VF1000X Facial Recognition Terminal

User Manual

Original operating instructions Version 1.0 / 08-2022

EN

General Notice

Although every care has been taken to ensure that this manual is reliable and accurate, Hanvon Corporation (here after referred to as Hanvon) provides it ‘as is’ and without express, implied, or limited warranty of any kind. In no event shall Hanvon be liable for any loss or damage caused by the use of this manual.

This manual describes VF1000X facial recognition terminal
in detail and contains full operating instructions.

Hanvon reserves the rights to change the specifications and information in this document without notice. The information contained herein is proprietary to Hanvon. Release to third parties of this publication or of information contained herein is prohibited without the prior written consent of Hanvon.

Any Changes expressly or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment.
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.

Note: 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.

FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environ ment .
This transmitter must not be co-located or operating in conjunction with any other antenna or tra nsmitter.
This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

Copyright © Hanvon, 2022

Content

1. About this document 5
2. Product Features 6
2.1 Appearance View 6
2.2 Installation Guide 7
2.3 Connection Port 8
2.4 Power up terminal 8
3. Operating Guide 9
3.1 Admin. Management 9
3.2 User Management 12
3.3 Data Management 16
3.4 USB Management 17
3.5 System Settings 21
3.6 System Info. 36
3.7 Auto Test 37
4. Appendix 38
Appendix1. Product Specification 38
Appendix2. Caution 39

1. About this document

Validity

These instructions are valid for the VF1000X Facial Recognition Terminal.

Target group

The target group for this document comprises the terminal operator and technical personnel.

Content and purpose

These user manual describe the VF1000X facial recognition terminal installation and operation information to users.

Supplementary documents

N/A

Abbreviations

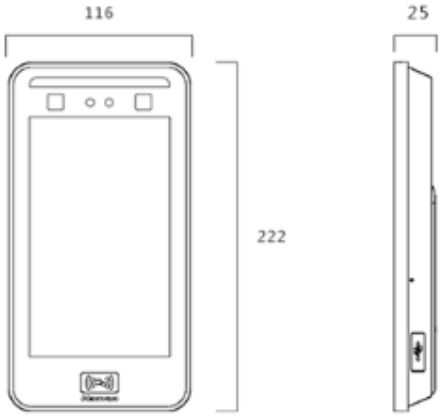
Hanvon	Hanwang Technology Co., Ltd Brand
Face Go	Hanwang Technology Co., Ltd Brand
VF1000X	VF1000X Facial Recognition Terminal

Danger categories and warning symbols

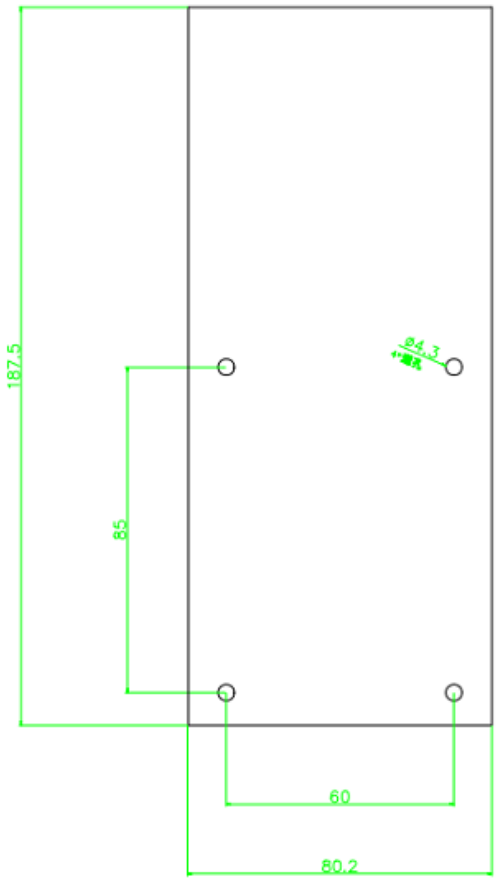
	DANGER
⚠	Danger Operation!
	NOTE
ℹ	Application tips, useful information

2. Product Features

2.1 Appearance View



2.2 Installation Guide



User can drill the holes according to the mounting diagram. Use the 4 wall mount, screws to mount the bracket to the wall.

User also could mount the terminal by choosing your “shortest” users and have them stand in front of the device.

Hold the terminal on the wall that employee can comfortably center their face in the LCD display window.

2.3 Connection Port

Definition	Feature
+12V	12V Power Supply
-12V	
LOCK_NO	Door Lock
LOCK_COM	
LOCK_NC	
GND	Ground
DOORSWITCH	Door Switch
Power	Power Input for adaptor
WGD0	Wiegand Output
WGD1	
WG_GND	
Network(Ethernet Port)	Network
RS485A	Signal For RS485
RS485B	
U485_5V	

2.4 Power up terminal

Select a proper language when the terminal boot first time. The terminal will provide several language options for customers:

- English
- 简体中文
- **-------** (be added as requirement)

