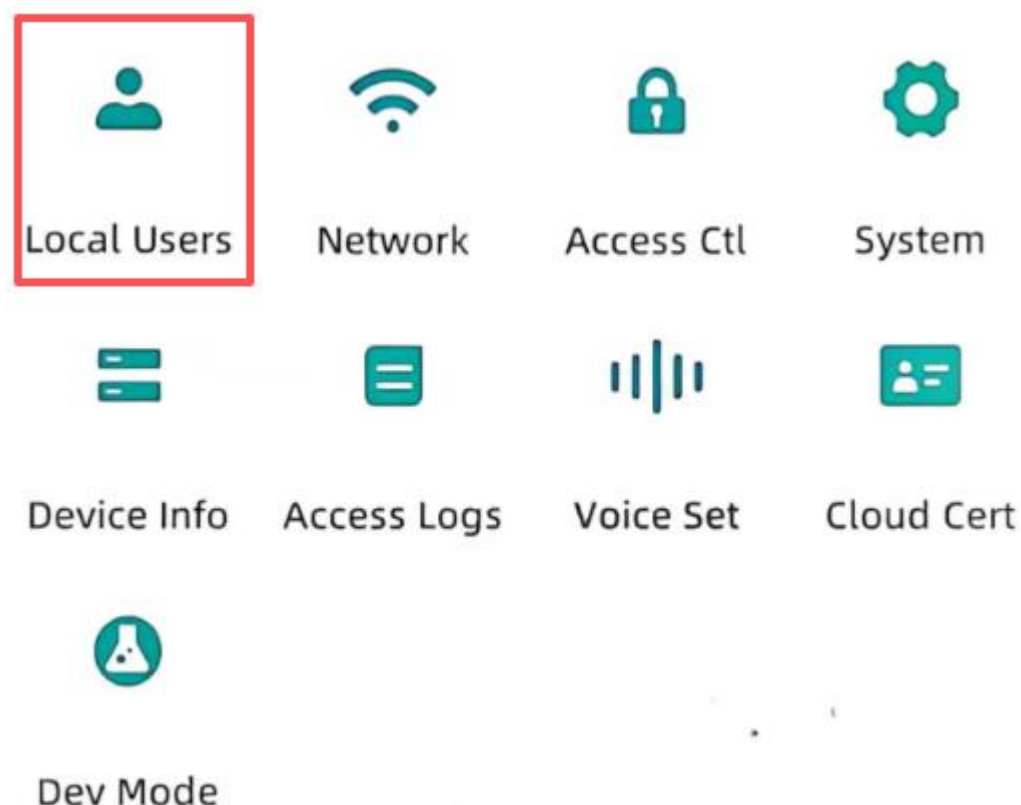
3.5.1. Ethernet

(1) Network Connection

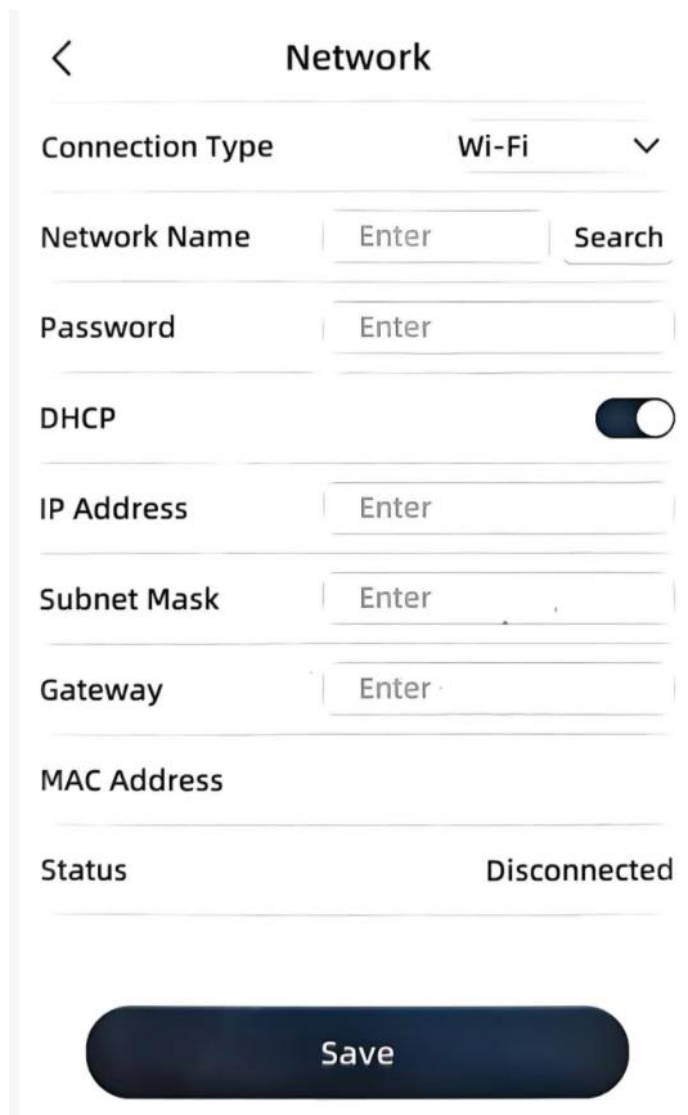
Simply plug the network cable into the Ethernet port. The network connection is successful when the IP address appears in the lower right corner of the screen.

