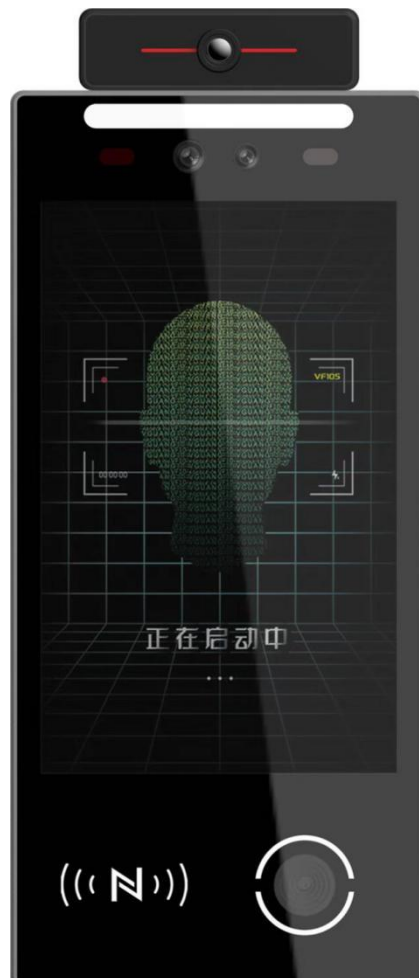


Intelligent Face Recognition Terminal

VF105 User Manual



Document description

This document is mainly composed of the following parts.

Chapter 1~3: Overall product introduction, including product characteristics, appearance, parameters, interface leads and installation methods.

Chapter 4: Introduce several working modes of the device to facilitate users to fully understand the device certification process.

Chapter 5: Introduce the way to log in to the device background.

Chapter 6: Due to the relatively large number of background setting items, this chapter lists the setting methods of several common scenarios to facilitate users to quickly set the device after getting the device.

Chapter 7: Introduce the function and usage of face device configuration tool in detail.

Chapter 8: Introduce the configuration options and operation instructions of the background of face device in detail.

Chapter 9: Notes for device registration, installation and use.

Users can quickly master the using method of the device according to the guidelines.

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1. Preface

Thanks for using VF105 face recognition, temperature measurement, code scanning and card swiping all-in-one device. Carefully reading this document can help you understand the functions and characteristics of this device, and quickly master the use and installation methods of the device.

1.1. Product introduction

VF105 integrates face recognition, temperature measurement, card swiping, QR code reading and ID card reading. It has four communication modes: RS485, Wiegand, Ethernet and WiFi. Card swiping and QR code reading can be configured into the above outputs. After successful card swiping or QR code recognition, the device will not be verified locally and will be directly output. Face recognition adopts the local verification method. The face inventory is placed locally on the device. After successful verification, the personnel ID can be output. The output method can also adopt one of the above four methods.

This product features 8-inch touch screen, voice broadcast, reserved microphone, and good interactivity and ease of use.

VF105 device supports protocol mode, and users can conduct secondary development according to the communication protocol provided by our company.

1.2. Product feature

Integrated face recognition, card swiping and QR code reading.

8-inch bright LCD touch screen, live voice broadcast prompt, 200W pixel binocular camera.

The recognition accuracy is more than 97%, and the recognition time is less than 0.3s/person.

The recognition distance is 0.3m-1.5m, and the maximum support is 50000 face databases, 50000 cards / QR codes, and 50000 records.

Personnel wearing masks, glasses and hats can be effectively identified, and mask detection is supported.

Built in silent live detection can effectively block photo, video and mask attacks.

Support TCP/IP, MQTT and HTTP protocols.

Scanning configuration and scanning registration are supported.

External alarm input, door magnetic status input, door exit switch input.

RS485, Wiegand output face ID number, QR code content or card ID number.

Built in high-precision clock chip and RTC battery can save time after power failure.

Electrostatic protection contact 8Kv, air 12kV.

The waterproof and dustproof grade of non temperature measurement module can reach IP66.

Support logo customization, protocol customization and OEM.

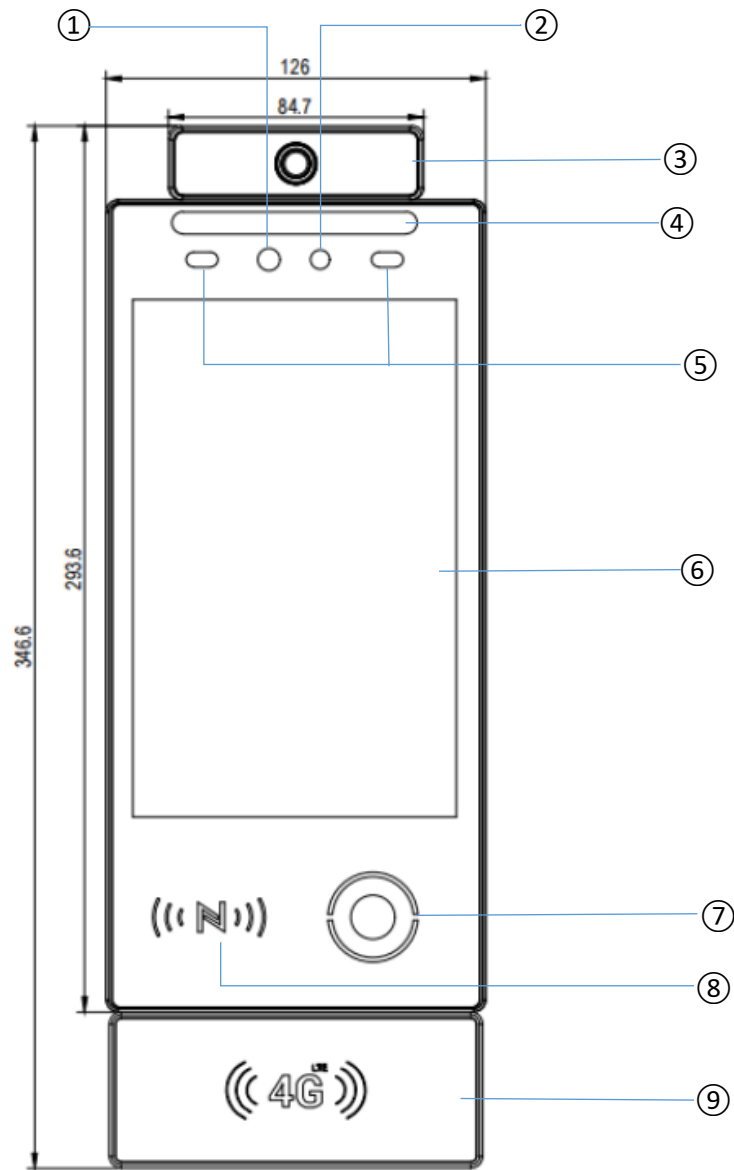
Support the installation of gate, 86 box, flat wall and column.

2. Product appearance

2.1. Appearance drawing

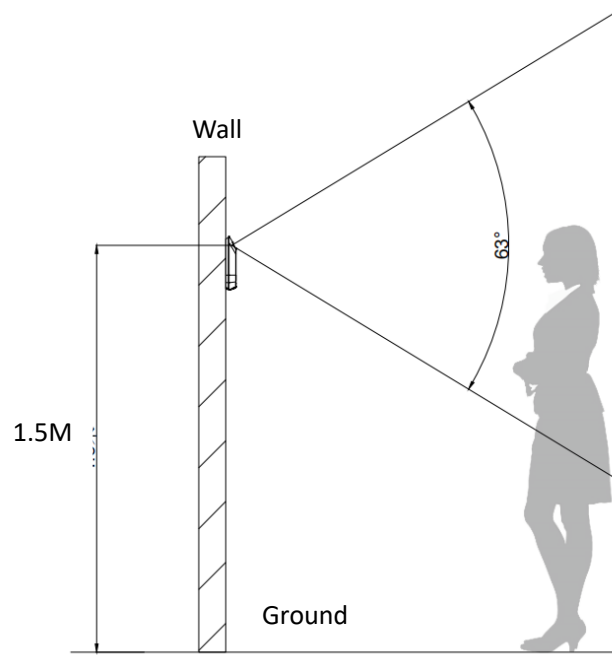


2.2. Appearance introduction

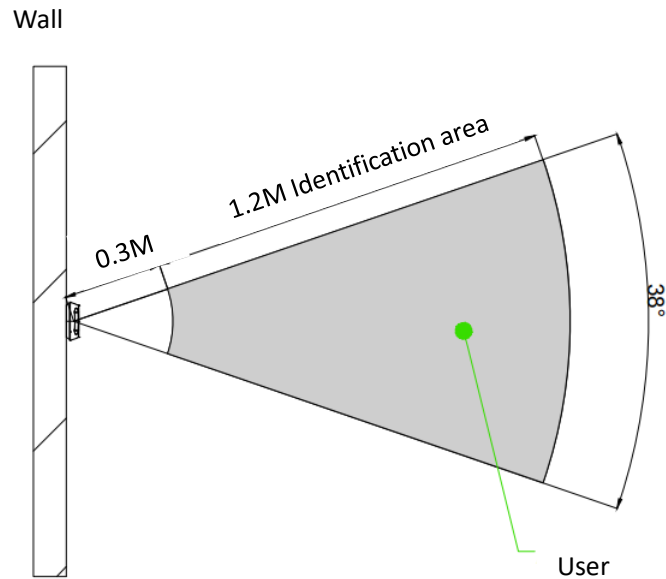


Serial number	Name	Instructions
①	Infrared camera	
②	RGB camera	
③	Temperature probe	Optional
④	White fill light	
⑤	Infrared fill light	
⑥	8 inch high brightness LCD touch screen	
⑦	Code scanning module	
⑧	Card swiping module	

2.3. Schematic diagram of reading area



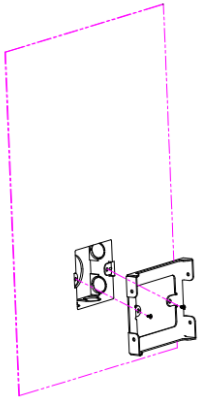
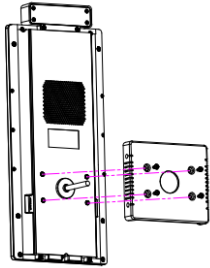
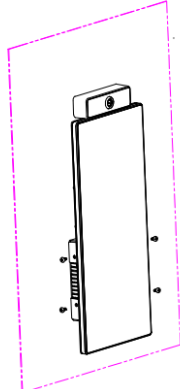
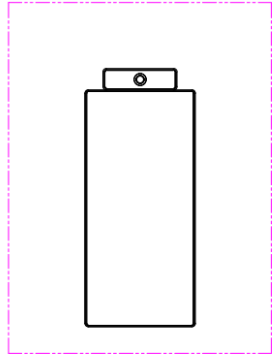
Profile




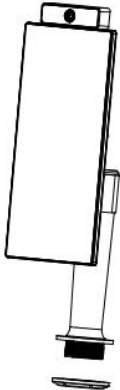
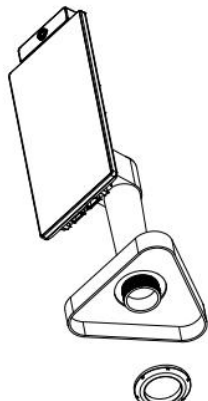
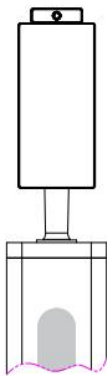
Vertical view

2.4. Installation method

86 box installation

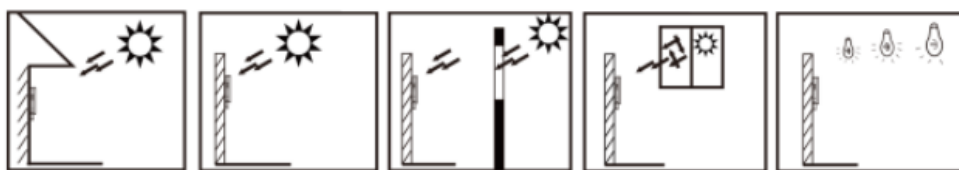
			
Step1:Connect metal bracket and 86 box screws.	Step2:Connect adapter bracket and device screws.	Step3:Install the device to the 86 box, connect side by screws.	Step4:Complete installation.

