# Intelligent Face Recognition Terminal

**VF205 User Manual** 





#### **Document description**

This document is mainly composed of the following parts.

Chapter  $1 \sim 3$ : 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

Thank you for using the VF205 face recognition device. Carefully reading this document can help you understand the functions and characteristics of this device, as well as quickly grasp the usage and installation methods of the device.

### **1.1.Product introduction**

VF205 adopts the Linux operating system, with a storage capacity of 8GB and expandable 16GB/32GB storage. It has multiple communication methods such as RS485, Wiegand, WIFI and Ethernet. Face recognition adopts local verification method, and the face inventory is placed locally on the device. After successful verification, the person ID can be output. The output method can also use one of the above three methods.

This product features an 8-inch touch screen, voice broadcasting, reserved microphone, and excellent interactivity and usability.

The VF205 device can support protocol mode, and users can conduct secondary development based on the Communication Protocol provided by our company.

## **1.2.Product feature**

- ✓ 8-inch high brightness LCD touch screen, live voice broadcast prompt, 200W pixel binocular camera.
- ✓ More than 97% of the full database has a recognition accuracy rate, and the recognition time is less than 0.3S/person.
- ✓ Recognition distance 0.3m-1.5m, maximum support for 50000 face databases, 50000 records.
- ✓ Personnel wearing masks, glasses, and hats can be effectively identified, supporting mask detection.
- $\checkmark$  Built in silent live detection, which can effectively block photo, video, and mask attacks.
- ✓ Supports TCP/IP, MQTT and HTTP protocols.
- ✓ External alarm input, door magnetic status input, and door switch input.
- ✓ RS485, Wiegand output face ID number.

- ✓ Built in high-precision clock chip and RTC battery, which can save time when powered off.
- ✓ Static electricity protection contact 8KV, air 12KV.
- $\checkmark$  The waterproof and dustproof level can reach IP66.
- ✓ Supports logo customization, protocol customization and OEM.
- $\checkmark$  Supports the installation of gate machine, 86 box, flat wall and column.

## **2.Product appearance**

## **2.1.Appearance drawing**



## 2.2.Dimension drawing



## **2.3.Appearance introduction**



Serial number	Name
1)	Infrared camera
2	RGB camera
3	White fill light
4	Infrared fill light
5	8-inch high brightness LCD touch screen

## 2.4.Schematic diagram of reading area



Profile

Wall



Vertical view

## **2.5.Installation method**

#### 86 box 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.
		n	

### Gate installation

0			
Step1:The opening	Step2:Remove the torch holder nut.	Step3:Fix the panel to	Step4: Assemble the
size of the gate panel		the torch holder and	panel to the gate and
is 34mm in diameter.		connect the wire ends.	complete the

#### Installation notes:

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



## **2.6.Device wiring**

### **Port description**

#### Screw terminal version

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



Port name	Pin number	Pin definition	
Power interface	DC round head	12V power supply	
	1	NO: Normally open end of relay	
Relay interface	2	COM: Relay common terminal	
	3	NC: Normally close end of relay	

A large in gout	1	IN1: Alarm input 1
Alarm input	2	IN2: Alarm input 2
Interface	3	GND: Ground wire
	1	485B: 485B cable
RS485	2	485A: 485A cable
	3	GND: Ground wire
	1	D0: Wiegand 0
Wiegand	2	D1: Wiegand 1
	3	GND: Ground wire
Network interface	RJ45	Connect network cable

#### Bare wire version

PIN#	Color	Pin Definition	Pin Description	
PIN1	Red	VCC	Power supply positive	
PIN2	Black	GND	Power supply ground	
PIN3	White	485B	485-B cable	
PIN4	Blue	485A	485-A cable	
PIN5	Brown	GND	Power supply ground	
PIN6	Orange	D0	Wiegand 0	
PIN7	Yellow	D1	Wiegand 1	
PIN8	Green	IN1	Alarm input 1	
PIN9	Purple	IN2	Alarm input 2	
PIN10	Grey	NO	Normally open end of relay	
PIN11	Pink	СОМ	Relay common terminal	
PIN12	Cyan	NC	Normally close end of relay	

#### Note:

Unused pins must be insulated!