(2) Ethernet Configuration

- ① Open the Settings menu, select Network Settings, and enter the network settings page.



- ② The Ethernet settings interface is displayed by default, with DHCP enabled by default. You can manually disable the DHCP switch to modify the IP address and other network parameters.

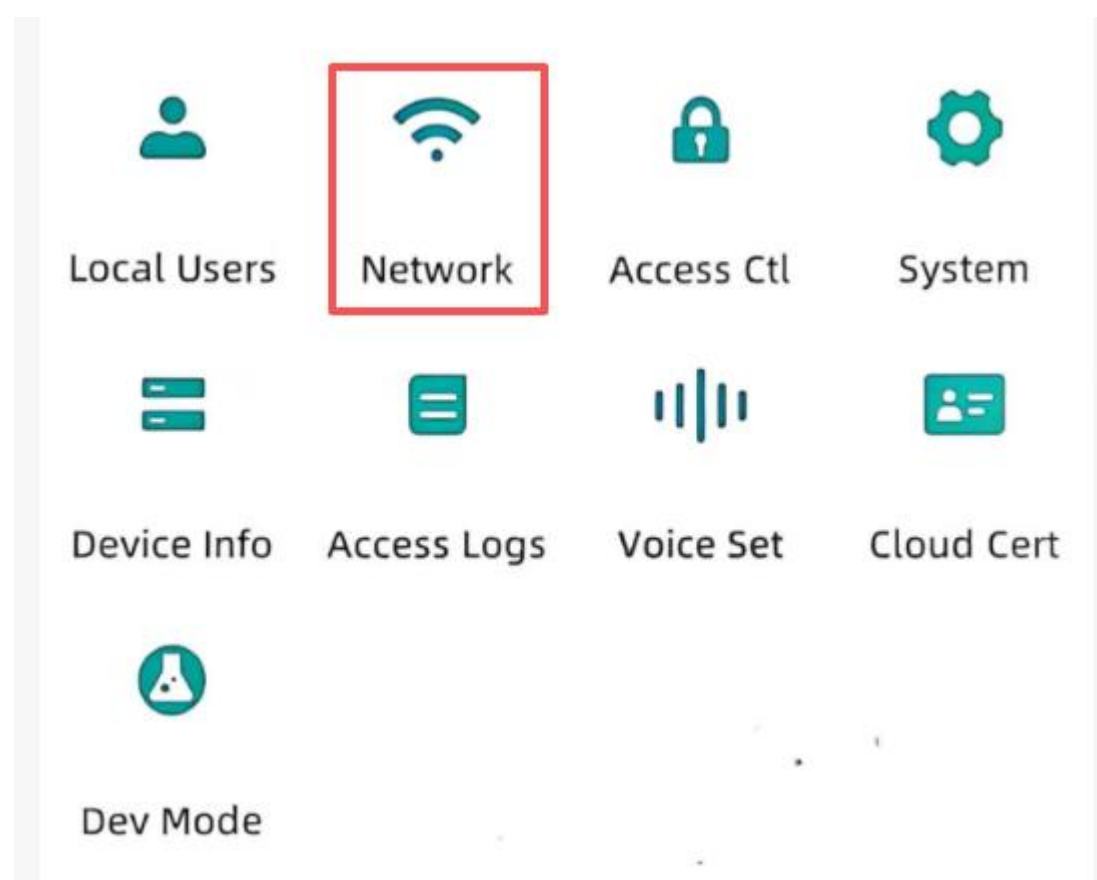


The image shows a mobile application interface for network configuration. At the top, there is a back arrow and the title "Network". Below this, the "Connection Type" is set to "Wi-Fi" with a dropdown arrow. The form includes input fields for "Network Name" (with an "Enter" placeholder and a "Search" button), "Password" (with an "Enter" placeholder), "DHCP" (a toggle switch currently turned on), "IP Address" (with an "Enter" placeholder), "Subnet Mask" (with an "Enter" placeholder), "Gateway" (with an "Enter" placeholder), and "MAC Address". At the bottom, the "Status" is displayed as "Disconnected". A large, dark blue "Save" button is positioned at the very bottom of the form.