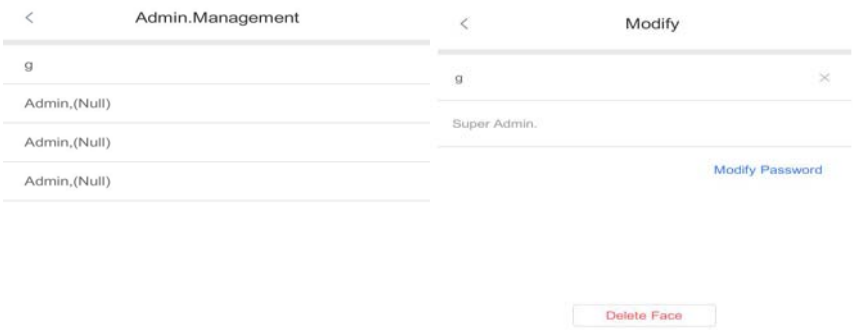
3. Operating Guide

3.1 Admin. Management

➢ **Admin. Management Main Menu**

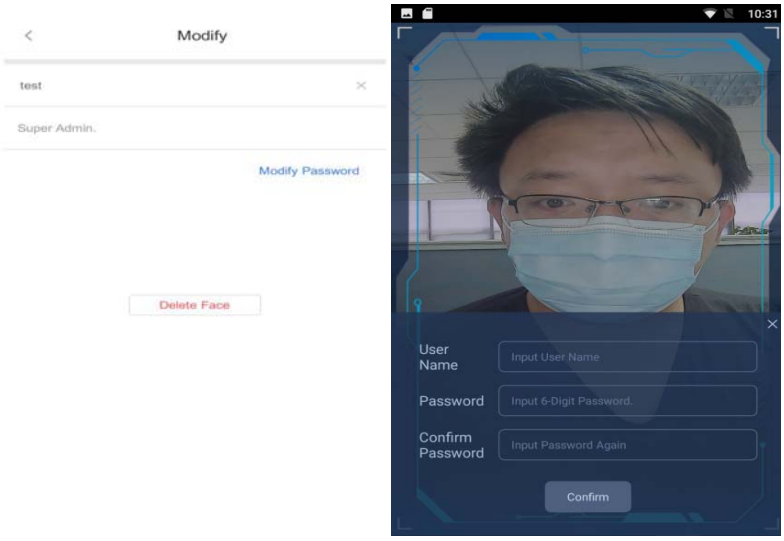
- If no admin. in system, then press **<MENU>** to enter the main menu.
- If there has enrolled admin. in system, then press **<MENU>** to enter admin. verifying process. While the verification is correct, then the system enter to the main menu.
- Press **<↑/↓>**to move selection to **<Set Admin>**, and press **<OK>** to enter into admin. menu.

➢ Set Admin.



- There are total 4 admin. accounts. A **<Null Admin.>** sign will display for unset admin. accounts. Choose a **<Null>** account to register an admin.
- Input Admin. Name: Press **<MENU>** to switch character inputting mode between **<Upper Case>, <Lower Case>** and **<Digital>.**

➢ Admin. Types



- Super Admin. can operate all functions and normal administrators.

⚠ The first administrator must be super admin and can't be deleted in system.

- Normal Admin. can operate User/Data/USB Management function, check system info. and auto test function.

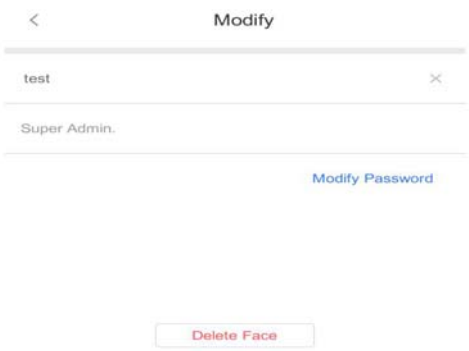
- Verification modes:
  - **ID and Pin:** Use ID and password sequentially as a verification method.
  - **ID and Face:** Use ID and face sequentially as a verification method.

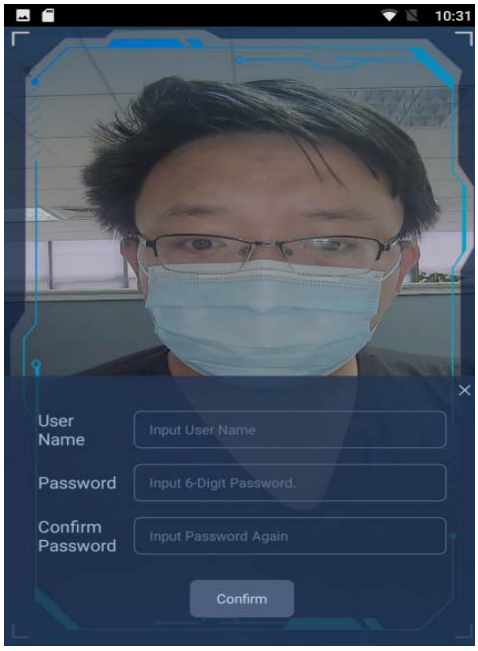
- If add as an user, please select the user privilege mode:
  - **Access & Attendance:** The terminal is used for access control and time attendance with relay output.
  - **Attendance:** The terminal is only used for time attendance without relay output.
- User Photo: Press **[confirm]** to capture a photo for the user. If don't, press **[x].**

Admin Verification

- After set an admin. account, then press **<MENU>** to activate admin verification process.
- Input admin. ID (or using registered RFID card)
- Input corresponding password or using face verification, according to the mode during admin registration, after verification is successful, then the system enter to the main menu.

Modify & Delete Admin account





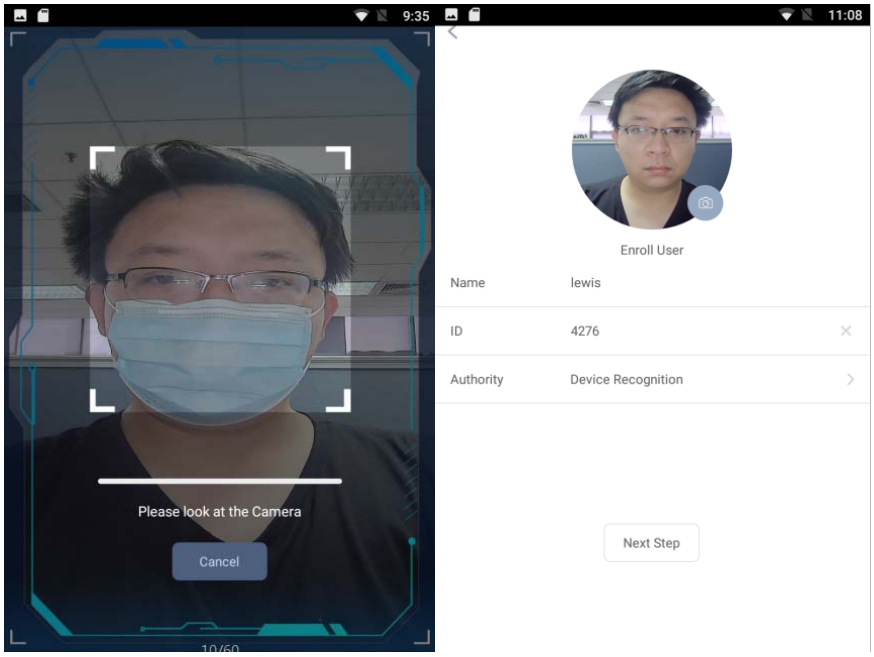
- Select a registered admin. account to modify or delete this account.
- Modify admin. name
- Modify password
- Re-enroll face template

⚠ Delete the certain admin. account: If only one registered admin. account with in the system, then it will be banned to delete.