Column installation

			
Step1:Remove the upper cover plate of the column.	Step2:Remove the torch holder nut.	Step3:Fix the upper cover plate and torch holder.	Step4:Assemble the upper cover plate to the column.

Installation notes:

Avoid backlight, direct sunlight, direct sunlight through windows, oblique sunlight through windows, and close light.



Backlight

Direct sunlight

Direct sunlight through windows

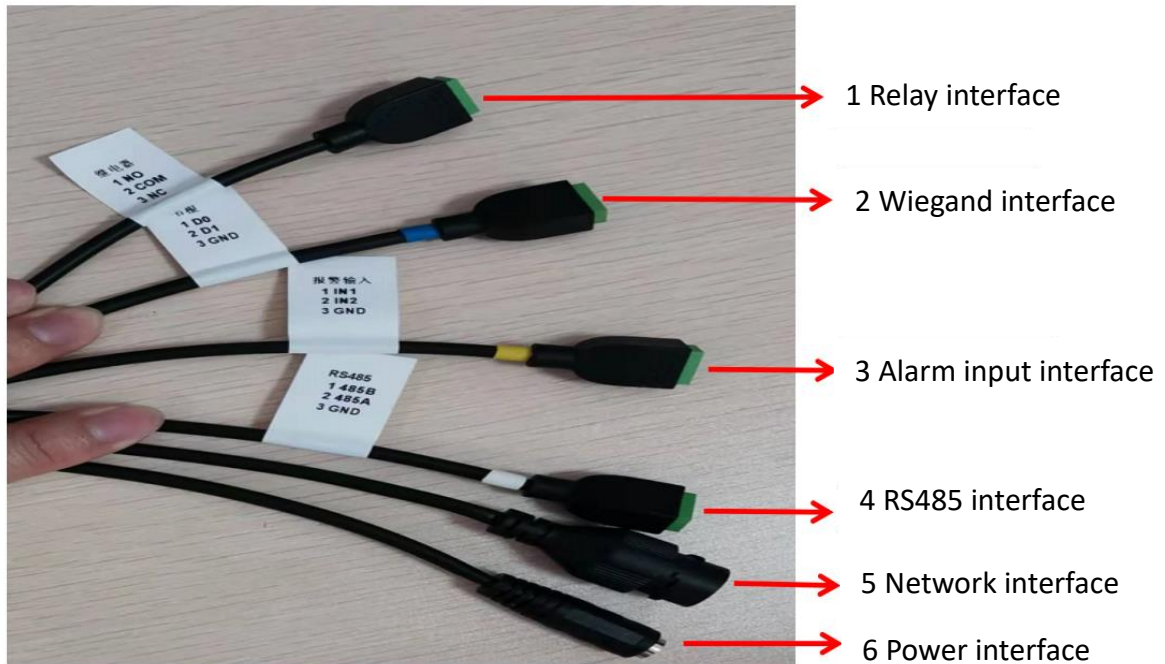
Oblique sunlight through windows

Close light

2.5. Device wiring

Port description

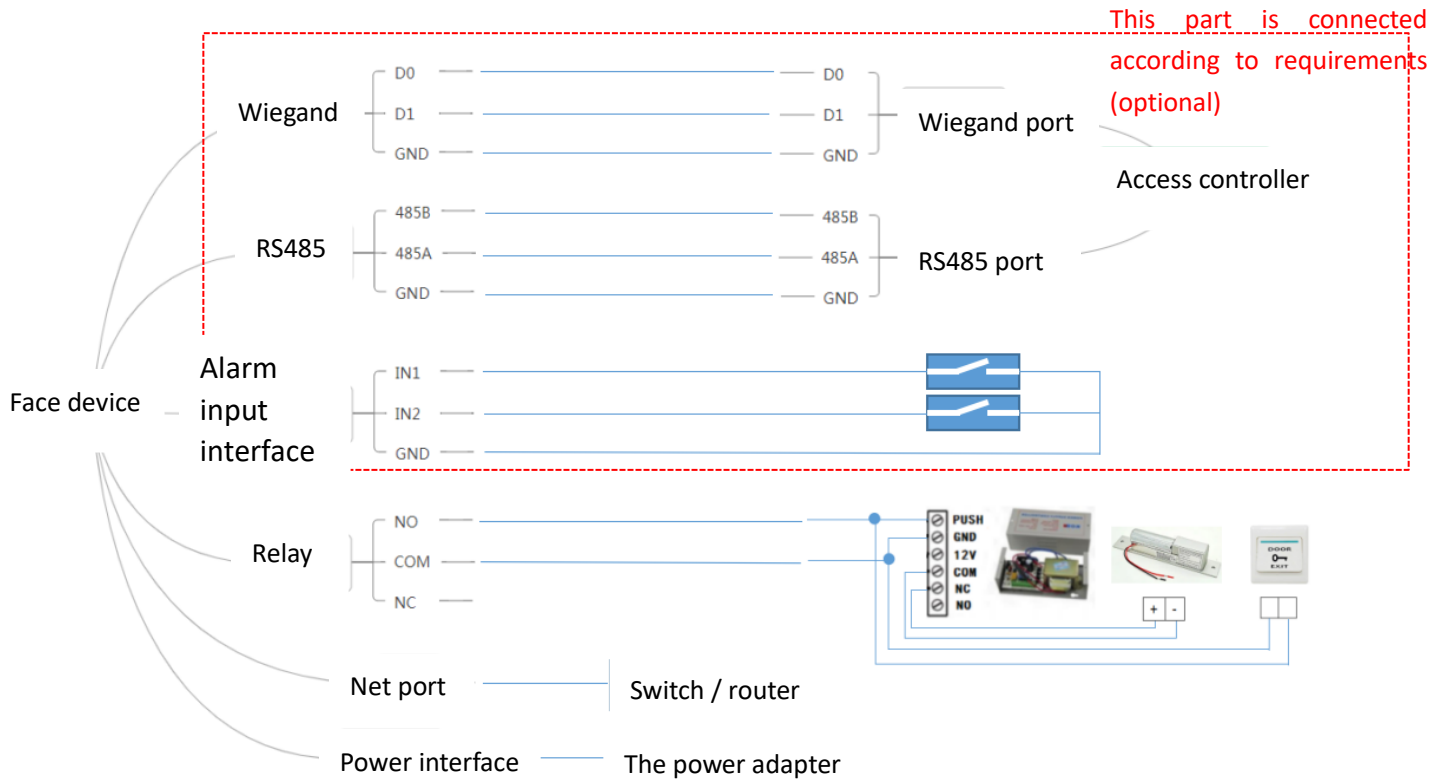
The face recognition device has six wiring terminals, and the wiring is defined according to the wire mark of the wiring terminal.



Port serial number	Port definition	Instruction	
1	Relay interface	NO	Normally open end of relay
		COM	Relay common terminal
		NC	Normally close end of relay
2	Wiegand interface	D0	Wiegand 0
		D1	Wiegand 1
		GND	GND
3	Alarm input interface	IN1	Alarm input 1
		IN2	Alarm input 2
		GND	GND
4	RS485 interface	485A	485_A cable
		485B	485_B cable
		GND	GND
5	Network interface	RJ45	Network interface
6	Power interface	DC	Power interface

Device wiring diagram

The electric plug-in lock mechanism in the figure is power-off unlocking and power on locking (two core wire lock head). If users use other types of electric plug-in locks, they should be connected according to the characteristics of the electric plug-in lock.



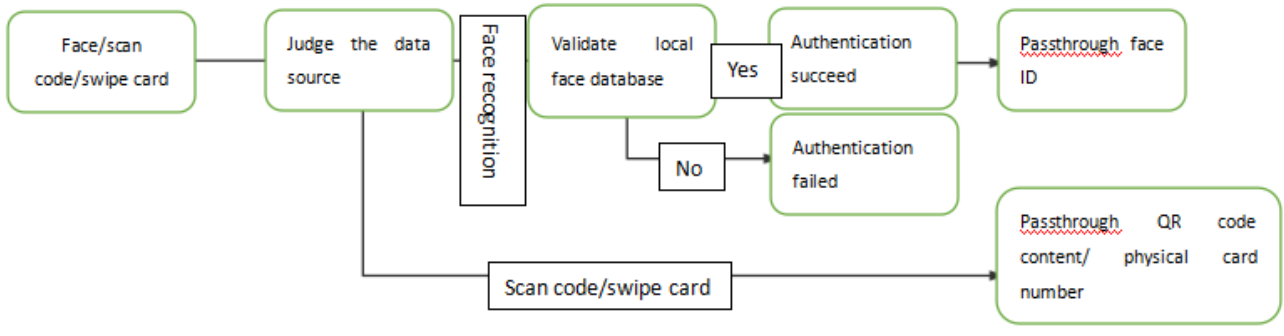
3. Technical parameter

Product parameters		
System parameter	OS: Linux	
	Storage capacity: 8GB (16G&32G expandable)	
	Processor: ARM Cortex A7 MP2 1GHz	
Display screen	Size: 8 inch LCD touch screen	
	Resolution ratio: 1280*800	
Communication mode	Wired: 1 10/100M adaptive network port	
	Wireless: 2.4G WiFi	
	1 RS485	
	1 Wiegand 26/Wiegand 34	
Physical interface	Relay: 30V1A	
	2 Alarm signal input interface	
Power supply	Supply voltage: 9~24V(DC) (12V power supply is recommended)	
	Max.16W	
Camera	RGB camera	Field angle: D=65° H=59° V=38°
		Aperture: 2.0
		Resolution ratio: 1920*1080
		Focal length: 4.35MM
	Infrared camera	Field angle D=68° H=60° V=40°
		Aperture 2.2
		Resolution ratio 1616*1232
		Focal length 2.35MM
Temperature measurement	Accuracy	Within one meter $\pm 0.5^{\circ}\text{C}$
	Working temperature	10 $^{\circ}\text{C}$ -35 $^{\circ}\text{C}$
Speaker	Built in two 8 Ω 1W speaker	
Material	Fireproof ABS + organic glass	
Working temperature	-20 $^{\circ}\text{C}$ ~ 55 $^{\circ}\text{C}$	
Working humidity	10%~90% (No condensation)	
IP Grade	Electrostatic protection: Contact 8KV, air 12KV	
	Dust proof and waterproof grade of non temperature measurement version: IP66 (other versions are not waterproof)	
Card swiping performance parameters		
Antenna specification	13.56MHz	
Antenna size	48mm*33mm	