If the device is damaged due to a short circuit due to lack of insulation treatment, the user shall bear the responsibility themselves!

#### 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 parameters**

Product parameters						
G . (	OS: Linux					
System	Storage capacity: 8GB (16G&32G expandable)					
parameters	Processor: ARM Corte	x A7 MP2 1GHz				
Display screen	Size: 8-inch LCD toucl	h screen display				
	Resolution ratio: 800*1	1280				
	Wired: 1 10/100M ada	ptive network port				
Communication	Wireless: 2.4G WiFi					
mode	1 RS485					
	1 Wiegand 26/Wiegand	1 Wiegand 26/Wiegand 34				
Physical	Relay: 30V1A					
interface	2 Alarm signal input interface					
	Supply voltage: $9 \sim 24 V(DC)$ (12V power supply is recommended)					
Power supply	Max: 11.3W					
	RGB Camera	Field angle: $D=65^{\circ}$ H=59° V=38°				
		Aperture: 2.0				
		Resolution ratio: 1920*1080				
Comment		Focal length: 4.35MM				
Camera	Infrared camera	Field angle D=68° H=60° V=40°				
		Aperture 2.2				
		Resolution ratio 1616*1232				
		Focal length 2.35MM				
Speaker	Built in one 4 $\Omega$ 2W speaker					
Material	Fireproof ABS + organic glass					
Working						
temperature	-20 °C~55°C					

Working					
humidity	$10\% \sim 90\%$ (No condensation)				
ID Crada	Electrostatic protection: Contact 8KV, air 12KV				
IF Glade	Dust and waterproof grade: IP66				
	Face recognition performance parameters				
Support mask det	Support mask detection				
1: N algorithm dynamic face detection (anti photo, video attack)					
Hardware infrared living detection (anti photo, video attack)					
50,000 face capacity					
Reading distance 0.3-1.5M					
Pass rate: $\geq 97\%$ (The capacity reaches 50,000 sheets)					
Error rate $\leq 0.01\%$ (The capacity reaches 50,000 sheets)					
Reading time <0.3s					

## 4. Device working mode description

## 4.1.Transparent transmission mode



In transparent mode, face only compares with local facial databases, and there is no authentication process.

### 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 protocol 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.Whitelist authentication mode



## 5.Login device background

## **5.1.Device networking configuration**

Download the configuration tool  $\langle$  Face register offlinev1.2.3  $\rangle$  on the official website (http://www.vguang.cn/vfxl), and double-click to open the configuration tool.

0	注册 🔘 删除		
人员ID:		设备密码: password	填写后台登录密码 野礼是password
人员名称:		MQTT配置项 服务器地址:	可以在设备后台修改
性别:◎ Mar	Women	客户端ID	
国家:		用户名:	
部门名称:		用户密码:	
: 是才员人		订阅主题前缀:	
手机号:		MessageQos : 💿 0	© 1 © 2
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:		二维码显示位置	
备注:			
			生成配置码
	人员D:         人员名称:         性别:@ Man         国家:         部门名称:         人员卡号:         手机号:         双限機式:@ 自由         开始时间戳:         通行次数:         门禁卡号:         备注:	人员D:         人员名称:         性别:       Man         國家:         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:	人员D:        没备密码:: password         人员A:        Man       Man

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.

络信息	人员注册和删除	0 XX75 0 1945	◎ 网络配置 ◎ 人员配置 ◎ 摄像头标定 ◎ MOTT配置
7347±			记去亦见, parsword
○ 以太网 ● WIFI	人员ID:		
MIFI账号· 122	人员名称 :		
123	性别:@	) Man 💿 Women	客户端ID
WIFI密码: 123	国家:		
	部门名称:		—————————————————————————————————————
◎ 通过DHCP获得IP地址	人员卡号:		/1)/~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
◎ 指定一个IP地址	手机号:		
	权限模式:@	) 自由通行 💦 临时通行模式1 🔿 临时通行模式	tt2
IP地址: 192.168.1.123	开始时间骤,[		
认网关: 192.168.1.1	结束时间歇。		
网掩码: 255.255.255.0	· · · · · · · · · · · · · · · · · · ·		
f选DNS: 114.114.114.114			
	: 世才樂[]		
	<b></b> 首注:		

Scan this configuration code for the camera on the face device (as shown in the following figure), and the screen of the face device will display a green font of "Network configuration successful" and broadcast a voice message of "Network configuration successful", indicating successful configuration. The device will automatically connect to the network, and when the connection is successful, the device will broadcast "Network connected".