3.5.2. Wi-Fi

(1) Network Connection

- ① Open the Settings menu, select Network Settings to enter the network configuration page.



② On this page, tap the network type dropdown list and select WiFi to enter the WiFi configuration page.

Network

Connection TypeEthernet

DHCP

IP AddressEnter

Subnet MaskEnter

GatewayEnter

DNSEnter

MAC Address

StatusDisconnected

Save

Network

Connection TypeWi-Fi

Network NameEnterSearch

PasswordEnter

DHCP

IP AddressEnter

Subnet MaskEnter

GatewayEnter

MAC Address

StatusDisconnected

Save

③ You may either enter the WiFi name directly, or tap the Search button to open the WiFi list:

Available Networks

FAST-E68A

TP-LINK_0965

feocey

HUAWEI-LA6UZS

koodle-test

koodle-vip

TP-LINK_02A5

1

360WiFi-Hysine-bg

jing mao

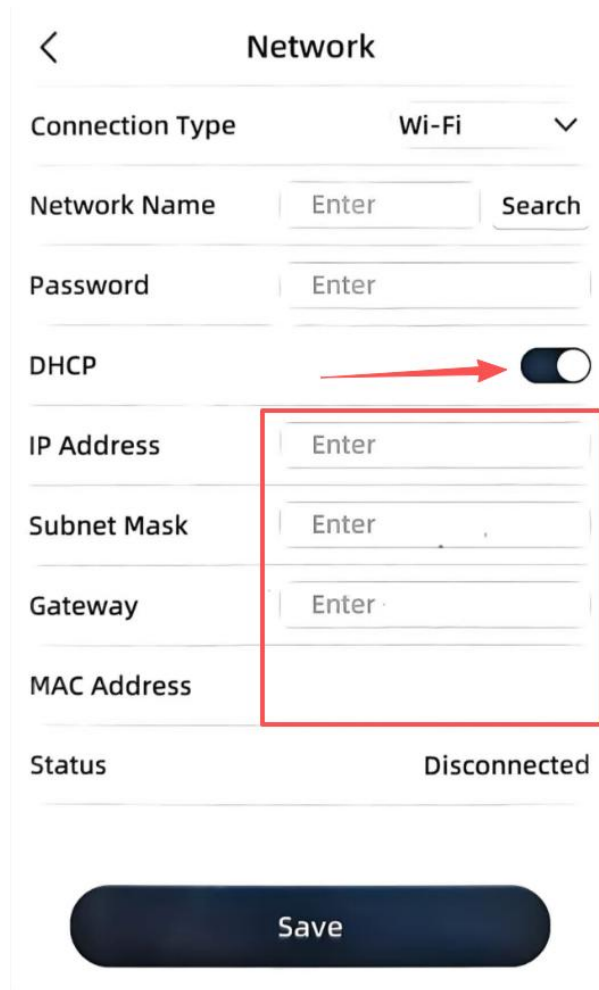
Close

Confirm

④ Select the WiFi name you want to connect to, tap Confirm, enter the password, and finally tap the Save button at the bottom to complete the connection.

