

FE-700VE

User Guide Manual



for Maximum Security Assurance

Palm Vein & Face Multimodal Biometrics

- Dual Biometric Authentication
- **Palm Vein, Face, Card, Password, QR**
- Compliant with GDPR
- **Advanced Anti-Spoofing**
- Dual User Verification



1. Dual Biometric Authentication for Unmatched Security

Combines facial recognition and palm vein authentication in one device, delivering **superior protection by requiring dual-verification**. Ideal for high-security environments where single-factor authentication is not sufficient.

2. High Accuracy and Robust Performance

Powered by deep learning algorithms and dual biometric matching technology, offering **accuracy rates exceeding 99.99% for both face and palm vein recognition**.

3. Versatile Environmental Adaptability

Integrated IR and 3D sensors, along with palm vein IR imaging, ensure consistent and reliable authentication performance across diverse conditions such as bright light, darkness, or when users wear masks, glasses, or hat.

4. Anti-Spoofing and Advanced Liveness Detection

Prevents fraudulent access with combined anti-spoofing measures-3D depth sensing for face, and subdermal vein pattern recognition for palm, effectively blocking attempts using photos, videos, masks, or fake palms.

5. Privacy-Centric Data Processing

Only **encrypted biometric templates** are stored and ensuring full compliance with global data protection standards such as GDPR and CCPA.

6. Flexible Authentication Options

Supports **multimodal authentication modes**: Face only, Palm only, Face + Palm (dual-factor) with card.

7. User-Friendly and Contactless Experience

Delivers a seamless, hygienic experience with **fully touchless recognition**. The system adapts to natural user movement and offers intuitive prompts via on-screen guidance.

8. Simple Integration and Remote Management

Supports **remote software updates, diagnostics, and device management**. Compatible with major access control platforms, offering **API for easy integration into existing systems**.

9. Ideal for High-Security Applications

Perfect **for data centers, laboratories, government facilities, and financial institutions** requiring the highest level of identity verification.



DATASHEET

Category	FE-700	FE-700VE
CPU	2 core CPU	2 core CPU
Memory	4GB RAM, 8G Flash	4GB RAM, 8G Flash
Users for Face	50,000	10,000
Users for Palm Vein	NA	10,000
User Capacity	200,000	10,000
PASSWORD	YES	YES
Comparison Model	1:1, 1:N, Multi Mode Authentication	1:1, 1:N, Multi Mode Authentication
Event Buffer	200,000	200,000
LCD	5" IPSTouch Screen	5" IPSTouch Screen
Camera	IR,RGB Dual lens Starlight camera	IR,RGB Dual lens camera
OS	LINUX	LINUX
Function	Face+Card+Password+QR code	PalmVein+Face+Card+Password
Power	12V / 2A, Adapter(AC 120 V)	12V / 2A, Adapter(AC 120 V)
Detection	Single / Multi(3~5)	Single / Multi(3~5)
Face Read Range	Max 2M	Max 2M
Palm Read Range	NA	15~40cm
Live Detection	Picture, Video, Mask	Picture, Video, Mask
QR Code	YES	NO
Communication	TCP/IP	TCP/IP
Speed	<0.5 sec (1:N, 50,000users)	<0.5 sec (1:N, 10,000users)
Card	Mifare format(13.56MHz)	
Input Ports	2ea(exit, door sensor), 1ea(fire)	
Output Ports	2ea(relay,wiegand)	
Temperature	-20 °C~60 °C	
Humidity	10~90%	
Product Size	188mm x 91mm x 25mm	
Product Weight	250g	
Certificate	CE, FCC, RoHS certifications pending	

Product Specifications Disclaimer:
Specifications are subject to change without prior notice as a result of ongoing product innovation, component availability, and technological advancements. KJ TECH reserves the right to modify product features to maintain quality standards and optimize performance.