## 5.2.Login face device background

After the face device is successfully connected to the network, 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 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.

<ul> <li>新标签页</li> </ul>		
$\leftrightarrow \rightarrow G$	http://10.102.106.124:8060	🔒 E
🛄 应用 🔣	S http://10.102.106.124:8060	阅读清单

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 background system of the following device.

Face device background system			language English 🗸 🙁 Administrator
Basic settings			
A White list settings	A Basic configuration	Automatically adjust screen brightness	o close 🔿 open
<ul> <li>Firmware information</li> <li>Personnel setting</li> </ul>	Configuration related to access record Voice and output related configuration	Screen brightness	
Pass record	Alarm related configuration Device anti removal setting	Auto off screen	🔿 close 🔹 💿 open
	Relevant settings of fill light Face related configuration	Auto off screen time	300
	Card swiping related configuration	Automatic Screensaver	🔿 close 💿 open
	Code scanning related configuration Channel related configuration	Automatic screen saver time	30 s
	Authentication mode	Show SN	Not show     Show
	MQTT related configuration	Show IP	Not show o Show
	Set device time Disable / enable	Volume	
	~	Automostic undate time	A stars

## **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.

#### 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.

Face device background system			language English	<ul> <li>Administrator</li> </ul>	
<ul> <li>Basic settings</li> <li>White list settings</li> <li>Firmware information</li> </ul>	Personnel list Personnel ID: Please enter the person Id Batch export	Personnel name : Please enter the name of the perso	n Query Add personnel	Batch import Batch delete	
⊗ Personnel setting	Serial number Name	id	Face picture	Operate	
Pass record		No Data			
	Select all Deselect Total 0 Page per page 5 records Total 0 records			Home page Last page Nex	ct page

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

Name			Local import		
artment			Photo entry	+	
list					
Sex	Select	~			
Power	Select	~			

- 4, The platform prompts that the entry is successful.
- 5, After successfully saving, can proceed with face authentication.

## 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.

络信息 网络类型	人员注册和删除 <ul> <li>注册</li> </ul>	册 💿 删除	◎ 内络配置 ⑧ 人员配置 ◎ 摄像头标定 ◎ MQTT	配置
◎ 以太网 ○ WIFI	人员ID:123		设备密码: password	
	人员名称:张三		MQTT配置项 服务器性址:	
wirish 2 :	性别: Man	Women		
VIFI密码:	国家:	0	田之之 ·	
The contraction	部门名称:			
》通过DHCP获得IPI地址	人员卡号:		(個主題前經)	
」指定一个IP地址	手机号:		MessageOos: 0 0 1 0 2	
	权限模式:◎ 自由通行	- 💿 临时通行模式1 💿 临时道	新行模式2	
PABAE: 192.108.1.123	开始时间戳:			
人网关: 192.168.1.1	结束时间戳:			
列掩码: 255.255.255.0	通行次数:			
选DNS: 114.114.114.114	门禁卡号:			
	备注:			
			生成配置码	

### 6.3.Scene 3

#### Scenario description

- 1, Can be used for device networking.
- 2, 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.

Face device background system					language Engli	ih	<ul> <li>Ø Administrator</li> </ul>	
	User type : Please enter user ty	Add			×		Query	Add
Firmware information	Serial number Pe	* Person ID	Please enter user ID			time R	lepeat end time	Operate
			<ul> <li>Montane contract Manuar 1.0</li> </ul>					
	Total 0 Page per page 20 records Tota	* Personnel type	Please choose personnel type	~			Home page Last page	Next page
		Start time	S Piease choose start time					
		End time	Please choose end time					
		Repetition type	Please choose repetition type					
				Cance	Confirm			

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

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. Users need to use this image to aim at the camera and scan the code when opening 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.