3.2 User Management

➢ User Management Main Menu

➢ User Enroll



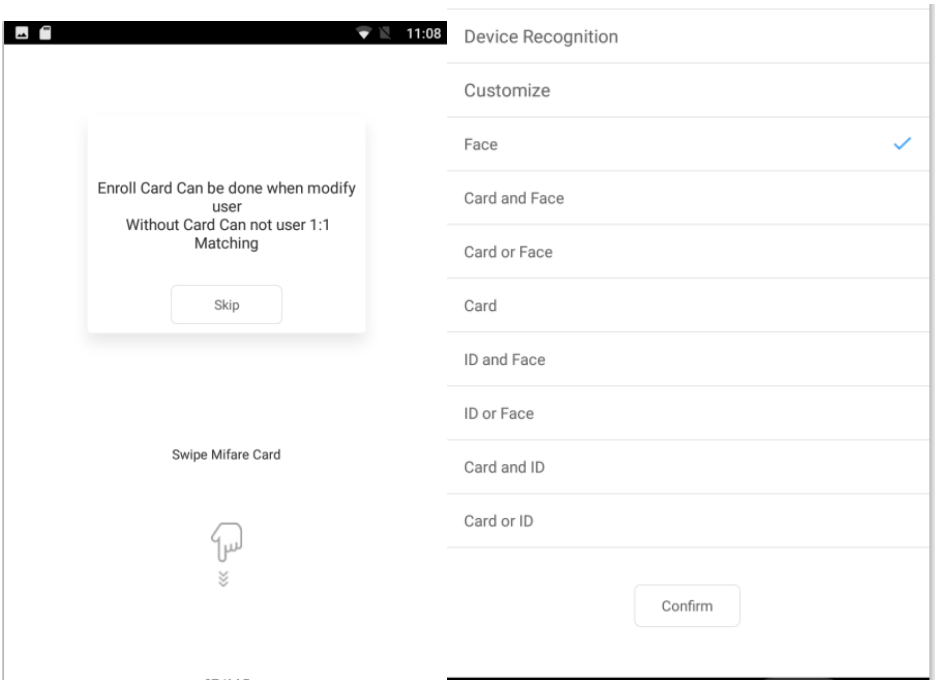
- Input User ID

⚠ The range of User ID can contain 18-bit characters totally

- Input name

Press to **<MENU>** will switch character inputing mode between **<Upper Case>** **<Lower Case>** and **<Digital>.**

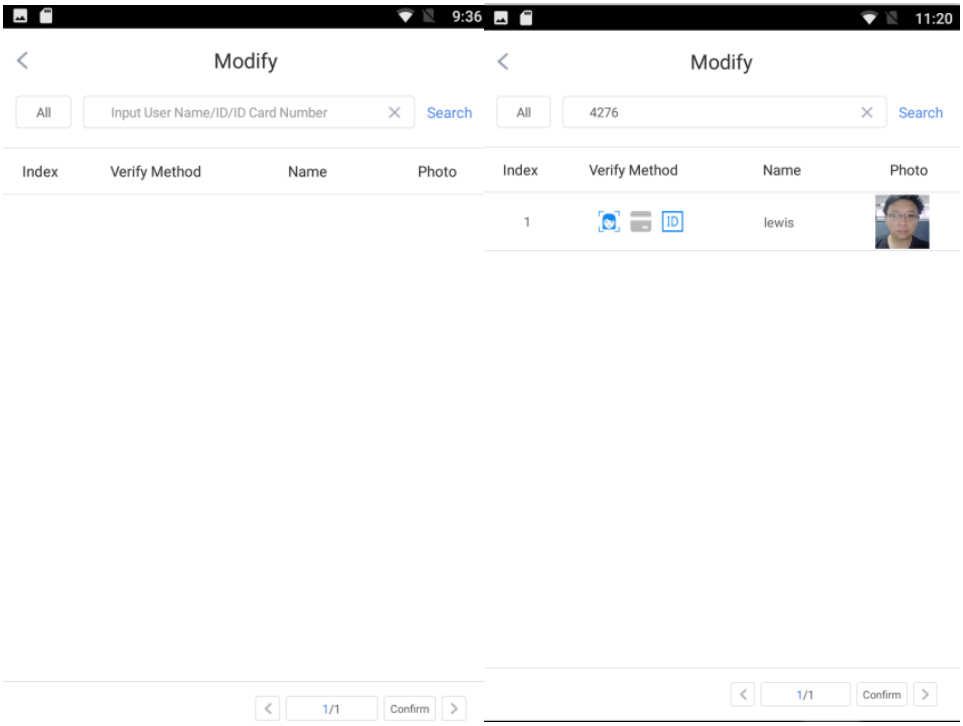
User Name can contain 14-bit characters totally.



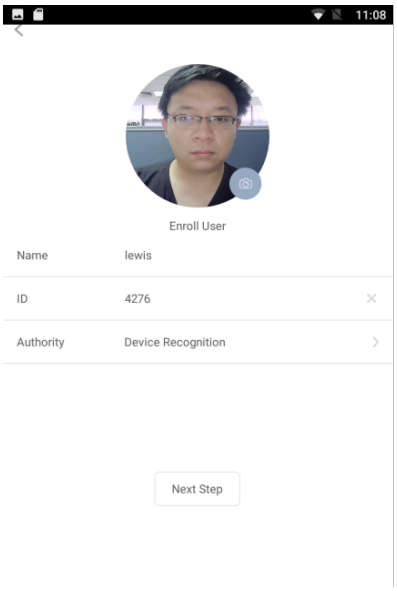
- Select a verification mode
- Face: Face should be inside the circle, The best distance is 30cm-100cm.
- Card(Optional) : There is a Card area for swiping Mifare card.
- Card and Face(Optional) : Swipe Card first Then look at the camera for face recognition.
- Card or Face(Optional) : Swipe card or scan face for recognition.
- ID and Face: Input User ID then scan user's face for recognition
- ID or Face: Input ID or scanning Face for recognition
- ID and Card(Optional) : Input the ID first and then swipe Card.
- ID or Card(Optional) : Input the ID or swipe card for recognition.
- **ID and Pin:** Use ID and password sequentially as a verification method

- User Photo: Press **[OK]** to capture a photo for the user. If don't, please check **[x].**
- User registering finished.