Reading distance	0-5cm (Card swiping distance may vary with different card types and specifications)
Supported card type	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, ID card
Code scanning performance parameters	
Symbologies	Two-dimensional (QRCODE, PDF417 etc)
Code scanning support device	Mobile screen/paper code
Image sensor	640*480
Reading direction	Tilt±40°, rotation±360°, deflection±30°
	Level: 62°
	Vertical: 49°
Precision	≥7mil
Reading distance	0~10cm
Scanning feedback	Voice prompt
Ambient illumination	0~80000Lux
Face recognition performance parameters	
Support mask detection	
1: N algorithm dynamic face detection (anti photo, video attack)	
Hardware infrared living detection (anti photo, video attack)	
5000 face capacity	
Reading distance 0.3-1.5M	
Pass rate: ≥97% (The capacity reaches 5000 sheets)	
Error rate ≤0.01% (The capacity reaches 5000 sheets)	
Reading time <0.3s	

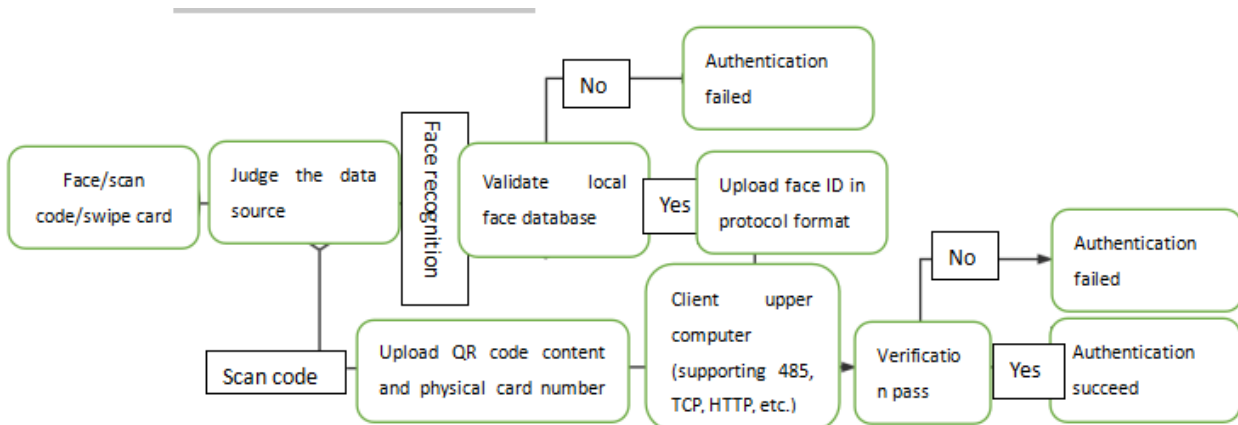
4. Device working mode description

4.1. Transparent transmission mode



In transparent transmission mode, code scanning / card swiping directly transmits data, and there is no authentication process. Face recognition only compares with the local face database.

4.2. Protocol mode



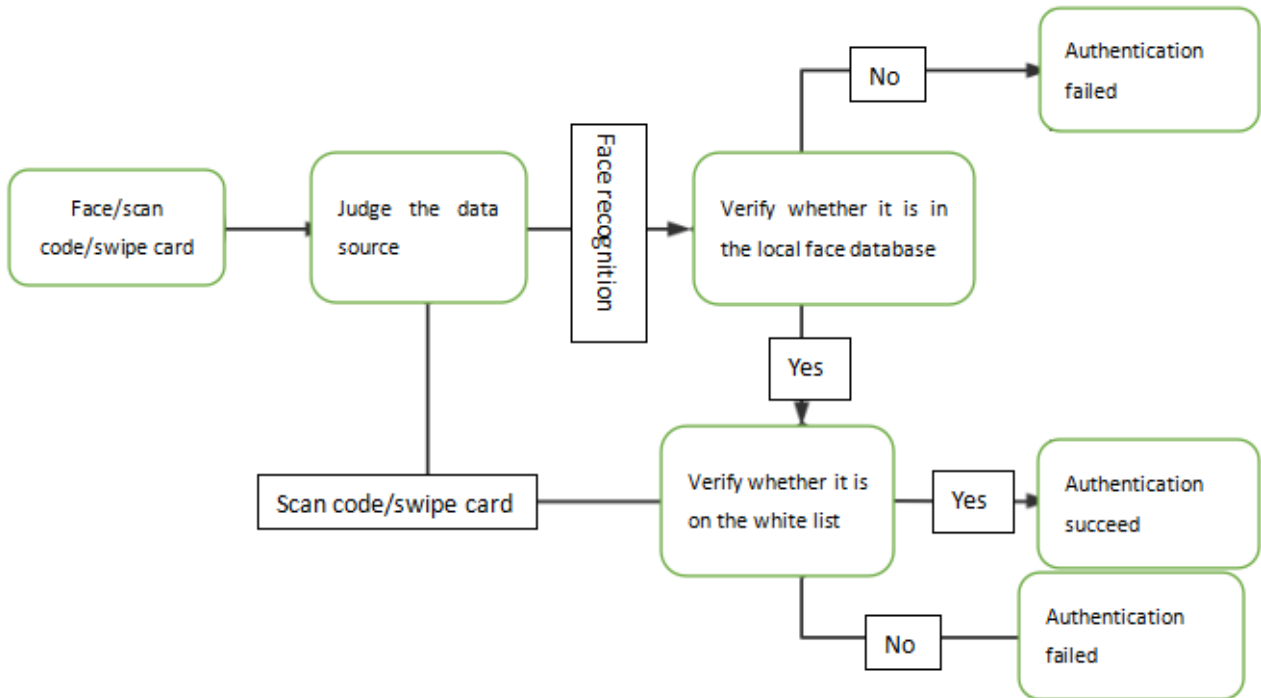
In protocol mode, the user needs to build an upper computer to receive data and return authentication results through 485 or TCP and HTTP protocols.

The agreement documents can be obtained on the official website.

4.3. Development mode

At present, the development mode is only used for card reading and writing operation, and other functions are not supported temporarily.

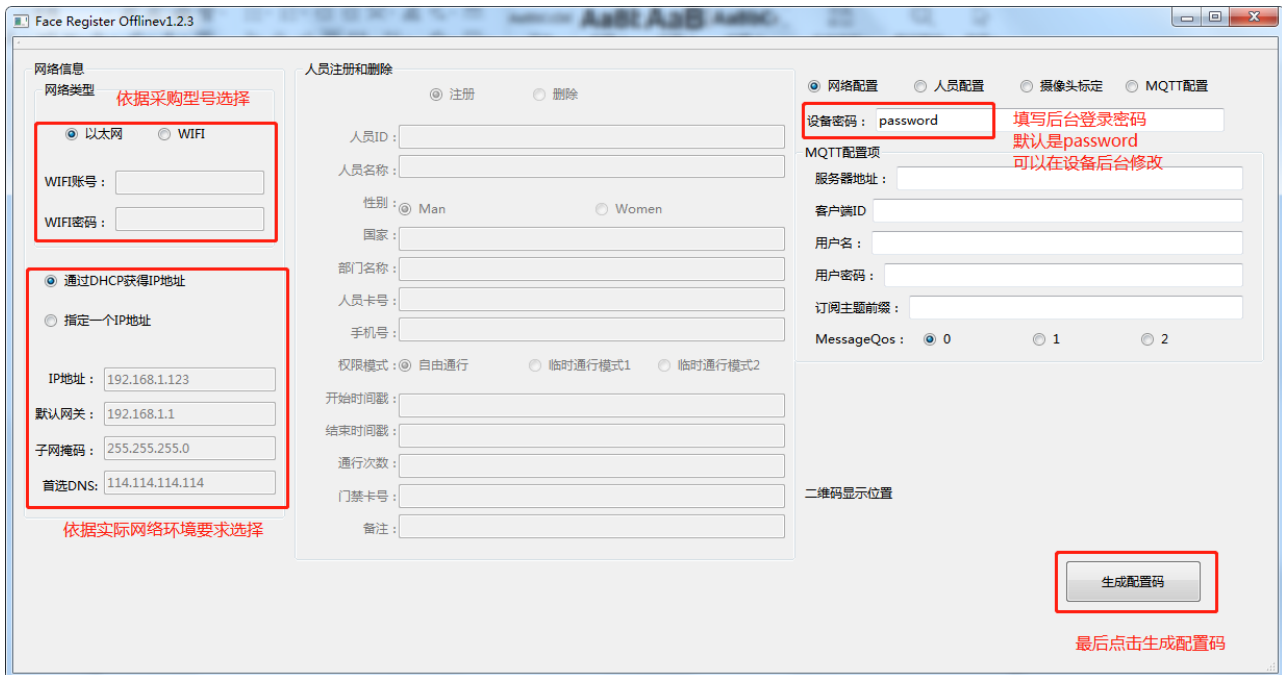
4.4. Local whitelist mode



5. Login device background

5.1. Device networking configuration

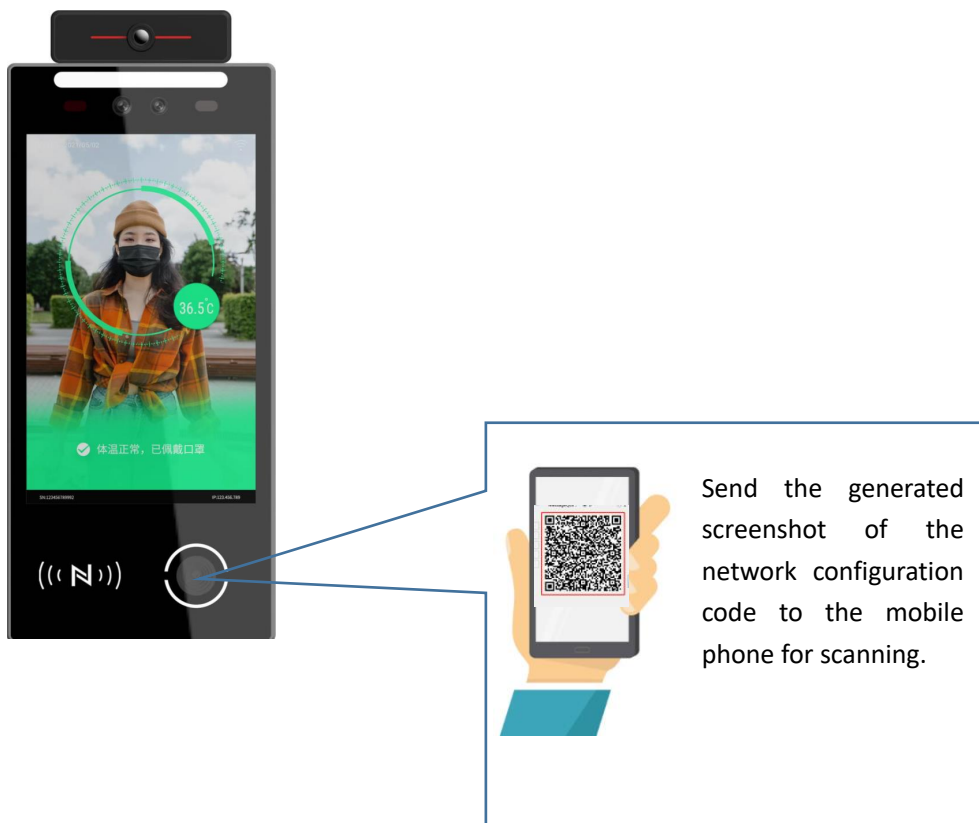
Download the configuration tool 《Face register offlinev1.2.3》 on the official website (<http://www.vguang.cn/vfxl>), and double-click to open the configuration tool.