络信息 网络 <u>类型</u>	人员注册和删除 ③ 注册	() 删除	<ul> <li>◎ 网络配置</li> <li>○ 人员配置</li> <li>○ 摄像头标定</li> <li>○ MQTT配</li> </ul>	置
の以大図 @ WIFI			设备密码: password	
0.000	/ QUD : 12		MQTT配置项	
WIFI账号: Vguang_RJ	人员名称:[12		服务器地址:	
wлп exa. vquanqrio0	性别:⊚ Man	O Women	客户端ID	
Wind(). 5 55-	国家:		用户名:	
	部门名称:		用户密码:	
	人员卡号:		订阅主题前缀:	
◎ 指定一个IP地址	手机号:		MessageQos : 0 0 1 0 2	
	权限模式:○ 自由通行	<ul> <li>临时通行模式1</li> <li>临时)</li> </ul>	町行模式2	
IP地址: 192.168.1.123	开始时间戳:			
认网关: 192.168.1.1	(法市时间涨。)		100-3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
网掩码: 255.255.255.0				
章洗DNS: 114.114.114.114	進行次叙:2			
	门禁卡号:		Plate a state of the second state of the secon	
	备注:			
				٦

### Personnel configuration

洛信息 网络 <u>类型</u>	人员注册和删除	◎ 注册	◎ 删除 従	提是注册/删除	◎ 网络配置	◎ 人员配置	◎ 摄像头标定	◎ MQTT配置
	( 810	0 1200			设备密码: pa	assword	 后台登录	密码
U KANNY W WITI	入页10:	1234567890	以且/1 公罟注	加入気レ	MQTT配置项		默认是:	password
VIFI账号: Vguang_RJ	人员名称:	55	以且/1		服务器地址:			•
VIFI密码: vguangrj_o0	性别:	Man	$\odot$	Women	客户端ID			
	国家:				用户名:			
)通过DHCP获得IP地址	部门名称:			可不埴	用户密码:			
	人员卡号:			110	订阅主题前缀	:		
) 指定一个IP地址	手机号:				MessageQo	s: 🔘 0	1	2
IP#批批· 1021681123	权限模式:	◎ 自由通行	◎ 临时通行模式	式1 🔘 临时通行模式2		an an Xinda		
	开始时间戳:					ю <b>Ш</b> арар	ne ext	
入网天: 192.168.1.1	结束时间戳:	<b>秋限模式(</b> )	乂文持"目田	通行"	122 m		1927 194	
网掩码: 255.255.255.0	通行次数:	<del>即:注加加</del> 2	ぬり后,可仕	仕息时间段刷版		化化物物	10 A	
选DNS: 114.114.114.114	门禁卡号:				- 4727	Source D		生成配置码
	备注:				- <u>Zita</u> i		深い しょうしょう ひょうしょう ひょうしん ひょう ひょうしん ひょう	
					- 3722	1. L. M. K.	ee	
						HABACAN Kabucian		生成配置码
					e e e e e e e e e e e e e e e e e e e	1.1100Cp	- No.	