➢ Modify User



- Input User ID
- Following the procedure to change **<user name>**, **<verification mode>**



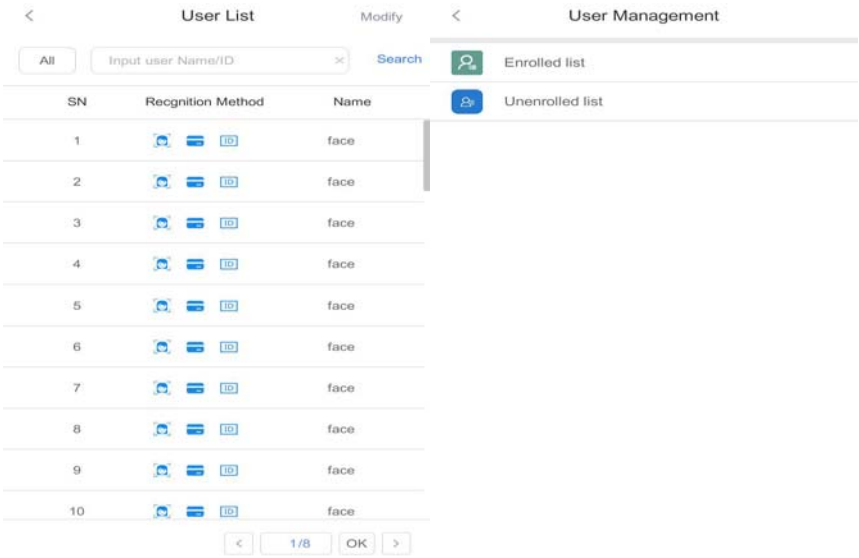
➢ Delete All Users

- Press **[Delete All]** to confirm)this process.

⚠ All user's ID, name and templates will be erased.

⚠ This step is irreversible. Not affect Admin data and records.

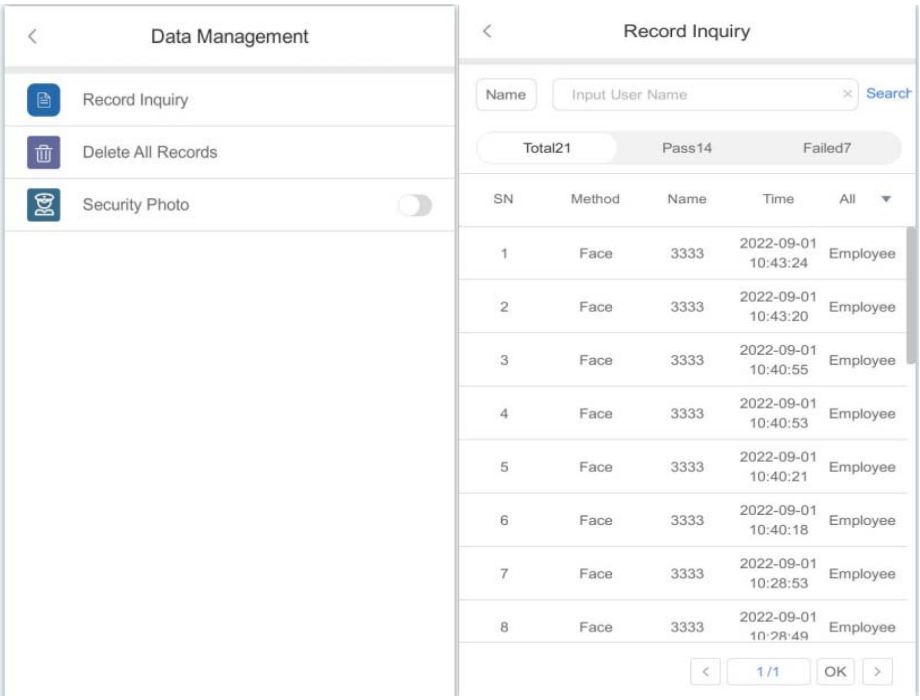
➢ User List



- Enter user list to check Un-enrolled and Enrolled list.
- Press to confirm this process.

3. 3 Data Management

➢ Data Management Main Menu



➢ Record Management

- Record Inquiry: User records can be inquiry by User ID/Name.
- Select a search mode to inquiry user records.
- Delete All Records

⚠ All records will be erased. This step is irreversible.

ℹ Backup all user data before doing this step.

➢ Security Photo

- Security Photo Switch: Turn on / off security photos function.

ℹ Default switch is off.

- Delete All

⚠ All security photos will be erased. This step is irreversible.

ℹ Backup all user data before doing this step.

3.4 USB Management

➢ USB Management Main Menu

Don’t remove USB Disk while data transferring.

Try other USB Disk, if the terminal doesn’t recognize it.

➢ Export Management

- Exp. All Records: Export all user records into a file, which named as “TIME+SN”.dat/xlsx.

For example, TIME063.dat, “063” is the last 3 bits of SN of the terminal.

- Exp.Users: Export part user’s data into a file which named “USER.TXT”

Data is stored into a “USERALL.TXT” file.

- Exp. Admin. Log: Export all admin operating logs.

Data is stored into a “LOG.TXT” file.

- Exp. Setting. File: Export terminal configuration file into a file, which named as “sys.dat”.

➢ Import Management

- Import Users
  Import all users data from USER.TXT file on an USB Disk into the terminal.

⚠ The range of user ID is from 1-99,999,999,999,999.

- Import Setting
  Import terminal configuration file from sys.dat file on a USB Disk into the terminal.

➢ Set Wallpaper

- Update the new wallpaper on a terminal.

⚠ 800 * 600pix BMP/JPG file, and named to <idlepicture.bmp> or <idlepicture.jpg>.