Take the WiFi (only 2.4G WiFi) output mode as an example. Assume that the WiFi name is 123 and the WiFi password is 123. The generated configuration code is as follows.



Scan the configuration code to the code scanning module on the face device (as shown in the figure below), the device buzzer will sound, the face device screen will display the green font "network configuration succeeded" and broadcast the voice "network configuration succeeded", which means the configuration is successful. The device will automatically connect to the network. When the connection is successful, the device will broadcast "network connected".



5.2. Login face device background

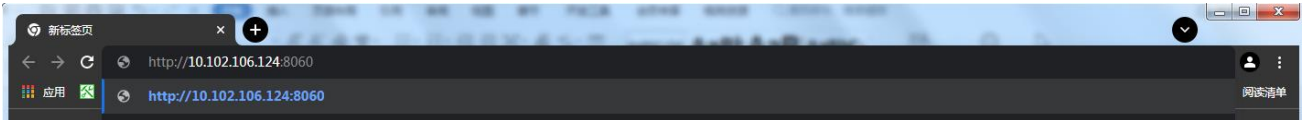
When the face device is connected successfully, the networking icon is displayed in the upper right corner of the screen, the device IP is displayed in the lower right corner, the system time is displayed in the upper left corner, and the device SN number is displayed in the lower left corner.



Connect the computer and face device to the same network. Open the browser, enter http: // device IP address: 8060 / in the address bar, and enter to enter the background management interface.

Assumed that the IP address obtained by the device is 10.102.106.124.

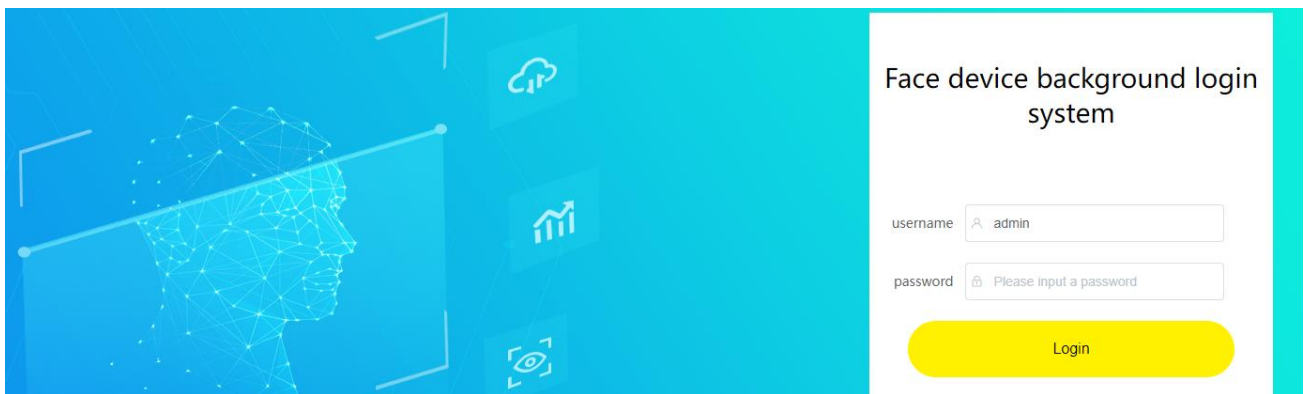
Enter the device address as follows and press enter.



Enter the background login interface. The login interface is as follows.

The default user name :admin.

The default login password is: password. (this password is the device password in face register offlinev1.2.3.)



After successful login, the background prompts to set "device configuration password".

This configuration password is mainly used to set the working mode of the code scanner, as well as device upgrading, factory recovery and other operations. Click OK to enter the system of the following device.

Face device background system

language English Administrator Quit

- Basic settings
- White list settings
- Firmware information
- Personnel setting
- Pass record

Basic configuration

- Configuration related to access record
- Voice and output related configuration
- Alarm related configuration
- Device anti removal setting
- Relevant settings of fill light
- Face related configuration
- Card swiping related configuration
- Code scanning related configuration
- Channel related configuration
- Authentication mode
- Network configuration
- MQTT related configuration
- Camera calibration
- Set device time
- Disable / enable

Automatically adjust screen brightness	<input checked="" type="radio"/> close <input type="radio"/> open
Screen brightness	<input type="range"/>
Auto off screen	<input type="radio"/> close <input checked="" type="radio"/> open
Auto off screen time	<input type="text" value="300"/> s
Automatic Screensaver	<input type="radio"/> close <input checked="" type="radio"/> open
Automatic screen saver time	<input type="text" value="30"/> s
Show SN	<input type="radio"/> Not show <input checked="" type="radio"/> Show
Show IP	<input type="radio"/> Not show <input checked="" type="radio"/> Show
Volume	<input type="range"/>
Automatic update time	<input type="radio"/> close <input checked="" type="radio"/> open

6. Face registration

Users can refer to the following scenarios for quick settings.

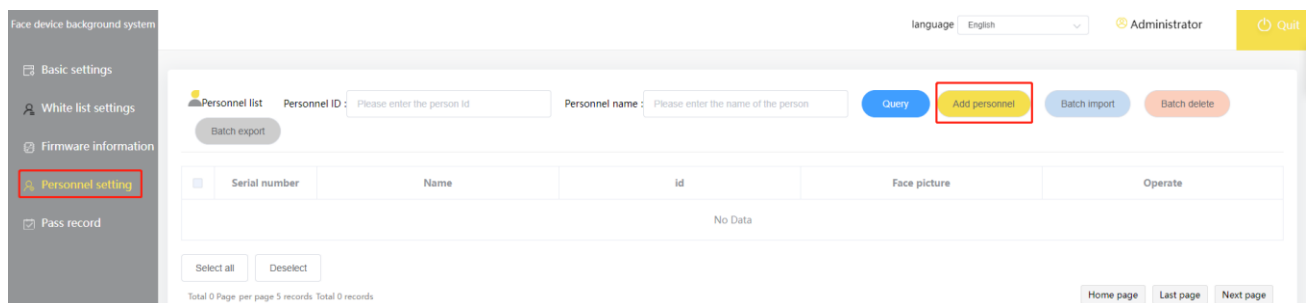
6.1. Scene 1

Scenario description

- 1, Can be used for device networking.
- 2, After registering the face, can pass freely.
- 3, Don't need code scanning / card swiping function; Or need to scan the code or swipe the card, and then transmit the QR code content and physical card number through 485 or Wiegand.

Setup process

- 1, Refer to the instructions in Chapter 5 to log in to the device management background.
- 2, Select add personnel in personnel settings.



- 3, Fill in the person ID, such as 123, fill in the person name, such as "San Zhang", click the "+" sign, select the local photo, and click OK; or take photos and input directly.

Add personnel

ID

Name

Department

list

Sex

Power

Face picture :

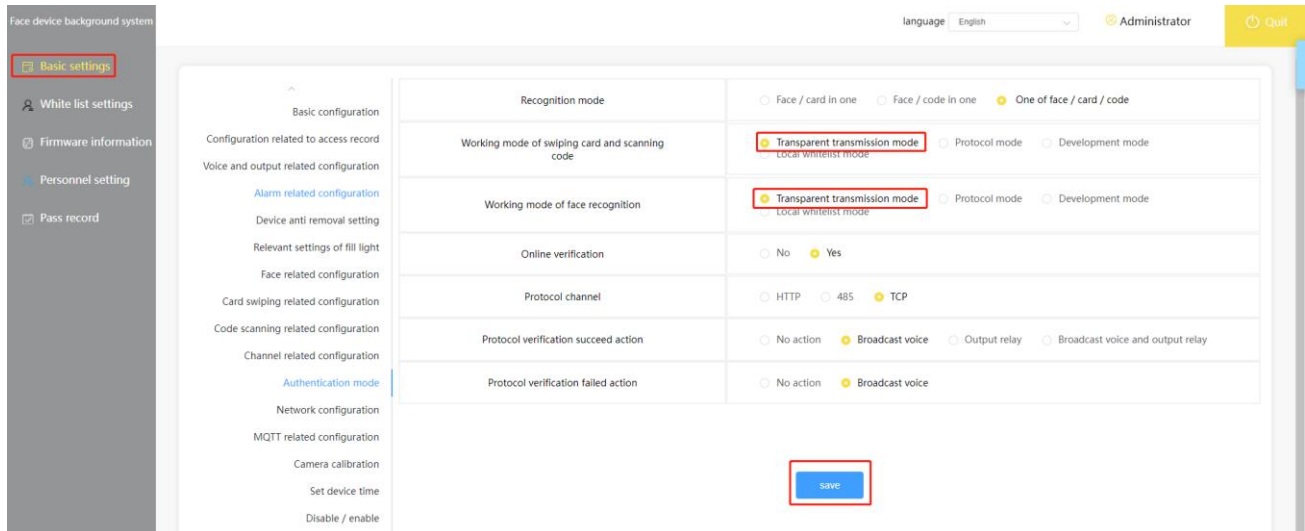
Local import

Photo entry

+

4, The platform prompts that the entry is successful.

5, Set the face recognition/code scanning/card swiping working mode as transparent transmission mode.



6, After saving successfully, can use face for authentication, scan code \ swipe card to output QR code content and card swiping data.

6.2. Scene 2

Scenario description

- 1, The face device unable to be connected to the network.
- 2, Only need to register face and use your face data to pass.
- 3, The premise is that the working mode of face device is "transparent transmission mode". The factory default of the device is "transparent transmission mode".

Setup process

Use the configuration tool "Face register offlinev1.2.3" to register personnel.

Open the configuration tool and select personnel configuration; Enter the person id; Fill in the name of the person; Click to generate configuration code; Scan the generated configuration code to the device, and the device screen prompts to use face for registration. During face registration, the face needs to be in the registration box. It is best to occupy all the registration boxes, and look at the registration box for 2-3 seconds, waiting for the device to complete registration.

After successful registration, can use face to pass.

Face Register Offline v1.2.3

网络信息

网络类型

以太网 WIFI

WIFI账号:

WIFI密码:

通过DHCP获得IP地址

指定一个IP地址

IP地址:

默认网关:

子网掩码:

首选DNS:

人员注册和删除

注册 删除

人员ID: 123

人员名称: 张三

性别: Man Women

国家:

部门名称:

人员卡号:

手机号:

权限模式: 自由通行 临时通行模式1 临时通行模式2

开始时间戳:

结束时间戳:

通行次数:

门禁卡号:

备注:

网络配置 人员配置 摄像头标定 MQTT配置

设备密码:

MQTT配置项

服务器地址:

客户端ID:

用户名:

用户密码:

订阅主题前缀:

MessageQos: 0 1 2



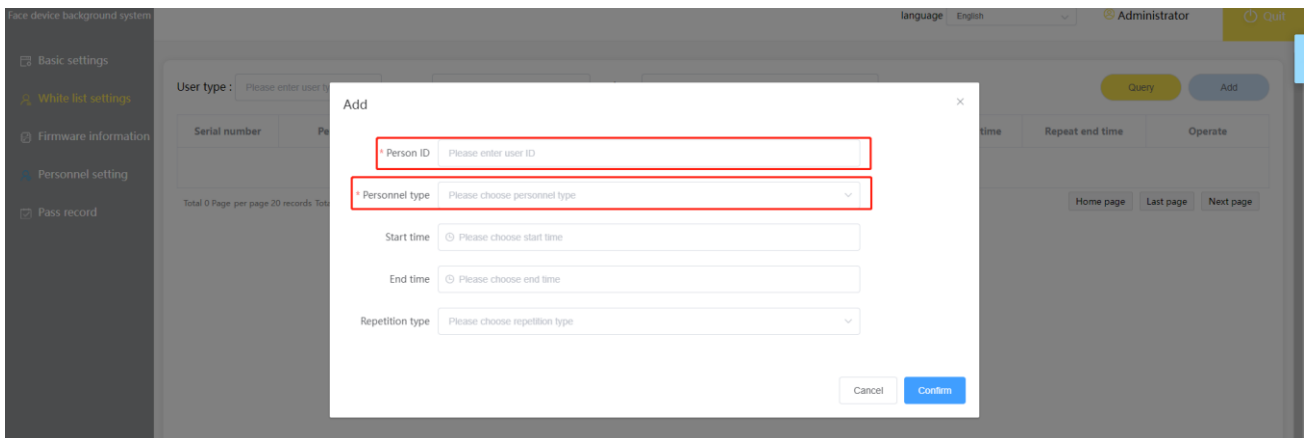
6.3. Scene 3

Scenario description

- 1, Can be used for device networking.
- 2, Code scanning / card swiping adopts the white list mode, that is, the code scanning / card swiping authentication authority is entered into the equipment in advance, and the door can be opened by code scanning / card swiping.
- 3, Face recognition in any mode.