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

络信息 网络类型	人员注册和删除 ◎ 注	き 御除	◎ 网络配置 ◎ 人员配置	◎ 摄像头标定  ◎ MQTT配置
● 以太网 ○ WIFI	人员ID:		设备密码: password	
WIFI账号·	人员名称:		MQ11配置坝 服务器地址:	
	性别:@ Man	🔘 Women	客户端ID	
WIFI密码:	国家:		用户名:	
◎ 通过DHCP获得IP地址	部门名称:		用户密码:	
》指完—个ID地址	人员卡号:		订阅主题前缀:	
U JHAE   IFADAL	手机号:		MessageQos : 🔘 0	1
IP地址: 192.168.1.123	权限模式:◎ 自由通	行 💿 临时通行模式1 💿 临时	<b></b> 通行模式2	
认网关: 192.168.1.1	开始时间戳:			
网掩码: 255.255.255.0	结束时间戳:			
貧选DNS: 114.114.114.114	通行次数:			
	`````````````````````````````````````			
				生成配置码

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

Face device background system			Language English $\sim$ SAdministrator	🖒 Quit
📑 Basic settings				
A White list settings	A Basic configuration	Automatically adjust screen brightness	o close open	Î
<ul> <li>Firmware information</li> <li>Personnel setting</li> </ul>	Configuration related to access record Voice and output related configuration	Screen brightness		
Pass record	Alarm related configuration Device anti removal setting	Auto off screen	🔿 close 🔹 open	
	Relevant settings of fill light Face related configuration	Auto off screen time	300 s	
	Card swiping related configuration	Automatic Screensaver	Close Open	
	Code scanning related configuration Channel related configuration	Automatic screen saver time	30 s	

Configuration item	Default value	Instruction	
Auto adjust screen	Close	Turn on / off the device to automatically adjust the	
brightness		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 lowe	
		right corner of the screen	
Display logo	No display	Upper left corner of face interface/Logo image in the	

		middle of the screensaver
Upload logo image		Select an image and set the logo image (png format
		100x70 pixels)
Screen saver image		Select an image and set the screensaver image (jpg
		format 1280x800 pixels)
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

📑 Basic settings			
A White list settings	^ Basic configuration	Panoramic picture	O Not save O Save
Firmware information	Configuration related to access record	Face picture	O Not save O Save
Personnel setting	Voice and output related configuration Alarm related configuration	Stranger record	Not save     Save
Pass record	Device anti removal setting		
	Relevant settings of fill light		
	Face related configuration		5340
	Card swiping related 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's face recognition record

### Voice and output related configuration

☐ Basic settings			-
& White list settings	∧ Basic configuration	Face verification successful voice	No voice     Broadcast default voice     Broadcast custom voice
Firmware information	Configuration related to access record	Face verification succeeded, customized voice content	人验验证成功
Personnel setting	Voice and output related configuration Alarm related configuration	Face verification succeeded relay	No action 🧿 Output relay
Pass record	Device anti removal setting Relevant settings of fill light	Face verification succeeded RS485 output	No output Output custom data 🧿 Output person Id
	Face related configuration	Face verification succeeded RS485 output data	face485data
	Code scanning related configuration	Face verification succeeded Wiegand output	No output Output custom data O Output person Id

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
Face verification succeeded, customized voice content	" Face recognition succeeded"	in protocol mode and development mode. 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	Set the voice feedback action when the face

	voice	recognition device fails to recognize the face.
		Broadcast custom voice: does not take effect
		in protocol mode and development mode.
	" Face	
Face verification failed,	authentication	Set custom voice content
custom voice content	failed"	

### Alarm related configuration

☐ Basic settings			
<b>A</b> White list settings	^ Basic configuration	Alarm switch	⊙ close ⊖ open
Firmware information	Configuration related to access record Voice and output related configuration	Alarm delay	3s
Personnel setting	Alarm related configuration	Alarm signal trigger type	Ground disconnect trigger Short circuit to ground trigger O Not trigger (default)
Pass record	Device anti removal setting Relevant settings of fill light	Alarm trigger output switch	🔾 close 🔹 open
	Face related configuration	Alarm output relay	🔿 close 🛛 open
	Code scanning related configuration	Alarm output Wiegand	0 (Oxclose)

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

☐ Basic settings				
A White list settings	<ul> <li>Basic configuration</li> </ul>	Anti disassembly switch	o close 🔿 open	
Firmware information	Configuration related to access record			
Poreonnal catting	Voice and output related configuration			
A Personner setting	Alarm related configuration		save	
Pass record	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. (VF205 device is not supported temporarily)

### Fill light setting

🕞 Basic settings			
A White list settings	A Basic configuration	Fill light mode	Normally close     Normally open     O     Automatic mode
Firmware information	Configuration related to access record	Photosensitive control	🔿 close 🔹 open
Nersonnel setting	Voice and output related configuration Alarm related configuration	Ambient light above this value	1100
Pass record	Device anti removal setting	Ambient light below this value	500