➢ Set Prompt Audio

- Update Successful and Failed prompt audio on a terminal.

⚠ PCM, 16000Hz, 16bit, stereo wave file, and named to <granted.wav> and <deny.wav>

ℹ Keep audio length less than 1 second.

➢ Firmware Upgrade

- Upgrade a new firmware for a terminal.

⚠ Firmware files are <VF1000X.BIN> and <VF1000X.TXT> and the file should be put in the folder of “update” under the USB drive

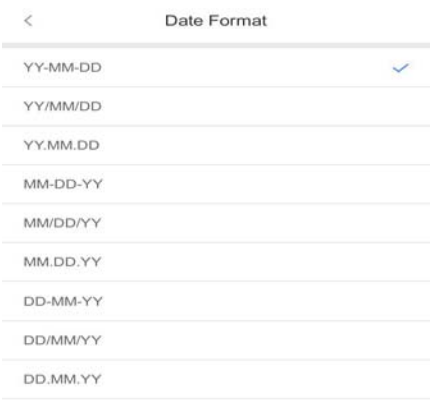
3.5 System Settings

- **System Main Menu**

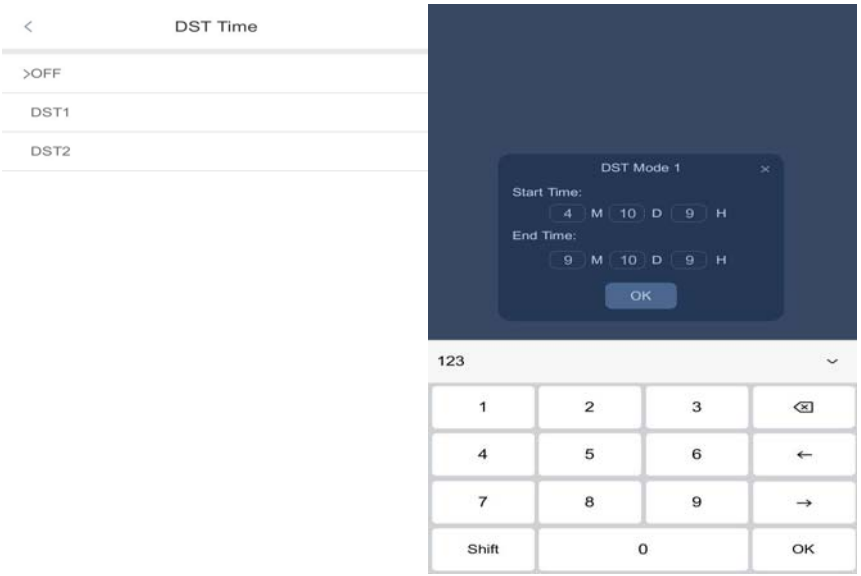
- **Basic**
  - **Date and Time**

- Date and Time: System date and time can be set with this function. It has the option of syn from the internet or you can turn it off to set the time on device. If you are using the internet time. It is necessary to select the time zone you are in. Otherwise it will have a time difference from the +8 time zone(default time zone is +8)

- Date Format: System date format can be set in 9 formats.



Daylight Saving: Set daylight saving time.
Select proper DST format according to DST rule of your region. Month-Day-Hour: DST time starts on 01:00 AM May. 1st, and ends at 03:00 AM Oct. 2nd
Default is off.



➢ Volume

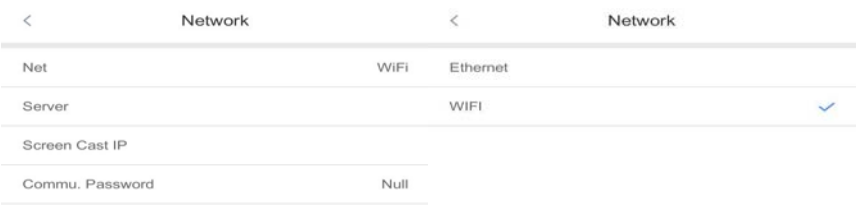
- Set Volume: terminal support 4 modes to customers.

ℹ The default is medium.

➢ Communication

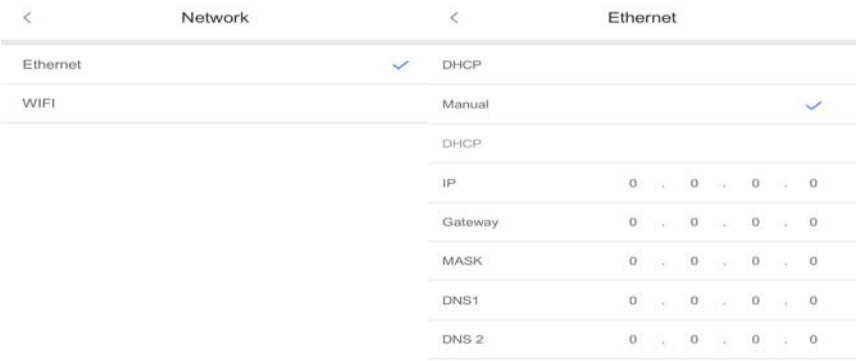
- Communication: Network RS485 and Wiegand setting

➢ Network



- Network: Ethernet mode and Wi-Fi mode.

The default is Ethernet.

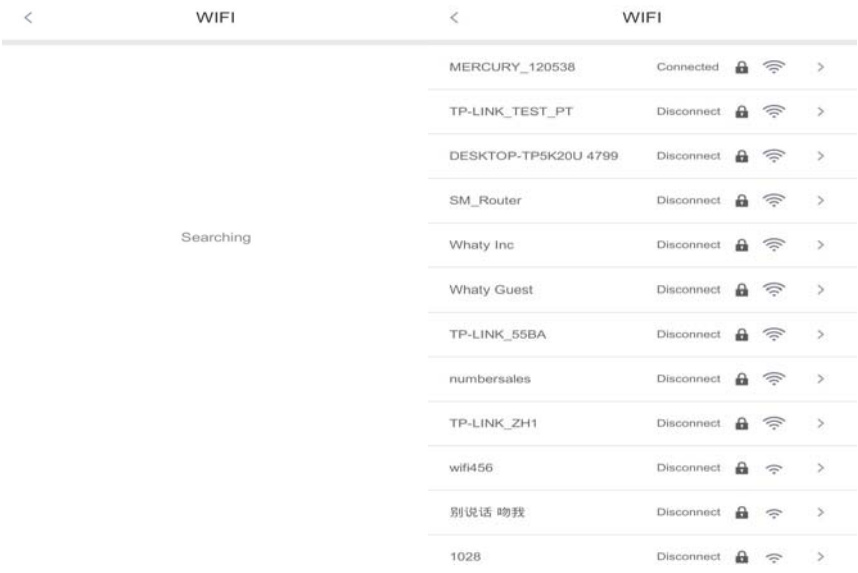


- Ethernet -DHCP

DHCP Switch: If the DHCP function turned on, user doesn't need configure the IP/Mark/Gate for terminal.