Setup process

- 1, Refer to the instructions in Chapter 5 to log in to the device management background.
- 2, Select the white list setting.
- 3, Select "Add".
- 4, Enter the person ID.



When the user type is face: fill in the ID of the person at the time of registration;

When the user type is card: the ID is hexadecimal positive sequence card number, and the letter must be lowercase, such as a9decad1.

When the user type is QR Code: the ID is a user-defined card number, the user needs to generate a QR code picture according to the instructions for use of authorized pass code mechanism_v1.0. The user can scan the code to open the door.

- 5, Select start time \ end time and specify the validity period of the white list.
- 6, Repeat type: no repeat.
- 7, Click OK.

7. Configuration tool instruction

7.1. Overview of configuration tool function

The configuration tool can realize the following functions.

- 1, Configure device network parameters.
- 2, Code scanning registration \ delete face, which can register \ delete personnel without networking or logging in the background.
- 3, Configure the MQTT parameters of the device.

7.2. Instruction

Network configuration

According to the purchased device model, choose to configure Ethernet or WiFi output mode, support DHCP, or configure fixed IP. Then, the tool generates the configuration code and scans the configuration code to the code scanning window of the face device.

The screenshot shows the 'Face Register Offline v1.2.3' application window. It is divided into several sections:

- Network Information (网络信息):**
 - Network Type (网络类型): Ethernet, WiFi
 - WiFi Account (WiFi账号): Vguang_RJ
 - WiFi Password (WiFi密码): vguangrj_c0
 - IP Address (IP地址): 192.168.1.123
 - Default Gateway (默认网关): 192.168.1.1
 - Subnet Mask (子网掩码): 255.255.255.0
 - Preferred DNS (首选DNS): 114.114.114.114
- Personnel Registration and Deletion (人员注册和删除):**
 - Registration (注册) selected, Deletion (删除) unselected.
 - Personnel ID (人员ID): 12
 - Personnel Name (人员名称): 12
 - Gender (性别): Man, Women
 - Nationality (国家):
 - Department Name (部门名称):
 - Personnel Card No. (人员卡号):
 - Mobile No. (手机号):
 - Authority Mode (权限模式): Free Passage, Temporary Passage Mode 1, Temporary Passage Mode 2
 - Start Time (开始时间戳):
 - End Time (结束时间戳):
 - Passage Count (通行次数): 2
 - Access Card No. (门禁卡号):
 - Remarks (备注):
- Network Configuration (网络配置):**
 - Device Password (设备密码): password
 - MQTT Configuration (MQTT配置项):
 - Server Address (服务器地址):
 - Client ID (客户端ID):
 - Username (用户名):
 - User Password (用户密码):
 - Subscription Topic Prefix (订阅主题前缀):
 - Message QoS (MessageQos): 0, 1, 2
- QR Code:** A large QR code is displayed in the bottom right, used for scanning the configuration code.
- Buttons:** A 'Generate Configuration Code' (生成配置码) button is located at the bottom right.

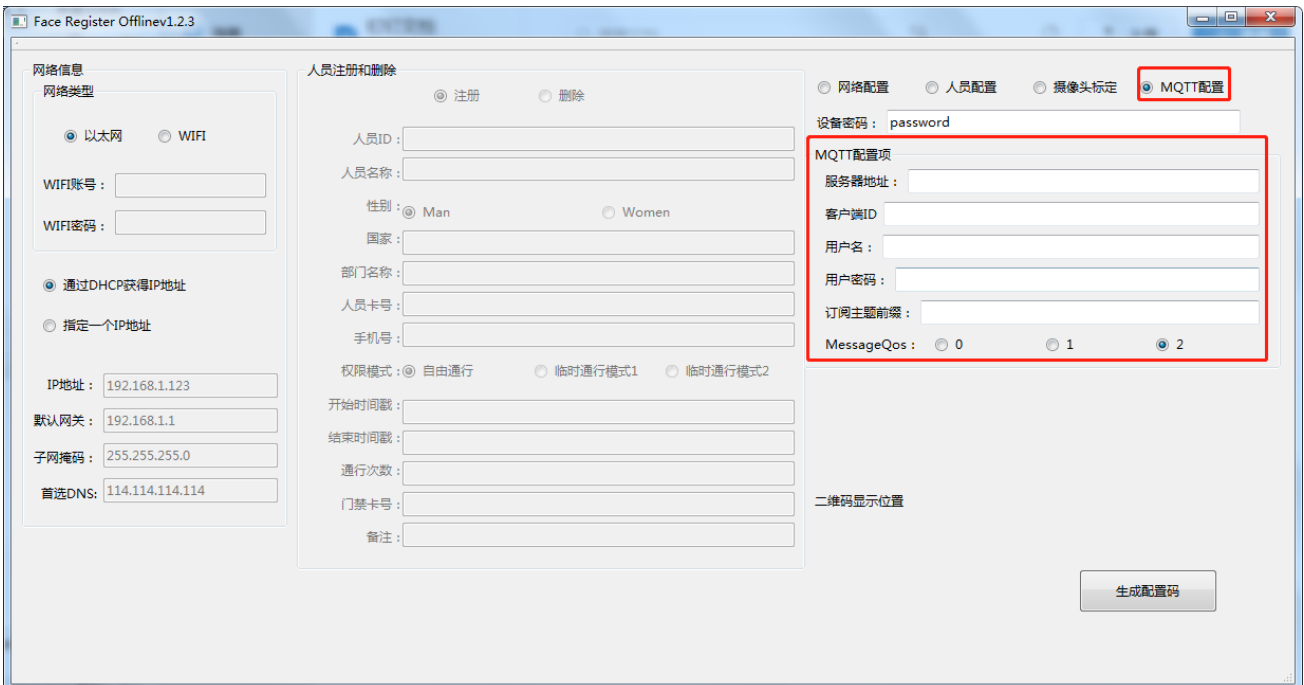
Personnel configuration

This configuration is used to register \ delete faces locally.



After scanning the configuration code, the device will prompt for face registration. After successful registration \ deletion, there will be a voice prompt.

MQTT configuration

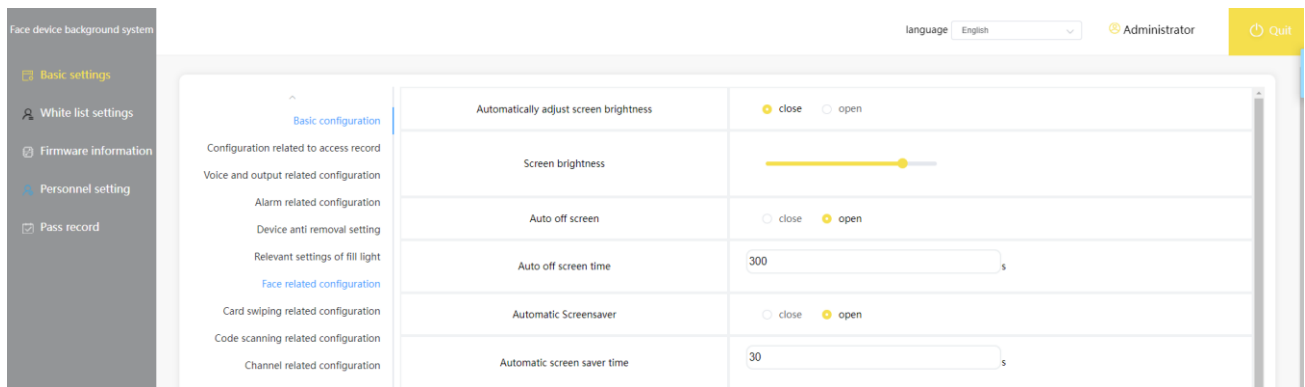


After filling in MQTT related information, click generate configuration code and scan the configuration code to the device reading window.

8. Background description

8.1. Basic setting

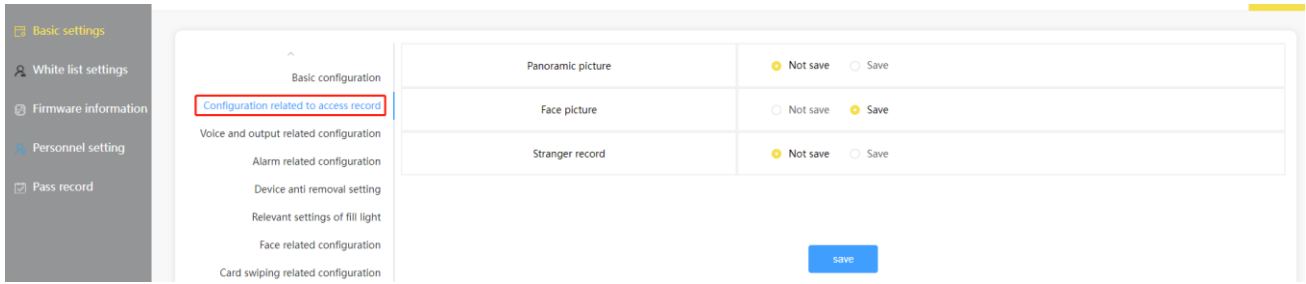
Basic configuration



The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Auto adjust screen brightness	Close	Turn on / off the device to automatically adjust the screen brightness
Screen brightness	80	Set screen brightness value
Auto off screen	Open	A period of standby, the screen will off
Auto off screen time	300s	Screen standby time
Auto screen saver	Open	After a certain standby time, enter the screensaver screen
Auto screen saver time	30s	Screensaver standby time
Display SN	Display	Whether SN number is displayed in the lower right corner of the screen
Display IP	Display	Whether the device IP address is displayed in the lower right corner of the screen
Volume	60	Adjust volume
Auto update time	Open	Networking automatically updates device time
Auto set time zone	Open	Networking automatically sets the device time zone
Device name	\	Name the device

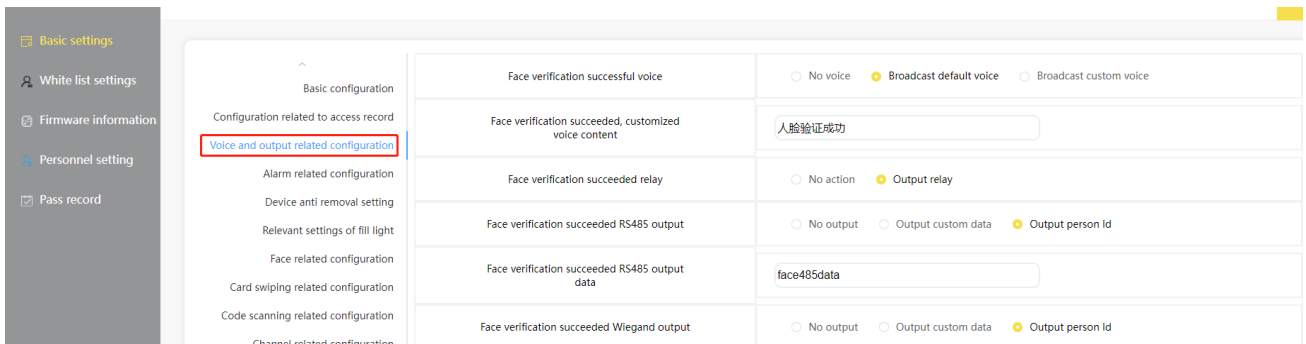
Pass record configuration



The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Panoramic picture	Not save	Set whether to save the panoramic picture when face recognition.
Face picture	Save	Only save the face photos when face recognition, and the priority is higher than the panoramic picture.
Stranger record	Not save	Set whether to save stranger face recognition record.