	Face related configuration	Ambient light detection interval	(ts
	Card swiping related configuration Code scanning related configuration	Delay time of fill light on in automatic mode	10s
	Channel related configuration Authentication mode Network configuration	Fill light brightness	

Configuration item	Default value	Instruction
Fill light mode	Automati c 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	500	Effective in automatic mode: turn on the fill light	
value	300	when the ambient light is lower than this value.	
Ambient light detection	1	Device detects the ambient light intensity every	
interval	1	second.	
Delay time of fill light on in	10	Delevitime of fill light on in outomotic mode	
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

🛱 Basic settings			
<ul> <li>White list settings</li> <li>Firmware information</li> <li>Personnel setting</li> </ul>	Assic configuration Basic configuration Configuration related to access record Voice and output related configuration Alarm related configuration	Face registration similarity threshold	Note: please contact technical support when modify this parameter
☑ Pass record	Device anti removal setting Relevant settings of fill light	Face recognition similarity threshold	
	Card swiping related configuration	Turn on live detection	🔿 close 🔹 o open
	Code scanning related configuration Channel related configuration	Temperature switch	o close 🖉 open
	Authentication mode	Alarm temperature	37 29999923706055
	Network configuration	Face recognition number configuration	•

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.	
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.	
		Set the live detection standard . It is recommended to	
Live detection threshold	10	keep the default value. The larger the value, the stricter	
		the detection.	
Mask detection	Close	Check whether the person is wearing a mask.	
Magle magazitian	Onen	When face recognition personnel wear masks, open this	
Mask recognition	Open	item to help them recognize successfully.	
	53	Set the detection standard for recognizing the face of	
Mask threshold		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		Set whether to turn on the detection of face repetition	
switch	Open	recognition function.	
	"Hello		
Stranger voice	stranger	Broadcast when recognizing unregistered face.	
	"		
Voice mode	No voice	Set the voice to broadcast when face verification is	

		successful.
Cupating	No voico	Select the greeting type when the previous option is
Greening		broadcast greeting.

### Channel related configuration

Basic settings			
<b>&amp;</b> White list settings	^ Basic configuration	TCP switch	🔿 close 🛛 open
Firmware information	Configuration related to access record	TCP server IP	10.102.106.129
Personnel setting	Voice and output related configuration Alarm related configuration	TCP server port number	9090
Pass record	Device anti removal setting	RS485 baud rate	115200-8-N-1
	Relevant settings of fill light Face related configuration	Wiegand	O Wiegand 26 O Wiegand 34
	Card swiping related configuration Code scanning related configuration	Relay delay time	- 2000 + ms
	Channel related configuration		

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

📑 Basic settings			
A White list settings	<ul> <li>Basic configuration</li> </ul>	Recognition mode	Face / card in one     Face / code in one     One of face / card / code
Firmware information	Configuration related to access record Voice and output related configuration	Working mode of swiping card and scanning code	Transparent transmission mode  Transparent transmission mode  Development mode  Development mode
<ul> <li>Personnel setting</li> <li>Pass record</li> </ul>	Alarm related configuration	Working mode of face recognition	C Transparent transmission mode O Protocol mode Development mode
	Relevant settings of fill light Face related configuration Card swiping related configuration	Online verification	No • Yes
		Protocol channel	○ HTTP ○ 485 <b>○ TCP</b>
	Code scanning related configuration	Protocol verification succeed action	No action     Broadcast voice     Output relay     Broadcast voice and output relay
	Authentication mode	Protocol verification failed action	No action     Geroadcast voice

Configuration item	Default value	Instruction
Recognition mode	One of face / card / code	The other two items are not supported temporarily.
Working mode of feee	Transport	Working mode (for face recognition 1: Transparent transmission mode 2: Protocol mode
recognition	transmission 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		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		Successful protocol verification action (the

succeed action	corresponding bit is 1 valid, Bit1: broadcast voice	
	Bit2: output relay)	
Protocol verification	Protocol verification failure action (Bit1:	
failed action	broadcast voice bit2)	
HTTP protocol callback	HTTP protocol callback address	
address	-	
HTTP request timeout	HTTP request timeout ms	

### Network configuration

Basic settings			
A White list settings	<ul> <li>Basic configuration</li> </ul>	Device password	1234567890
Firmware information	Configuration related to access record	Network type	O Ethernet O WiFi
🙈 Personnel setting	Voice and output related configuration	Wi-Fi name	Vouano RJ