If the DHCP function turned off, user needs configure the IP Address/Mark/Gate for terminal.

- WiFi Network



- WiFi Network -Scan Hotspot List

The WiFi hotspot will display on the list, **<** 🔒 **>** means need password to connect.

- Delete WiFi Configuration

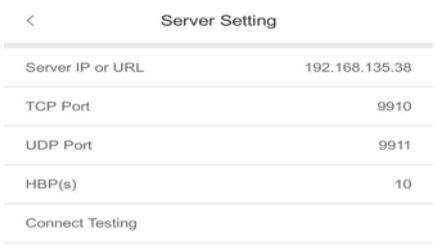
- Network -Password

It is for enhancing the security of network access through software or SDK.

⚠ The password can be set max 8 bits.

- Network -Push to sever

1. Push to sever Switch is default to on.



2. Record Data User can select record data/record+security photo data be pushed to the server.
3. User Data: User can select user template data/user template+head photo data be pushed to the server.
4. Server configuration: User needs to set IP address and port of server.

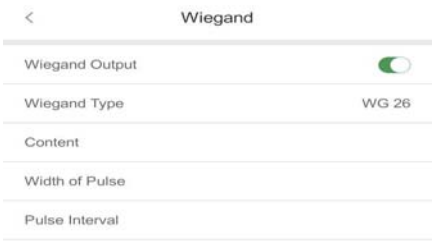
The default IP address is 192.168.0.3.

The default CMD/HBP port is 9910/9911.

The default HBP Delay is 10.

The port parameters have to more than 1024. The HBP delay range is 10~300.

➢ **Communication -Wiegand Output**



- Wiegand Output-Type: System supports standard Wiegand protocol output on the follow list.

The default type is Wiegand output 26.

- Wiegand Output-Pulse Width

  Set proper pulse width for wiegand output to match the external wiegand input terminal.

The default Pulse Width is 100 us.

The pulse width range is 20~8000 us.

- Wiegand Output-Pulse Interval

  Set proper pulse interval for wiegand output to match the external wiegand input terminal.

The default Pulse Interval is 1000 us.

The interval range is 200~20000us.

- Wiegand Output-Content

The user can set Weigand output content with Card ID or User ID.

➢ Attendance

➢ Attendance -Interval

- Interval: Only the first record will be saved while several records created by the same user during defined interval time.

The default Interval is 1 minute.

The interval range is 0~255 minutes.

- Unlock Sync: It is defined to enable the unlock execution synchronic to the attendance interval. The unlock execution will be only executed at the first time for the same user during defined time of attendance interval time.

➢ Attendance – Work Status

➢

- Work Status: It is defined to mark the work status related to each record such as in, out, overtime in, overtime out.

The default is off.

If Work Status is on, user could select the desired work status by pressing down key**<IN/Out>** or just finish the verification if desired work status displaying on screen.

- Auto Switch: It is defined to display the work status automatically according to the time that set.

For example, if the time of work status “in” set as 9:00 and work status “out” set as 18:00, the work status “in” will be displayed automatically when time reach 9:00 till time reach 18:00, the work status “out” will be displayed automatically when time reach 18:00 till time reach 9:00 in next day. The default is off.

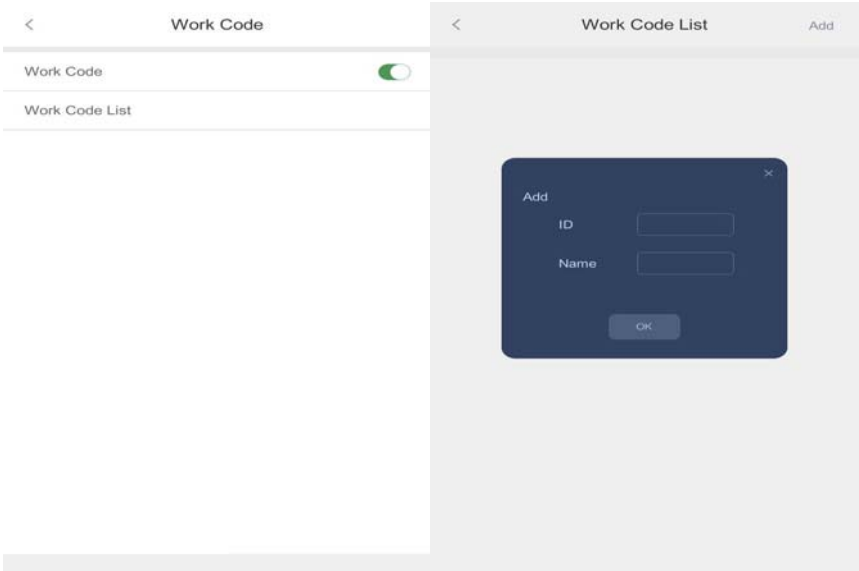
- Switch Time: User can set auto switch time.

The default is 09:00 for “in” and 18:00 for “out”.

- List: User can edit or add the work status on the list by selecting the desired one then press ok to edit or delete.
- Edit and Delete: User could edit the ID and Name of work status.

The default work status is In/Out and they can’t be deleted. New added work status could be deleted.