(2) WiFi Configuration

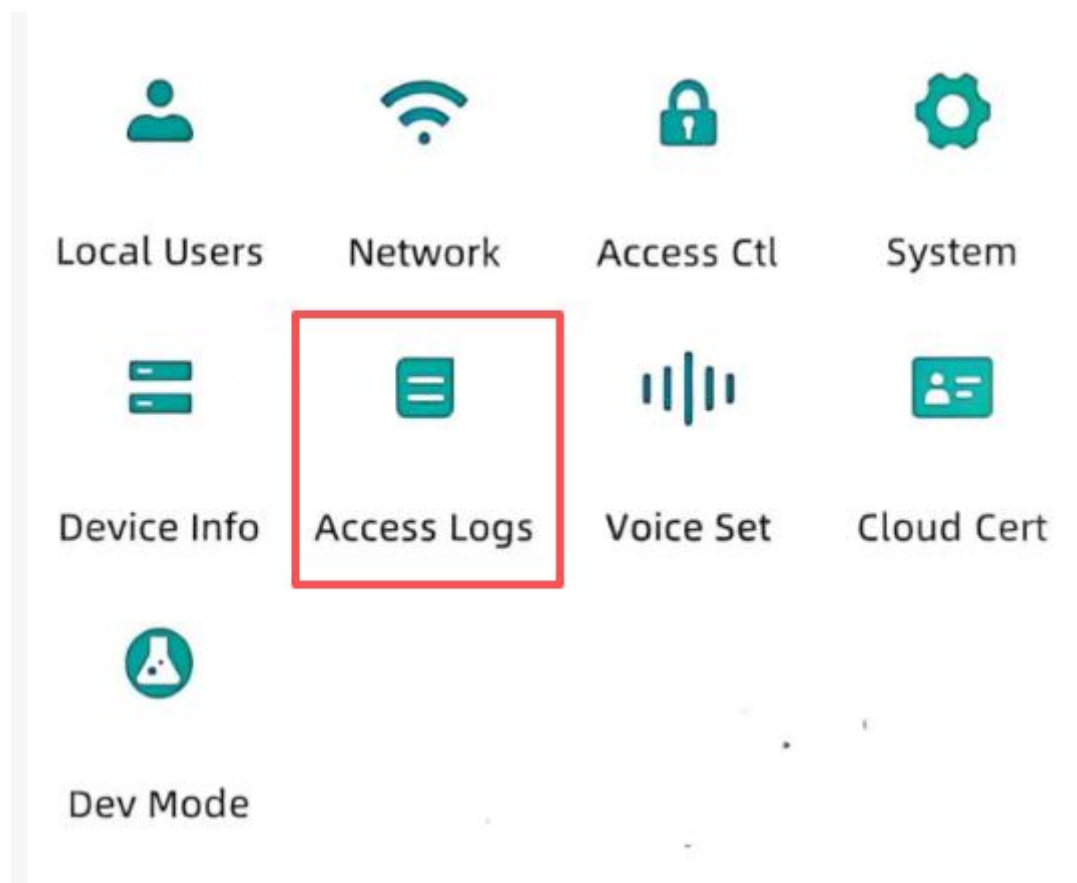
On the WiFi configuration page, disable DHCP to manually set IP and other network parameters.



The image shows a 'Network' configuration screen. At the top, there is a back arrow and the title 'Network'. Below this, the 'Connection Type' is set to 'Wi-Fi'. There are input fields for 'Network Name' (with an 'Enter' placeholder and a 'Search' button), 'Password' (with an 'Enter' placeholder), and a 'DHCP' toggle switch which is currently turned on. Below the DHCP toggle, there are input fields for 'IP Address', 'Subnet Mask', and 'Gateway', each with an 'Enter' placeholder. These three fields are grouped together and highlighted with a red rectangular box. Below these fields is a 'MAC Address' field. At the bottom, the 'Status' is shown as 'Disconnected'. A large 'Save' button is at the very bottom.

3.6 Access Record Query

On the Settings menu, tap Record Query to enter the page and view access records.



3.7 Webserver

VF124 supports accessing local device services via Webserver, enabling user registration, face/card credential management, access record viewing, basic device configuration, and other functions.