Cable & Connector

● Connector

Pin	Description	Color
1	RX(-)	Green
2	NO	White
3	RX(+)	Yellow
4	COM	Green
5	TX(-)	Black
6	NC	Blue
7	TX(+)	Red
8		
9	GND	Black
10	PUSH	Red
11	IO OUT	Green
12	IO IN	White
13	WG-D1	Green
14	WG-D0	White
15	RS485B	Black
16	RS485A	Red
17	GND	Blue
18	POWER GND	Green
19	FIRE	Yellow
20	POWER +VDC	Red

● Power

Pin	Description	Color
18	POWER GND	Black
20	POWER +VDC	Red

● TCP/IP

1	RX(-)	Green
3	RX(+)	Yellow
5	TX(-)	Black
7	TX(+)	Red

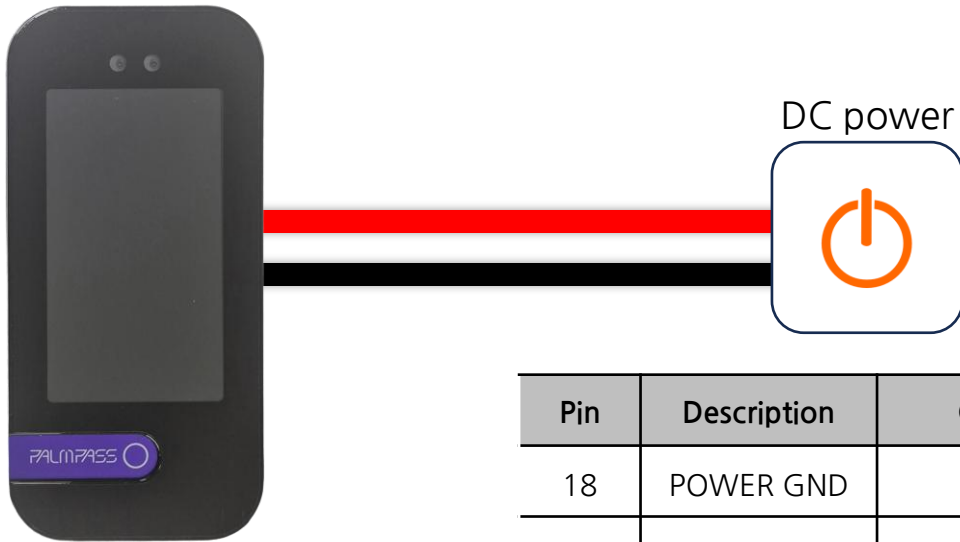
● LOCK

6	NC	Blue
4	COM	Green
2	NO	White

● Exit Button

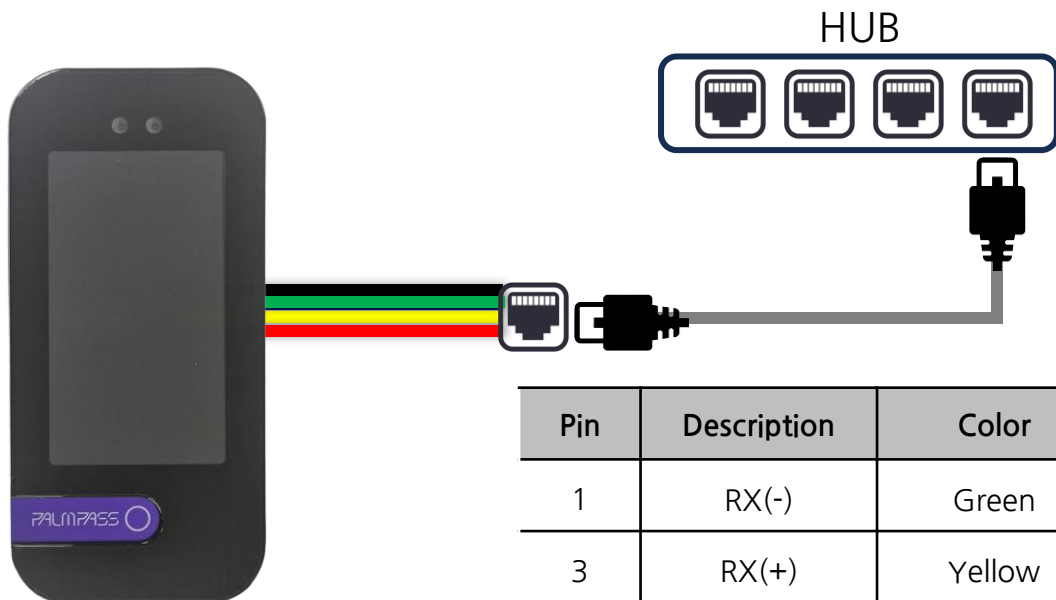
9	GND	Black
10	PUSH	Red

Power



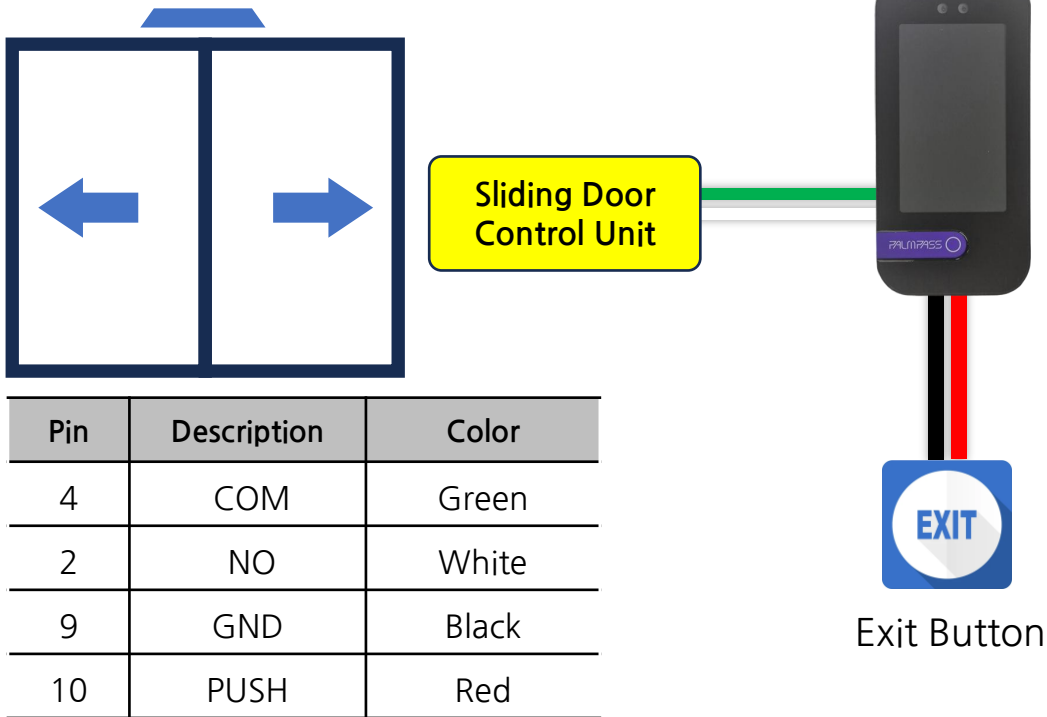
Pin	Description	Color
18	POWER GND	Black
20	POWER +VDC	Red