➢ **Attendance – Work Code**



➢

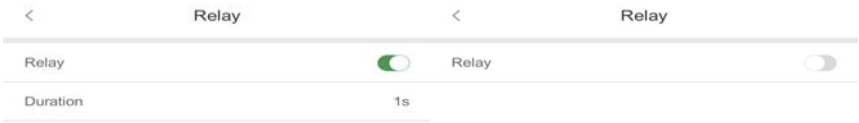
- Work Code: It is defined to mark the work code related to each record such as engineering, maintaining, training etc.

The default is off. If Work Code is on, user has to select the desired work code after verification.

- Add: User can browse/add work code on this list.
- Edit and Delete: User edit the work status and code with ID/Name.

➢ Security

➢ Security – Access Control



- Unlock: User can set duration time of unlock.

The default duration is 3 seconds.

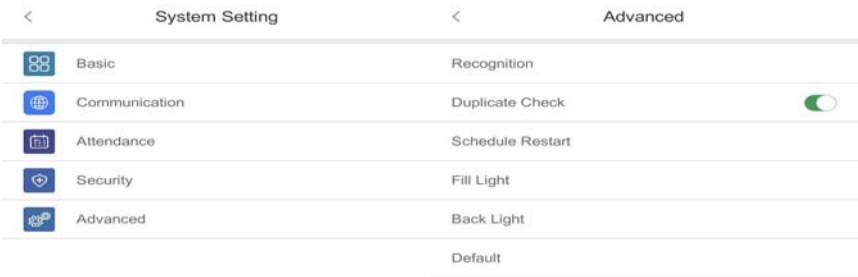
The duration range is 0~10 seconds.

➢ **Security – Alarm**

- Tamper Alarm Switch: Enable/Disable tamper alarm function.

ℹ The default is OFF.

➢ Advanced

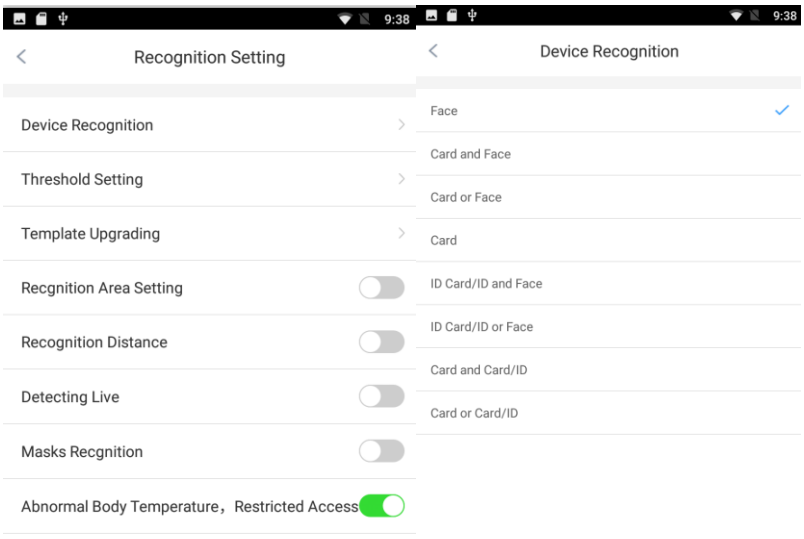


➢

- Duplication Check: System will match new enrolled user with database to check this user already enrolled or not. If system displaying “Similar to ID XX”, admin is suggested to check this user for double enrollment.

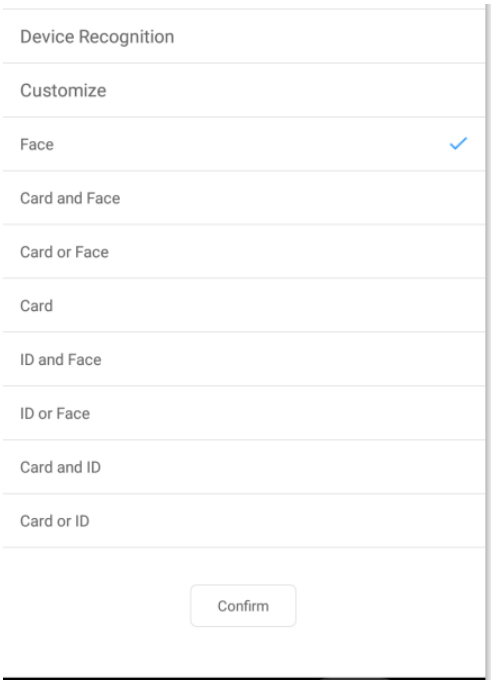
The default is ON.

Recognition Setting Include Threshold setting, Living, and enroll method.



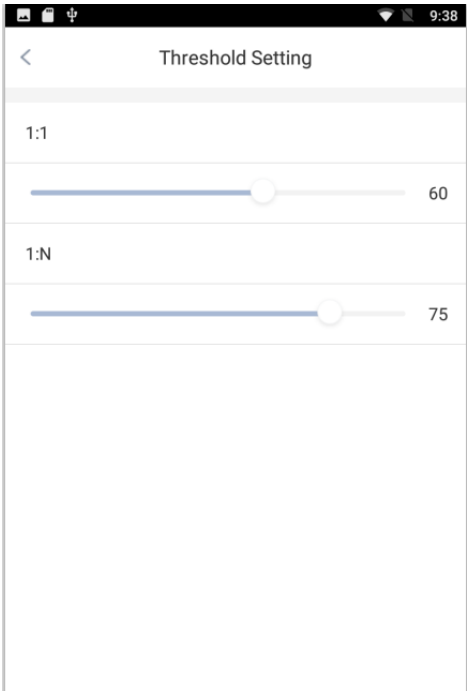
Device Recognition

The device support different recognition method, Such as: Face, (Card and Face, Card or Face, Card as optional) Device recognition means the ticks method.



Threshold setting

Set the match point to determine whether recognition passes or fails.



Detect Living

Default level is normal. It can be set as high and extremely High

Template upgrading

If the device have upgraded the face recognition algorithm. Then this function can upgrade the current template to the latest one directly.

Recognition Area Setting.

Set the recognition area,(To confirm the middle area is the recognition area)

Recognition Distance

To set the best distance of recognition.