Voice and output related configuration



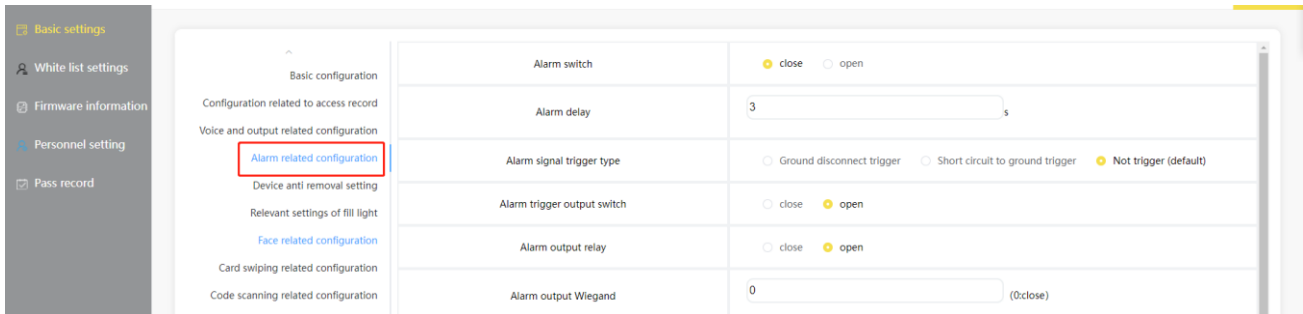
The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Face verification successful voice	Broadcast default voice	Set the voice feedback action when the face recognition device successfully recognizes the face.
		Broadcast custom voice: does not take effect in protocol mode and development mode.
Face verification succeeded, customized voice content	“ Face recognition succeeded ”	Set custom voice content
Face verification succeeded relay	Output relay	Set the action of the output relay when face recognition is successful.

Face verification succeeded RS485 output	Output personnel ID	Set the 485 port to output data content when face recognition is successful.
Face verification succeeded RS485 output data	face485data	It takes effect when "output custom data" is selected in the previous item.
Face verification succeeded Wiegand output	Output personnel ID	Set that when face recognition is successful, Wiegand port outputs data content. The personnel ID must meet the specifications of Wiegand 26 or Wiegand 34.
Face verification succeeded Wiegand output data	1234567890	It takes effect when "output custom data" is selected in the previous item.
Face verification failed voice	Broadcast default voice	Set the voice feedback action when the face recognition device fails to recognize the face.
		Broadcast custom voice: does not take effect in protocol mode and development mode.
Face verification failed, custom voice content	“ Face authentication failed ”	Set custom voice content
Card swiping verification succeeded voice	Broadcast default voice	Set the voice feedback action when the card is swiped successfully.
		Broadcast custom voice: does not take effect in protocol mode and development mode.
Card swiping verification succeeded, custom voice content	“ Card swiping succeeded ”	Set custom voice content
Card swiping verification succeeded relay	Output relay	Set the action of the output relay when the card swiping is successful.
Card swiping verification succeeded RS485 output	Output card number	Set the 485 port to output data content when the card swiping is successful.
Card swiping verification succeeded RS485 output custom data	card485data	It takes effect when "output custom data" is selected in the previous item.
Card swiping verification succeeded Wiegand output	Output card number	Set the Wiegand port to output data content when the card swiping is successful.
Card swiping verification succeeded Wiegand output data	1233211230	It takes effect when "output custom data" is selected in the previous item.
Card swiping verification failed voice	Broadcast default voice	Set the voice feedback action when card swiping fails.
		Broadcast custom voice: does not take effect in

		protocol mode and development mode.
Card swiping verification failed, custom voice content	“ Card swiping failed”	Set custom voice content
Code scanning verification succeeded voice	Broadcast default voice	Set the voice feedback action when the code scanning is successful. Broadcast custom voice: does not take effect in protocol mode and development mode.
Code scanning verification succeeded voice content	“ Code scanning succeed”	Set custom voice content
Code scanning verification succeeded relay	Output relay	Set the action of the output relay when the code scanning is successful.
Code scanning verification succeeded RS485 output	Output card number	Set the 485 port to output data content when the code scanning is successful.
Code scanning verification succeeded RS485 output data	qr485data	It takes effect when "output custom data" is selected in the previous item.
Code scanning verification succeeded Wiegand output	Output card number	Set the Wiegand port to output data content when the code scanning is successful.
Code scanning verification succeeded Wiegand output data	9876543210	It takes effect when "output custom data" is selected in the previous item.
Code scanning verification failed voice	Broadcast default voice	Set the voice feedback action when code scanning fails. Broadcast custom voice: does not take effect in protocol mode and development mode.
Code scanning verification failed, custom voice content	“ Code scanning failed”	Set custom voice content

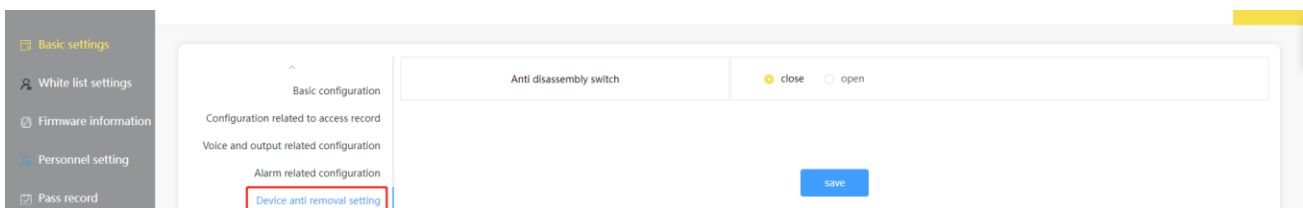
Alarm related configuration



The description list of configuration items is as follows:

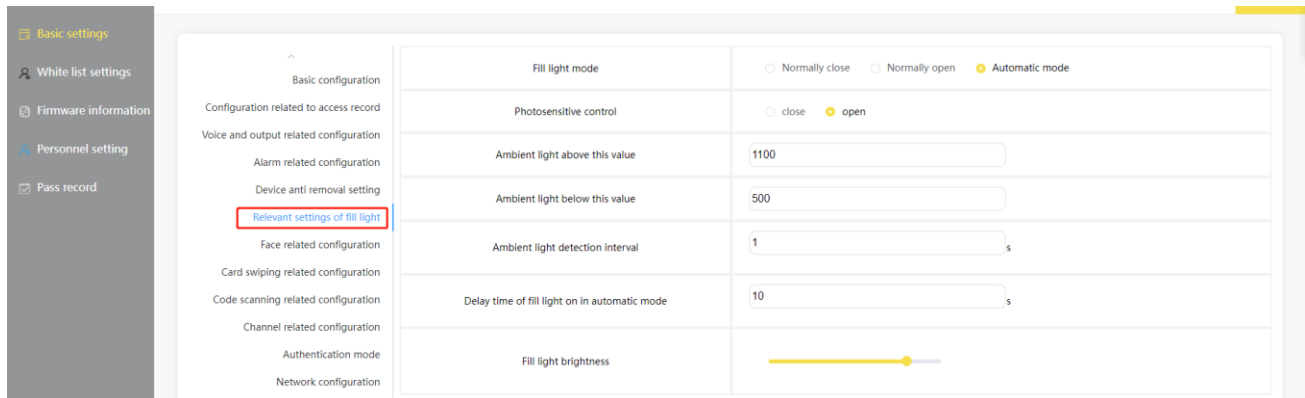
Configuration item	Default value	Instruction
Alarm service switch	Close	Set to turn on / off face device alarm signal trigger function.
Alarm delay	3s	The alarm trigger signal needs to last for 3 seconds to trigger the alarm voice.
Alarm signal trigger type	Not trigger	Set alarm trigger mode.
Alarm trigger output switch	Open	Set the feedback action of the device after the alarm signal is triggered.
Alarm output relay	Open	Act immediately when the alarm signal is triggered.
Alarm Wiegand output	Close	Output Wiegand data immediately when the alarm signal is triggered.
485 output	Close	Output 485 data immediately when the alarm signal is triggered.
Broadcast voice	Default voice	Voice broadcast when the alarm signal is triggered.

Device anti removal setting



It is closed by default. When it is turned on, the device will give an alarm when it is removed or powered on without installation. (VF105 device is not supported temporarily)

Fill light setting

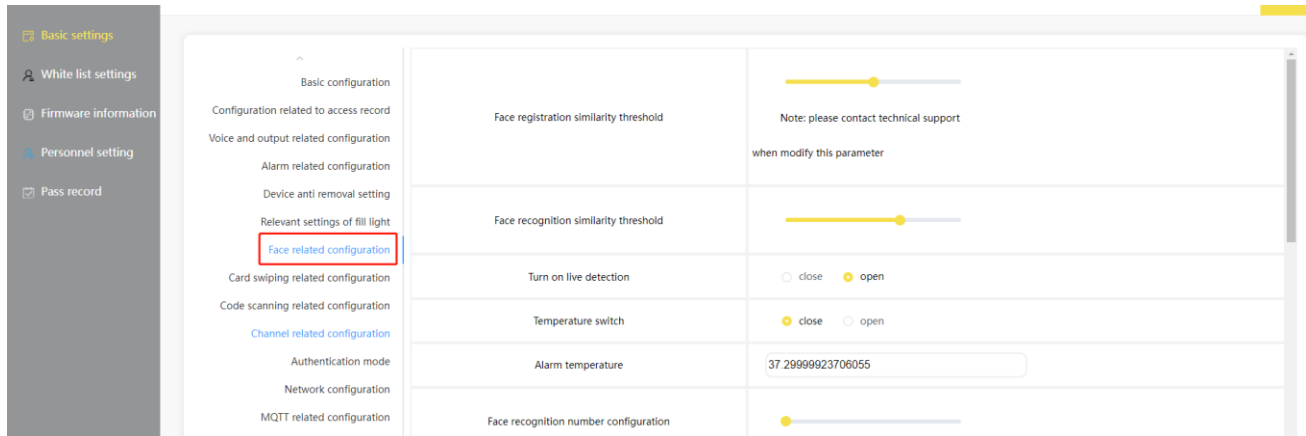


The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Fill light mode	Automatic mode	Set the working mode of the fill light. In the automatic mode, the fill light will be turned on or off automatically according to the needs of face recognition.
Photosensitive control	Open	This item will not take effect temporarily.
Ambient light above this value	1100	Effective in automatic mode: turn off the fill light when the ambient light is higher than this value.
Ambient light below this value	500	Effective in automatic mode: turn on the fill light when the ambient light is lower than this value.
Ambient light detection interval	1	Device detects the ambient light intensity every second.
Delay time of fill light on in automatic mode	10	Delay time of fill light on in automatic mode.
Fill light brightness	80	Set the fill light brightness.