Network Connection

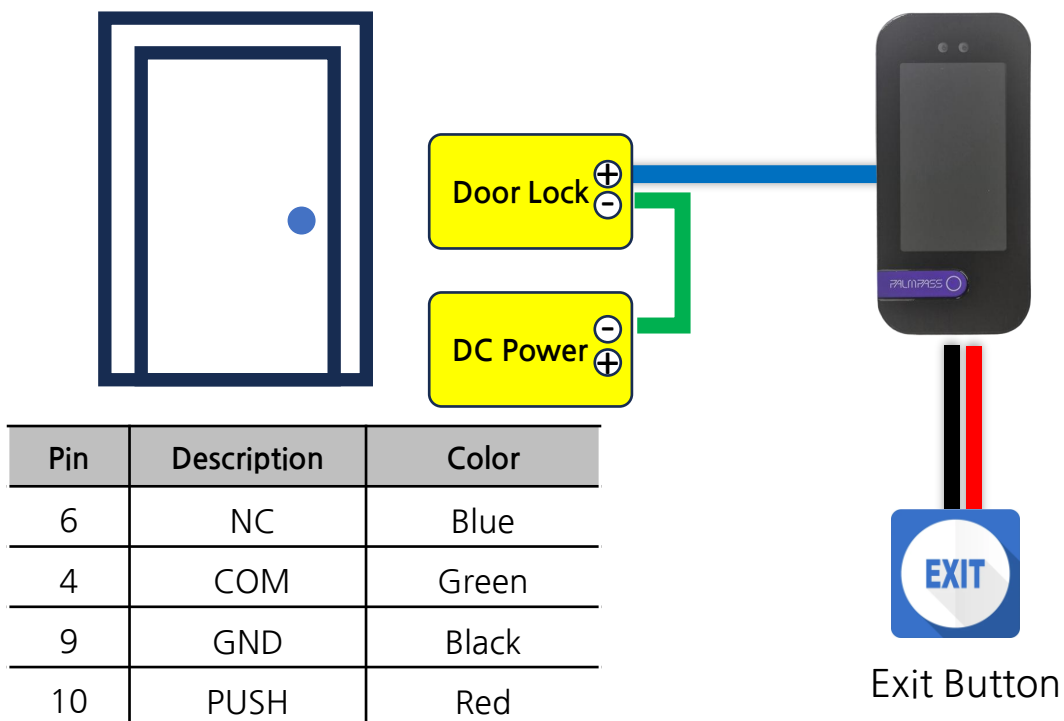


Pin	Description	Color
1	RX(-)	Green
3	RX(+)	Yellow
5	TX(-)	Black
7	TX(+)	Red

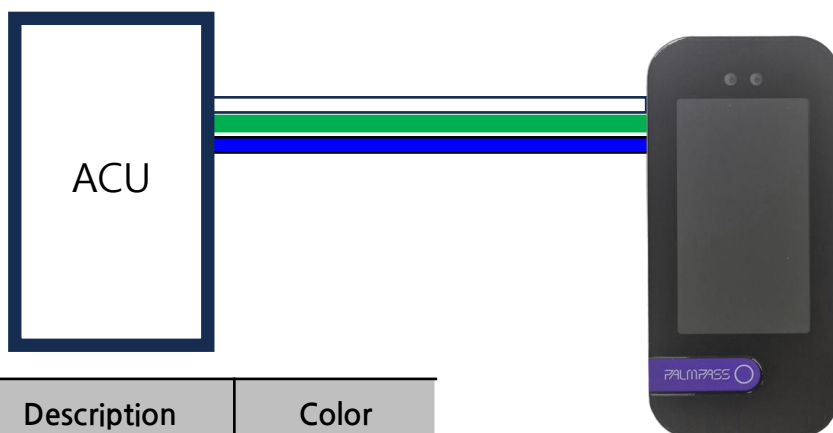
Sliding Door Connection



Door Lock Connection

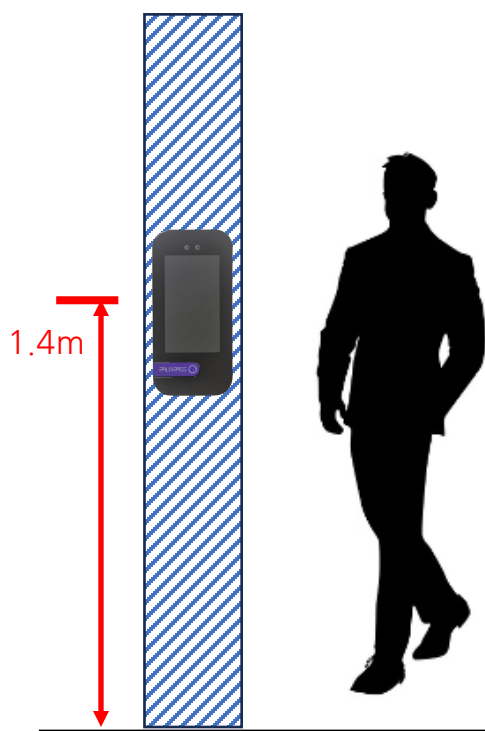


ACU(Access Control Unit) Connection



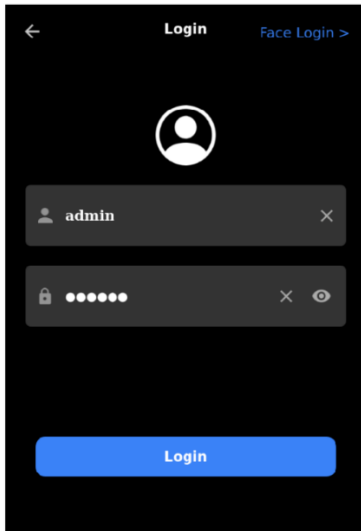
Pin	Description	Color
14	WG-D0	White
13	WG-D1	Green
17	GND	Blue

Installation Height



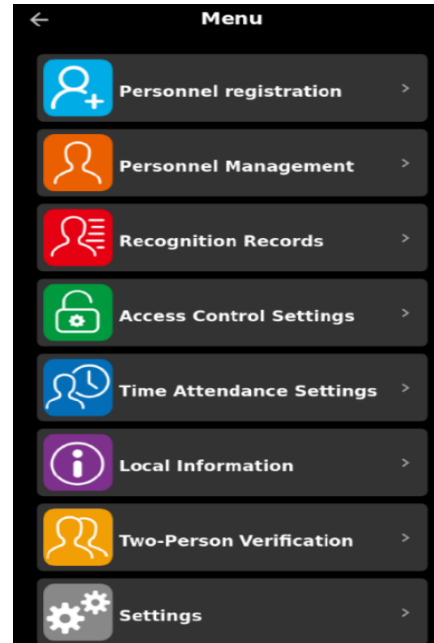