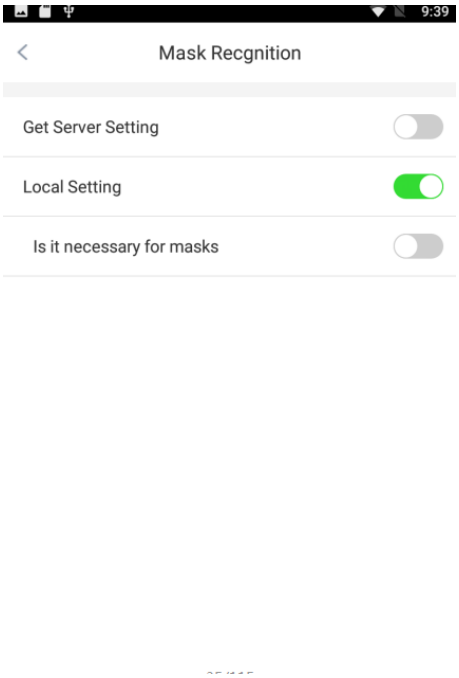
Mask Recognition

To configure that whether the masks is necessary

A**bnormal Body Temperature, Restricted Access.**

Add the temperature measuring, If the temperature is too high. Then the access is not allowed. (Above 37.2 Celsius is abnormal) (Optional)

.

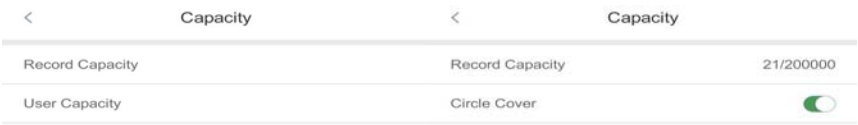


- Default: This operation will delete all data and configurations. And then initialize the device to factory setting.

⚠ If the administrator **<confirm>**, the terminal will be in factory mode!

3.6 System Info.

➢ Capacity Info.

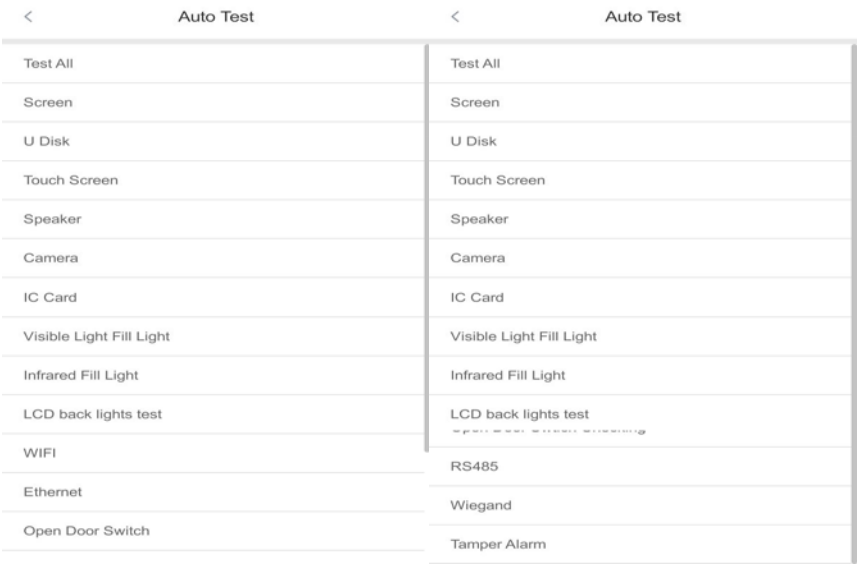


- User: Current enrolled user numbers and total capacity of user numbers for face related recognition mode.
- Record: Current record numbers and total capacity of record numbers.

➢ Product Info.

- Product info: IP Address/Mask Number/Gate/MAC/SN/Firmware version/Algorithm.

3. 7 Auto Test



- Test All: Test all below hardware automatically

  Press **<OK>** if it is working normal

  Press **<ESC>** if it is working abnormal.

A list of status will be displayed after all testing.

- Check LCD: Display Red, Green and Blue on the screen
- Check USB
- Check touch screen
- Check Detection.
- Check Speaker.
- Check Camera.
- Check Fill lights(Infrared/visable lights)
- Check RFID Cards.(optional)
- Check Network.(wifi/Ethernet)
- Check USB Disk.
- Check Door Switch
- Check Wiegand
- Check RS485
- Check Tamper Alarm

4. Appendix

Appendix1. Product Specification

- **User capacity**
  - 10,000 users for face related verification method AND other verification methods including card, card and photo, ID and Pin
- **Record capacity**
  - Data Capacity:200,000
  - Security Photo: 200,000
- **Verification methods**
  - Face
  - Card and Face (card is optional)
  - Card or Face
  - Card
  - ID and Pin
- **Languages:**
  - English
  - 简体中文
- **Recognition algorithm**
  - V5.5.30
- **Display**: 7 inch TFT
- **RFID card**: Mifare card (Optional)
- **Communication**
  - TCP/IP
  - USB port
  - WiFi
  - Wiegand
  - RS485
- **Power:** 12V DC, 2 A
- **Environment Light**: 0-80,000Lux
- **Working Temperature**: -15℃-65℃
- **Working Humidity**: 20% - 80%

Appendix2. Caution

- **Installation Environment**

Sunlight slanted shines on the
terminal through the window.

- **Restoration and restart**
  When the system halted and cannot quit, you can remove the adapter to restore and restart the system, or you also can press **<RESET>** to restart the terminal.

- **Restore to default setting**
  Restore all parameters to the default setting.

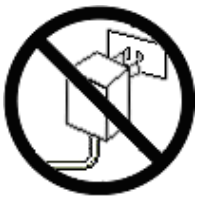
- **Non-Water proof**
  The terminal is non-waterproof, please keep away from water.

- **Prevent from Falling**
  The parts in this terminal are friable; please prevent the terminal from dropping, smashing, bending and high pressure.

- **Cleaning**
  Please use soft cloth or the other similar material to clean the screen and faceplate, please avoid cleaning with water and cleanser.

- **Low Temperature Environment**
  The working temperature for screen and the main parts in this terminal are the normal indoor temperature. The performance of this terminal will get worse, if the working temperature extend this temperature range.

Please prevent the screen from oil or any sharp objects.



Please use the equipped adapter for the terminal, the other unknown adapters will burn out