Note: the high and low values of ambient light are recommended to remain the default. If the environment is limited and must be adjusted, the high value shall be at least 600 greater than the low value. Otherwise, the backlight of the device will be abnormal.

Face related configuration

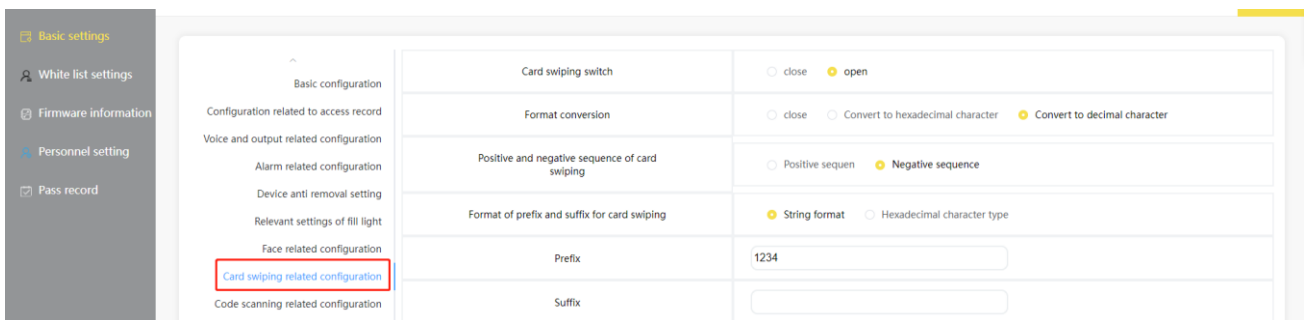


The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Face registration similarity threshold	50	Set the face detection standard during registration. It is recommended to keep the default value. The larger the value, the stricter the detection.
Face recognition similarity threshold	54	Set the face detection standard during face recognition. It is recommended to keep the default value. The larger the value, the stricter the detection.
Turn on live detection	Open	Set whether to turn on the live detection function.
Temperature switch	Close	Set whether to turn on the temperature measurement function.
Alarm temperature	37.299	Set temperature alarm threshold.
Face recognition number configuration	1	Only one person can be identified at the same time.
Face recognition	Open	Set whether to turn on the face recognition function.
Infrared image	Close	Set whether to turn on the infrared image. It is recommended to turn it off.
Live detection threshold	10	Set the live detection standard . It is recommended to keep the default value. The larger the value, the stricter the detection.
Mask detection	Close	Check whether the person is wearing a mask.
Mask recognition	Open	When face recognition personnel wear masks, open this item to help them recognize successfully.
Mask threshold	53	Set the detection standard for recognizing the face of people wearing masks. It is recommended to keep the default value. The larger the value, the stricter the detection.
Recognition distance	150cm	Set the maximum face recognition distance.

Repeat broadcast interval	5s	Set repeated broadcast interval.
Time interval of repeated recognition	1.5s	Set the face recognition interval.
Recognition timeout	1s	Set face recognition timeout.
Repeat identification switch	Open	Set whether to turn on the detection of face repetition recognition function.
Stranger voice	“ Hello stranger”	Broadcast when recognizing unregistered face.
Voice mode	No voice	Set the voice to broadcast when face verification is successful.
Greeting	No voice	Select the greeting type when the previous option is broadcast greeting.

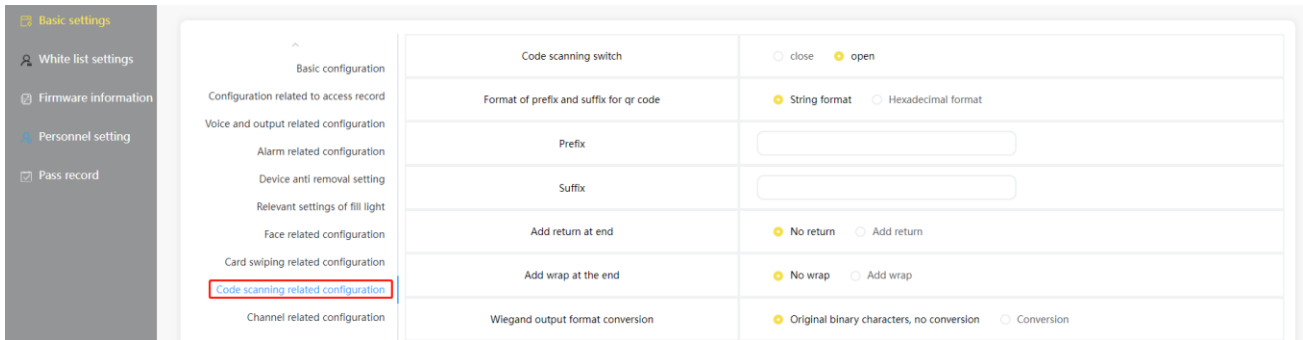
Card swiping related configuration



The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Card swiping switch	Open	Set whether to turn on the card swiping function.
Format conversion	Close	Set card swiping output format.
Positive and negative sequence of card swiping	Positive	Set the positive and negative sequence format of card swiping output.
Format of prefix and suffix for card swiping	Hexadecimal	Set the prefix and suffix format of the card number.
Prefix	(Empty)	Prefix of card number.
Suffix	(Empty)	Suffix of card number.
Add return at end	Close	Add return after card number.
Add wrap at end	Close	Add wrap after card number.

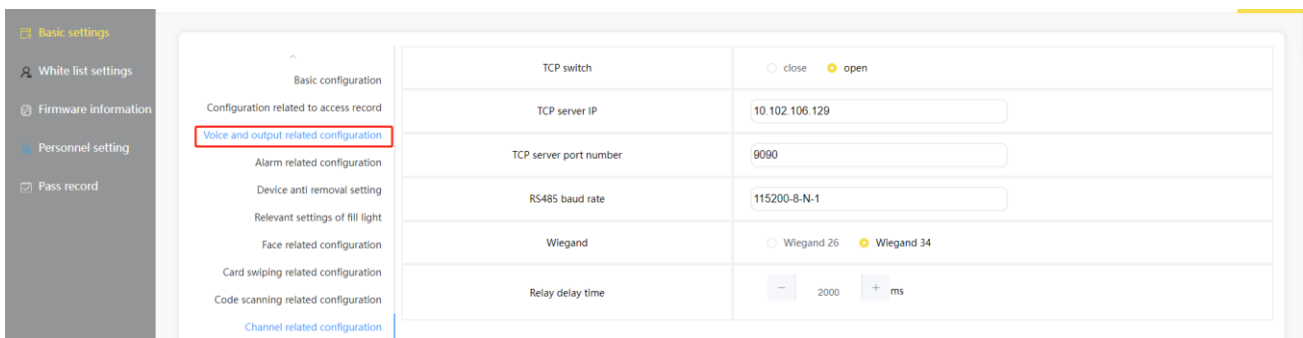
Code scanning related configuration



The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Code scanning switch	Open	Set whether to turn on the code scanning function.
Format of prefix and suffix for qr code	String format	Set prefix and suffix format when scanning code.
Prefix	(Empty)	Prefix
Suffix	(Empty)	Suffix
Add return at end	Close	Enter is added after the content of code scanning.
Add wrap at the end	Close	Wrap is added after the content of code scanning
Wiegand output format conversion	No conversion	It takes effect when the scan output channel is set to Wiegand.

Channel related configuration

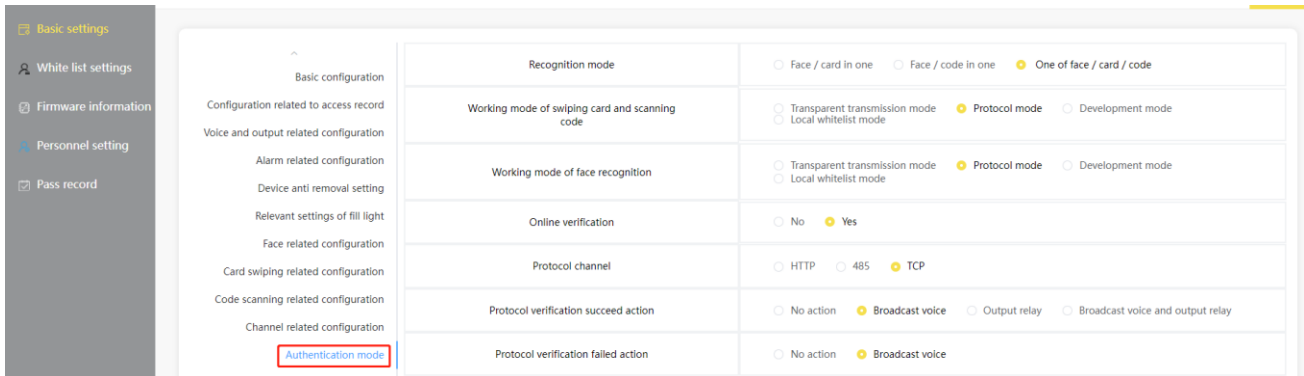


The description list of configuration items is as follows:

Configuration item	Default value	Instruction
TCP switch	Close	Set whether to open the TCP transmission channel
TCP Server IP	\	Set TCP server IP
TCP Server port number	\	Set TCP server port number

RS485 Baud rate	115200-8-N-1	Set 485 channel parameters
Wiegand	Wiegand 34	Set Wiegand port protocol
Relay delay time	2000ms	Set the relay action holding time when the authentication is successful