The recommended installation height is 1.4m to 1.6m (distance between the lens and the ground).

Entry MENU & MENU



Main Screen:

After powering on the device, tap the main screen for approximately 5 seconds. A menu icon will appear on the bottom left corner of the LCD.

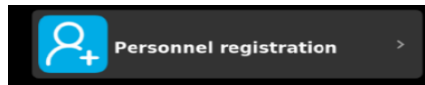
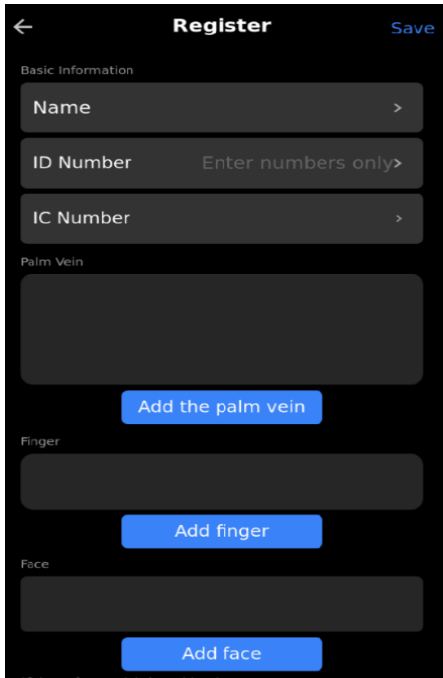


Login

Tap the menu icon to open the login screen. Once you successfully log in, the main menu will appear.