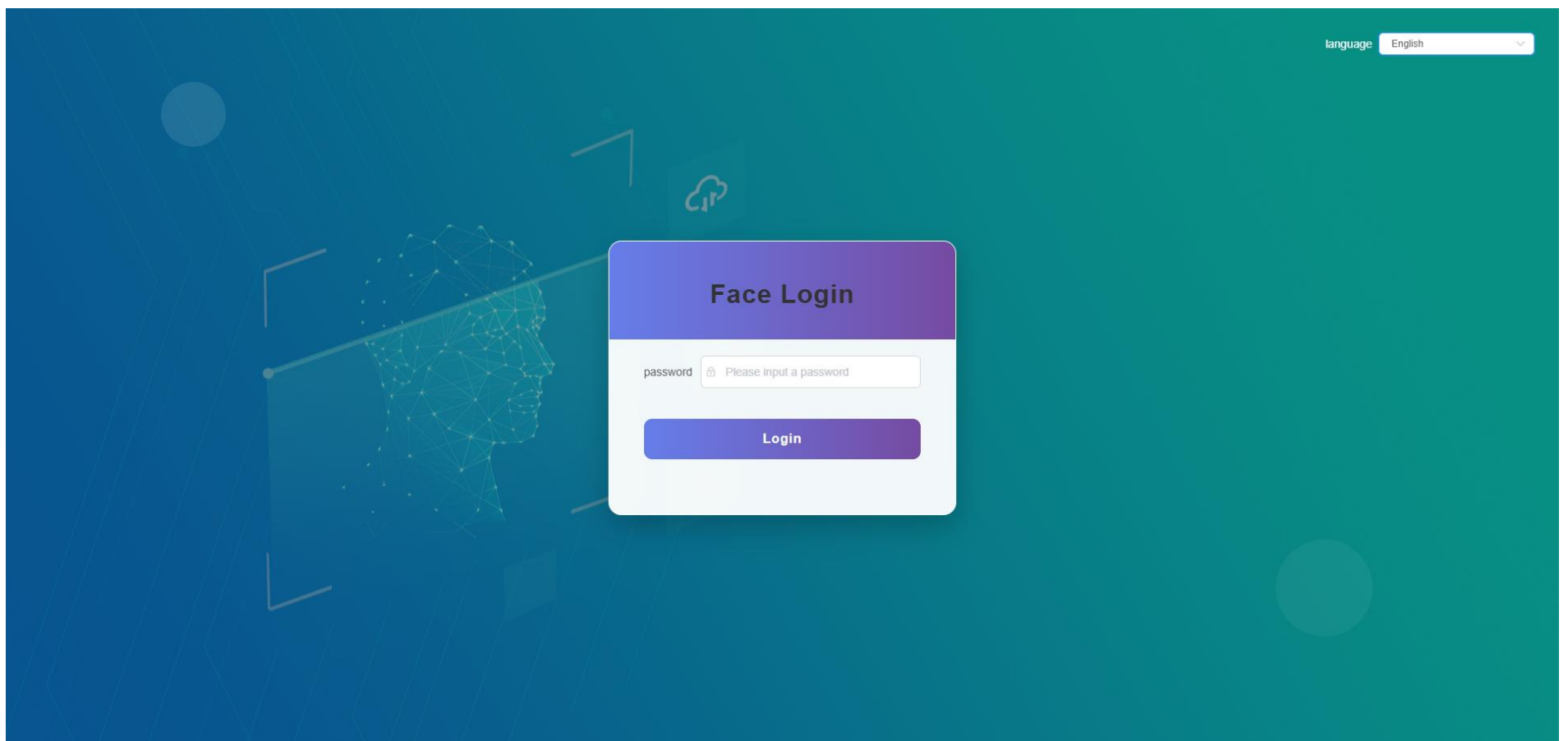
3.7.1. Webserver Login

After the device is properly connected to the network, the IP address will be displayed in the lower right corner of the main face recognition interface.

On a computer within the same local area network, enter the device's IP address followed by :8080 in the browser address bar.