Authentication mode

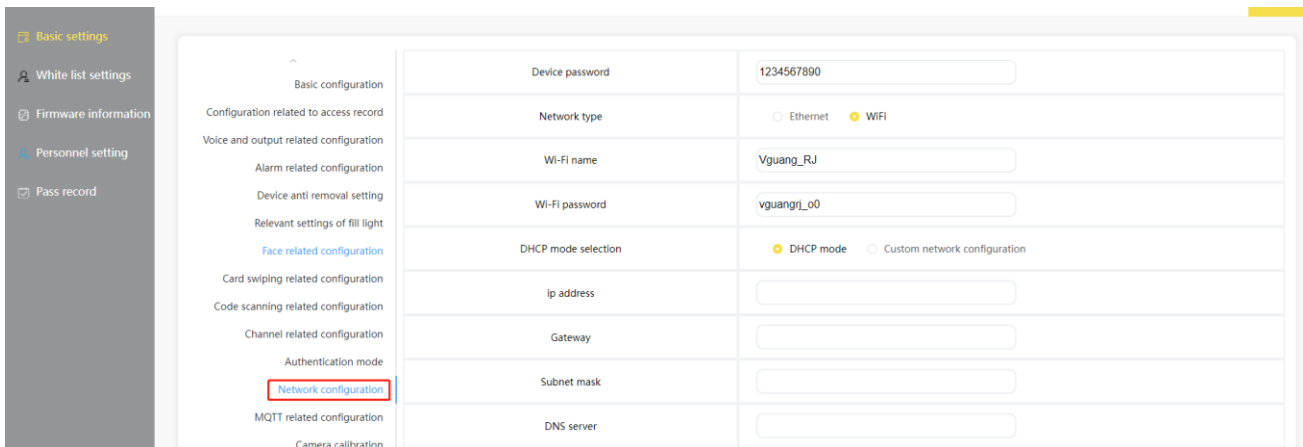


The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Recognition mode	One of face / card / code	The other two items are not supported temporarily.
Working mode of swiping card and scanning code	Protocol mode	Working mode (for card swiping / code scanning, 1: Transparent transmission mode 2: Protocol mode 3: Development mode 4: Local white list mode) Note: when it is the development mode, the face recognition working mode will also change to the development mode at the same time.
Working mode of face recognition	Transparent transmission mode	Working mode (for face recognition 1: Transparent transmission mode 2: Protocol mode 3: Development mode 4: Local white list mode) Note: when it is the development mode, the face recognition working mode will also change to the development mode at the same time.
Online verification	No	Valid when code scanning / card swiping or face is in white list mode "Yes": offline priority "no": offline only
Protocol channel	TCP	Protocol channel (1: HTTP 2: 485 3: TCP) Note: when it is in the development mode, the channel in the configuration development mode does not support HTTP. If HTTP is configured, TCP will

		be used by default.
Protocol verification succeed action		Successful protocol verification action (the corresponding bit is 1 valid, Bit1: broadcast voice Bit2: output relay)
Protocol verification failed action		Protocol verification failure action (Bit1: broadcast voice bit2)
HTTP protocol callback address		HTTP protocol callback address
HTTP request timeout		HTTP request timeout ms

Network configuration



The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Device password	Fill in the device password by default	Device password set when logging in the system for the first time
Network type	The configuration tool shall prevail	Set networking mode
Wi-Fi name	\	WiFi name to be configured when setting WiFi mode
Wi-Fi password	\	WiFi password to be configured when setting WiFi mode
DHCP mode selection	DHCP	IP mode selection dynamic / static
ip address	\	Configure when selecting custom network configuration
Gateway	\	Configure when selecting custom network configuration
Subnet mask	\	Configure when selecting custom network configuration

DNS server	\	Configure when selecting custom network configuration
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MQTT configuration

The description list of configuration items is as follows:

Configuration item	Default value	Instruction
Server address	0.0.0.0	Set mqtt server address
Client ID	123456788	Set client ID
User name	admin	Set user name
User password	password	Set user password
Topic prefix	\	Set topic prefix
Qos	Qos2	Set Qos type

Camera calibration

This item is a device debugging item. Users are not allowed to use this function.

Set device time

Set the face device system time.

Disable/enable

Disable /enable the device.

Password modification

Modify the background login password and the device configuration password.

Device restart

Restart the face device.

8.2. White list setting

When the white list working mode is selected for card swiping / code scanning or face recognition working mode, the personnel ID set through the white list can pass normally.

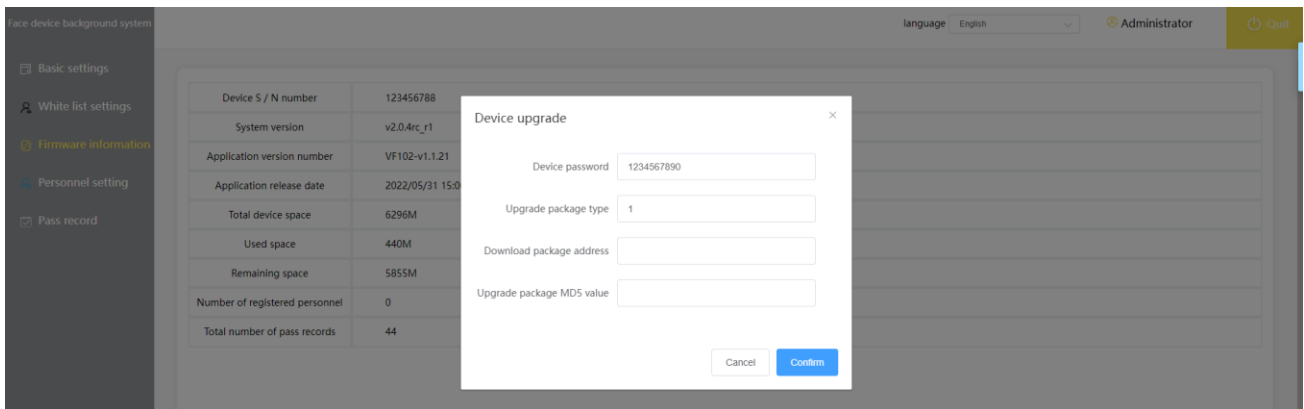
Click add

Select the person Id, user type, start time and end time of the white list and the type of repetition. When the user type is selected as two-dimensional code, the two-dimensional code needs to be generated according to the instruction for authorized access code mechanism. When the user type is face, the user ID is the person Id set when registering face. When the user type is card, the user ID is the card number.

8.3. Firmware information

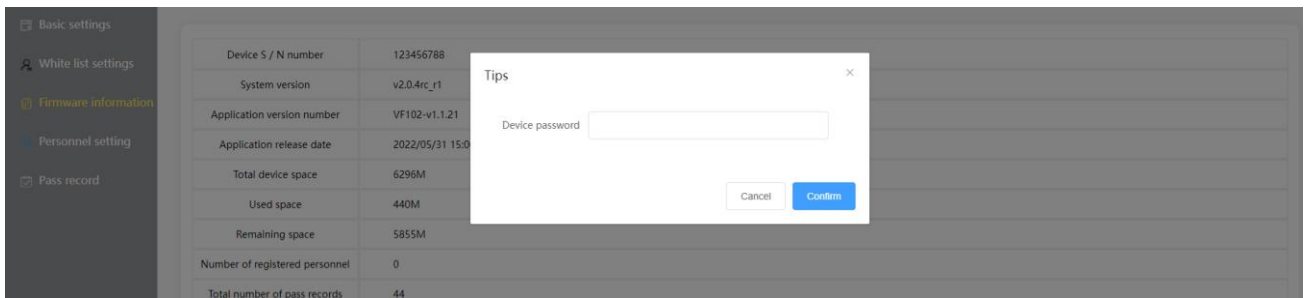
This part is mainly used to upgrade the device or restore the device to the factory.

Firmware update



Contact the manufacturer to obtain the upgrade address and MD5 value.

Reset device



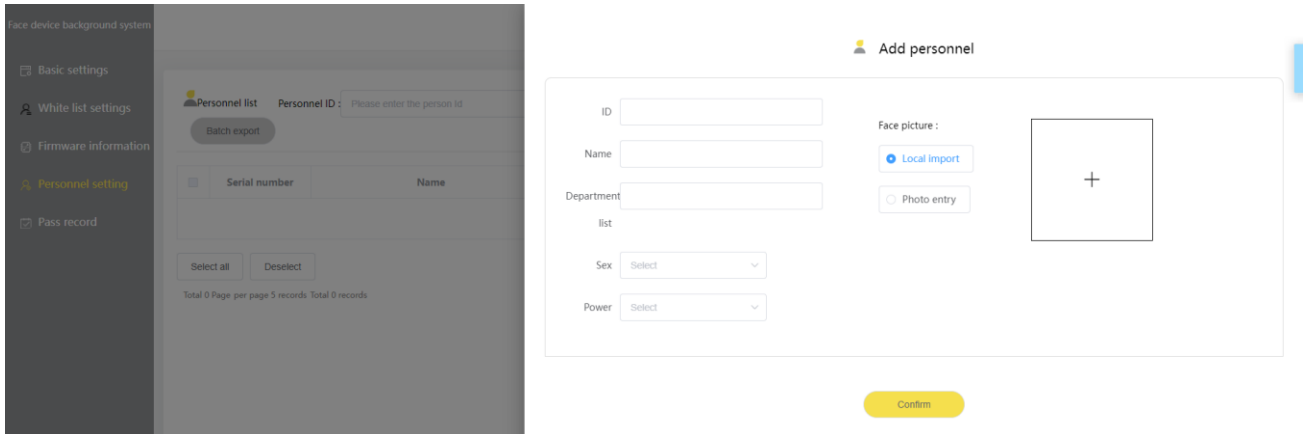
After entering the device password, click "OK".

The device will return to the factory state.

8.4. Personnel setting

Add personnel

Local import



After filling in the personnel ID and name, (Department and gender are not required), click local import, and then click the plus sign in the right border to import face photos.

Photo import

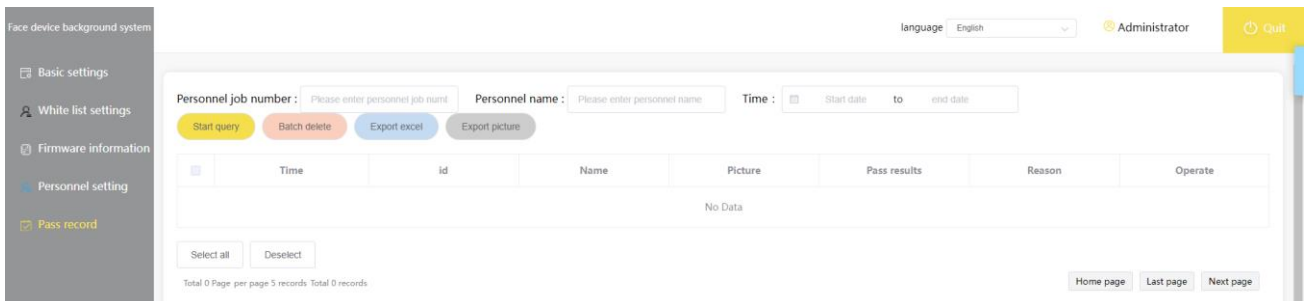
After filling in the personnel ID and name, (Department and gender are not required), click photo import, and the device will enter the photo mode. If the employee uses his face, the device will be registered successfully.

Batch import

Download the form template and import the form after completing the form.

8.5. Pass record

This item is used to query and delete pass records and export pass record tables.



9. Notes

Face registration photo requirements

Face pixels: minimum 80, maximum 512

Image size: 50 ~ 300K

Image height and width: 512 ~ 800 wide, 640 ~ 1024 high

Image format: JPG

Background requirements: life photos, no beauty filters, no heavy makeup, no sunglasses, scarves, masks, etc.

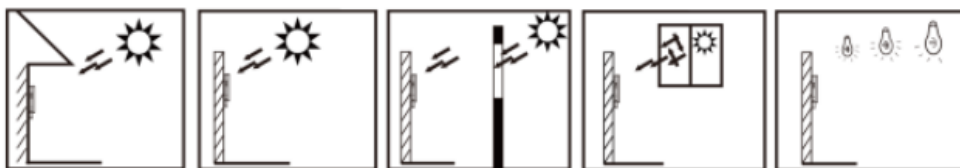
Face registration requirements

During face registration, the face needs to be in the registration box. It is best to occupy all the registration boxes, and look at the registration box for 2-3 seconds, waiting for the device to complete registration.

Installation environment requirements

It is necessary to avoid backlight, direct sunlight, direct sunlight through windows, oblique sunlight through windows, and close illumination of lights. The above environment will affect the effect of face recognition.

When the device is under strong light, sunlight will interfere with the temperature measurement module.



Backlight

Direct
sunlight

Direct
sunlight
through
windows

Oblique
sunlight
through
windows

Close
illumination
of lights