Personnel Registration

Navigation

Register Save

Basic information

Name >

ID Number Enter numbers only>

IC Number >

Palm Vein

Add the palm vein

Finger

Add finger

Face

Add face

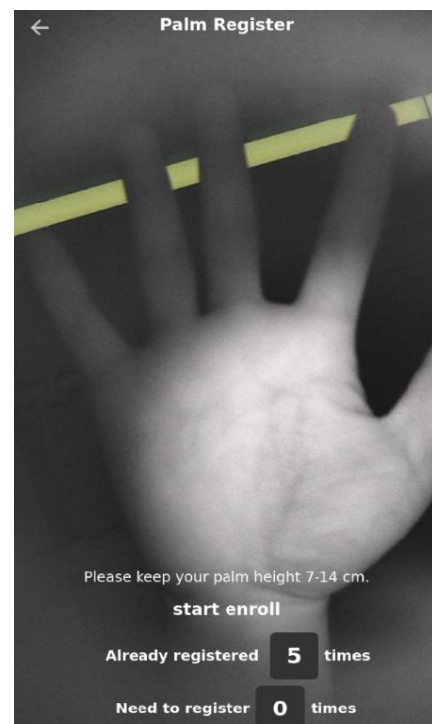
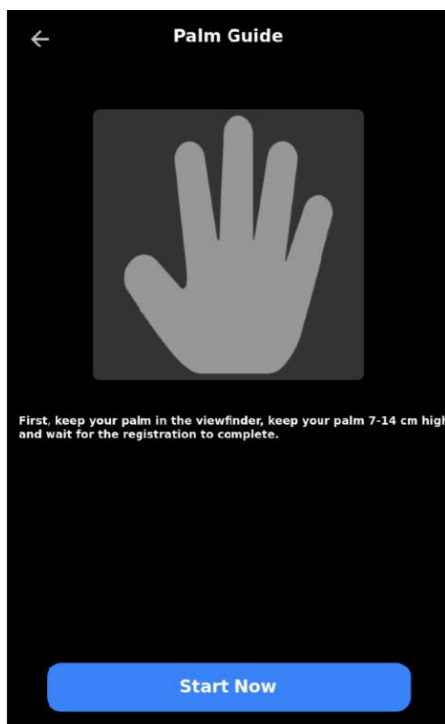
Personnel Registration:

Enter the user's name and ID, then register the following authentication methods:

Card Registration (RF Card):

Tap "IC Number" and then place the card to be registered in close proximity to the reader to register it.

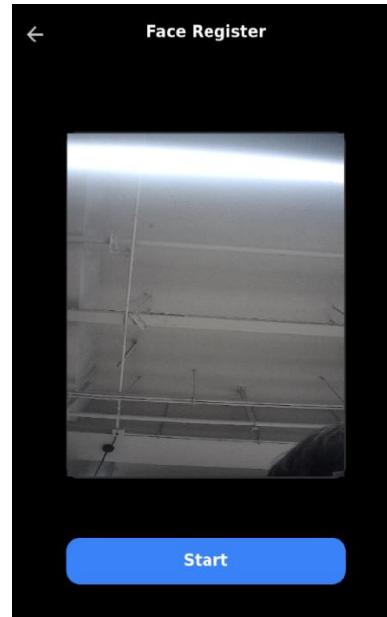
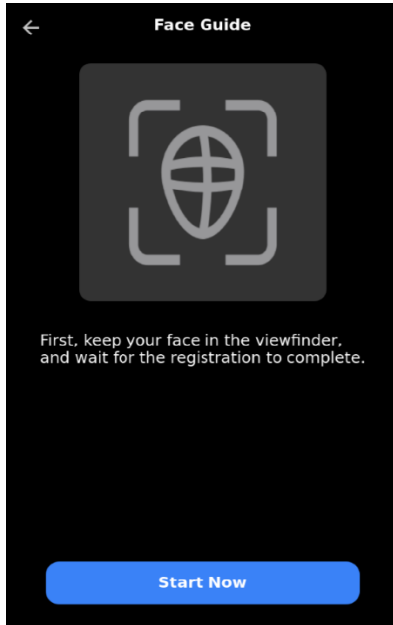
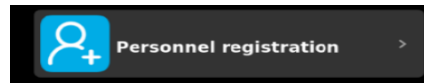
*** Compatible card formats may vary by product, and the compatible card format must be confirmed at the time of purchase for proper use.**