The December of	Alarm related configuration		
	Device anti removal setting	Wi-Fi password	vguangrj_o0
	Face related configuration	DHCP mode selection	DHCP mode     Custom network configuration
	Card swiping related configuration	ip address	
	Code scanning related configuration		
	Channel related configuration	Gateway	
	Authentication mode	Subnet mask	
	MOTT related configuration		
	Camera calibration	DNS server	

Configuration item	Default value	Instruction
Device password	Fill in the device	Device password set when logging in the
	password by	system for the first time
	default	
Network type	The configuration	Set networking mode
	tool shall prevail	
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	١	Configure when selecting custom network
		configuration
Gateway	١	Configure when selecting custom network
		configuration
Subnet mask	١	Configure when selecting custom network
		configuration
DNS server	١	Configure when selecting custom network
		configuration

### MQTT configuration

📑 Basic settings							
A White list settings	^ Basic configuration	Server address	tcp://10.42.0 1:31011				
Firmware information	Configuration related to access record	Client ID	123456				
Personnel setting	Voice and output related configuration Alarm related configuration	User name	admin				
Pass record	Device anti removal setting	User password	password				
	Face related configuration	Topic prefix					
	Card swiping related configuration Code scanning related configuration	Qos	Qost Qost Qos2				
	Channel related configuration						
	Authentication mode						
	Network configuration	save					
	MQTT related configuration						

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 selecting the whitelist working mode for scanning codes or face recognition, the personnel ID set through the whitelist can pass through normally.

🖻 Basic sattings									
옷 White list settings	User type : Please	e enter user type v Use	Please enter user ID	Time :	Start date to	end date		Q	Add
Firmware information	Serial number	Person ID	Personnel type	Start time	End time	Repetition type	Repeat start time	Repeat end time	Operate
Personnel setting					No Data				
Pass record	Total 0 Page per page 2	20 records Total 0 records						Home page	Last page Next page
Click add									
Add									$\times$
* Persoi	n ID Plea	ase enter user II	)						
* Personnel t	type Plea	ase choose pers	onnel type				\ \		
Start t	ime 🕒 P	lease choose st	art time						
End t	time 🕒 P	lease choose ei	nd time						
Repetition t	type Plea	ase choose repe	tition type				`	/	
								Cancel	Confirm

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

Face device background system						language English	Administrator	🖒 Quit
🗟 Basic settings								
& White list settings	Device S / N number	123456788						
	System version	v2.0.4rc_r1	Device upgrade		×			
Pirmware information	Application version number	VF102-v1.1.21	Device password	1234567890				
R Personnel setting	Application release date	2022/05/31 15:0						
Pass record	Total device space	6296M	Upgrade package type	1				
	Used space	440M	Download package address					
	Remaining space	5855M						
	Number of registered personnel	0	Upgrade package MD5 value					
	Total number of pass records	44						
				Cancel Confir	m			

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

### Reset device

	Device S / N number	123456788			
C. Downers information	System version	v2.0.4rc_r1	Tips	X	
Himware information	Application version number	VF102-v1.1.21	Device password		
	Application release date	2022/05/31 15:0			
	Total device space	6296M			
	Used space	440M		Cancel Confirm	
	Remaining space	5855M			
	Number of registered personnel	0			
	Total number of pass records	44			

After entering the device password, click "OK".

The device will return to the factory state.

## 8.4.Personnel setting

### Add personnel

#### Local import

Face device background system				Add personnel		
& White list settings	Personnel list Personnel ID : Please enter the person Id	ID		Face picture :		
Firmware information		Name		Local import		
	Serial number Name	Department		O Photo entry	+	
		list				
	Select all Deselect	Sex	Select ~			
	Total O Page per page 5 records Total O records	Power	Select ~			
				Confirm		

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.

Face device background system					language English	h 💉 🧐	Administrator	
Basic settings     White list settings     Einnurare information	Personnel job number : Please entite Start query Batch delete	er personnel job numt Personne Export excel Export picture	I name : Please enter persone	tet name	Start date to end date			
Personnel setting	Time	id	Name	Picture No Data	Pass results	Reason	Operate	
	Select all Deselect. Total 0 Page per page 5 records Total 0 records	ds				Home pa	ige Last page Next pa	age

## 9.Notes

#### Face registration photo requirements

Face pixels: minimum 80, maximum 512

Image size:  $50 \sim 300$ K

Image height and width:  $512 \sim 800$  wide,  $640 \sim 1024$  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.

#### Wiring requirements:

For unused pins, insulation treatment must be applied!

If the device is short circuited or damaged due to lack of insulation treatment, the user shall bear the responsibility on their own!

#### 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.