Example: Device IP: 192.168.10.119 Enter in browser: **192.168.10.119:8080**

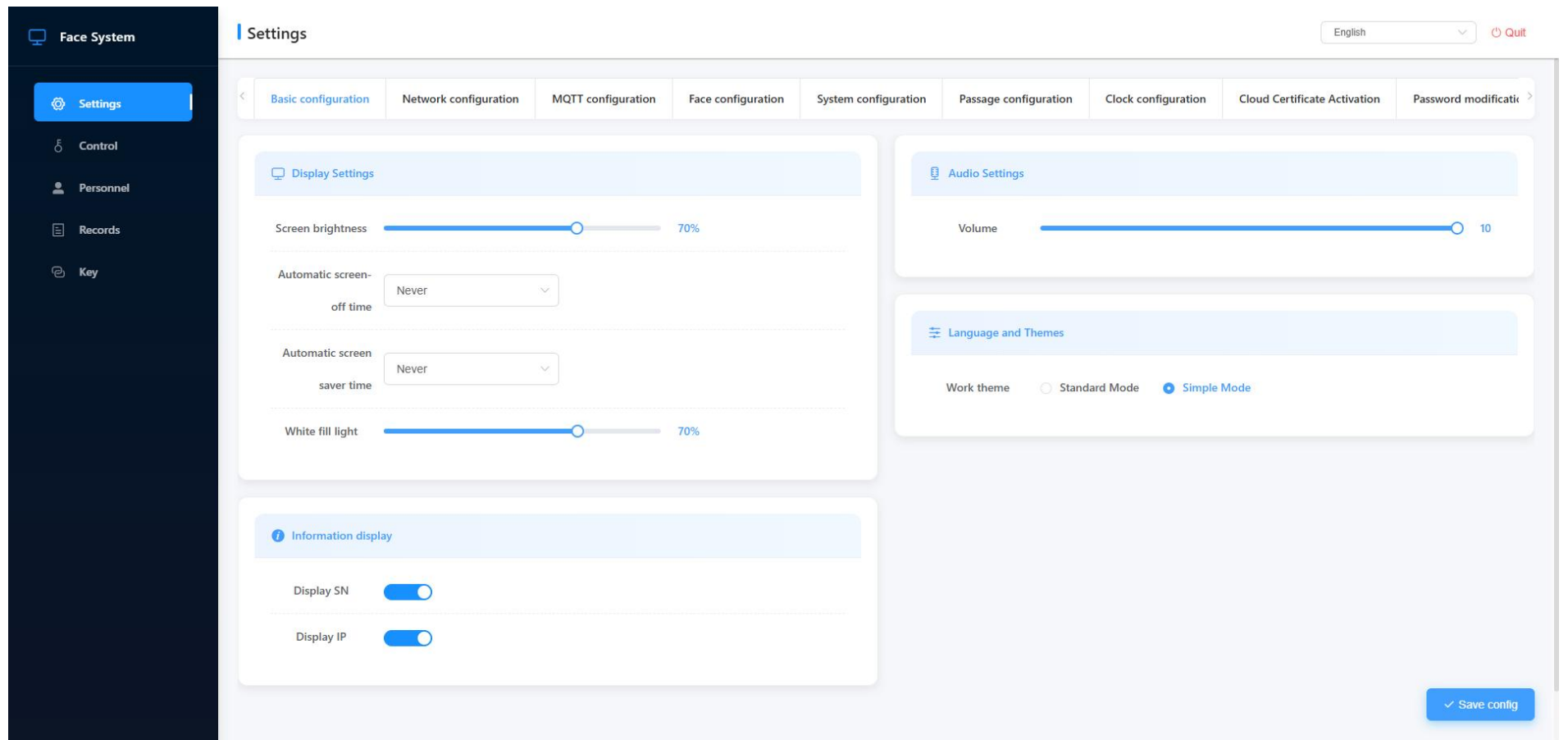
Press Enter to access the device's Webserver page.



Log in with the password (same as the device Settings menu password; default: password).

Language can be switched in the upper right corner of the page.

3.7.2. Webserver Functions



Functions are divided into four categories:

Settings: Same as settings on the device side

Control: Remotely open door, restart, reset, and perform remote upgrades

Personnel: View the internal whitelist; add, delete, edit, and query users, credentials, and permissions

Records: View access records

4、 SaaS System

To use with the **Feocey Office** SaaS system, you may visit the following link:

<https://office.feocey.com/>

After registration and login, bind the device to start using. For the detailed operating guide of **Feocey Office** SaaS, please refer to *Feocey Office User Guide*.

5、 FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- - Reorient or relocate the receiving antenna.
- - Increase the separation between the equipment and receiver.
- - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- - Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and

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

RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20cm the radiator your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

6、Contact Us

Company Name: Suzhou Fanxi Technology Co., Ltd.

Official Website: www.feocey.com

Contact Information: WhatsApp: +86 18910826160

Company Address:

Yangshan Science Park, No.8 Jinyan Road, Huqiu District, Suzhou City, Jiangsu Province