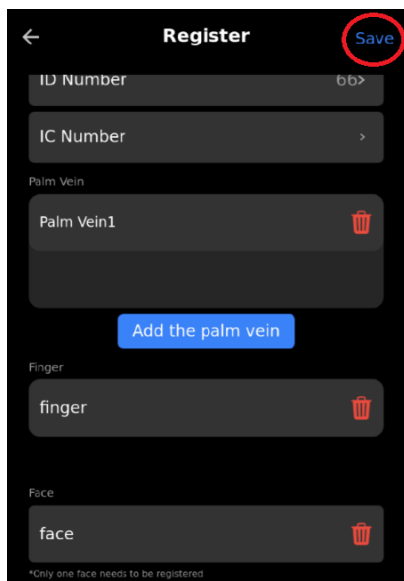
Vein Registration: Place your palm 7-14cm away from the screen. Registration will complete after 5 captures.

Personnel Registration

Navigation



Face Registration: Touch the 'Start Now' button, then position your face within the LCD screen to register it.

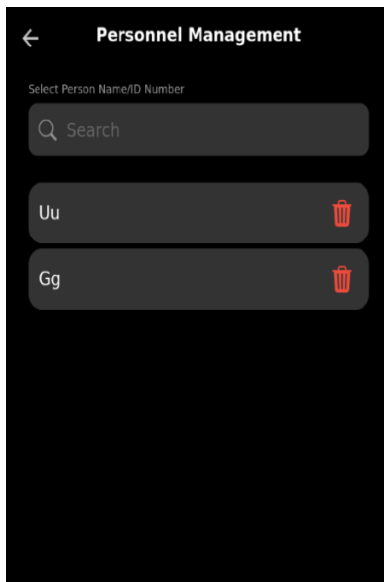


Save:

Once user registration is complete, tap the 'Save' button in the upper right corner to save the information.

Personnel Management

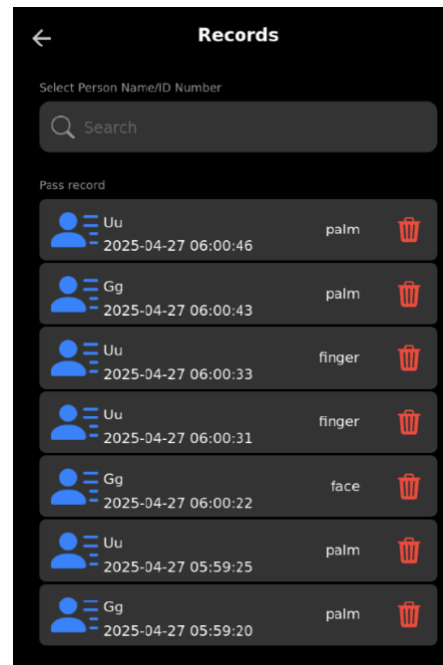
Navigation



Personnel Management You can view the list of registered users and manage their information, including deletion and modification.

Delete: Tap the trash can icon next to the user's name to delete the user.

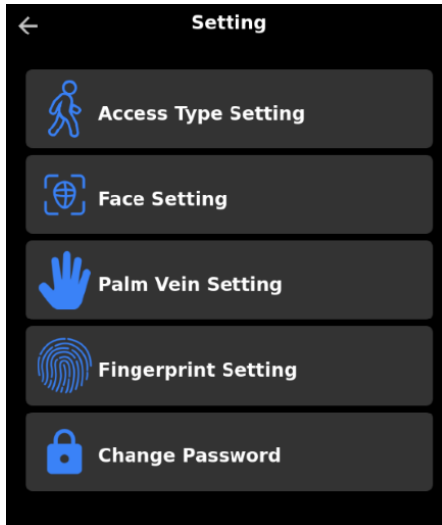
Modify: Tap a user's name to enter registration mode, where you can modify their information (e.g., re-register or delete vein, face, or card data).



Search Recognition Records: You can search for the log records of authenticated users.

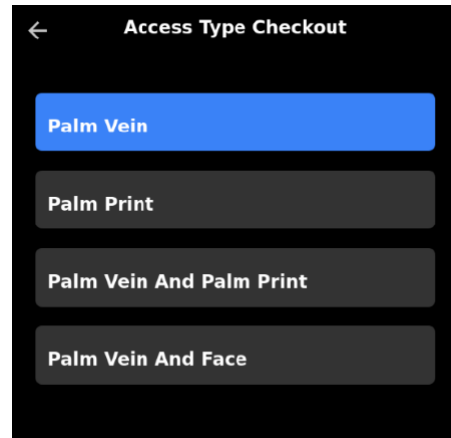
Access Control Settings

Navigation



Settings:

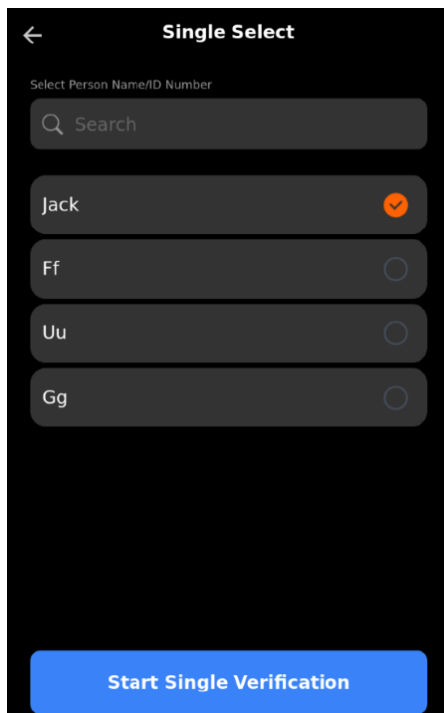
Select Authentication Mode: Touch 'Access Type Setting' to choose various authentication modes.



Palm Vein: When Palm Vein is selected, it operates using either vein or face authentication, similar to 'Any mode'.

Palm Print & Palm Vein And Palm Print: Features planned for future implementation (currently not supported).

Palm Vein And Face: A dual authentication mode that uses both vein and face.



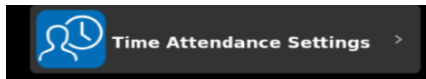
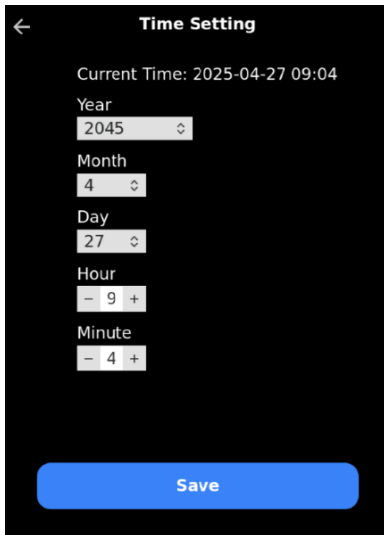
Setting Palm Vein And Face Mode:

Tap the 'Palm Vein And Face' button and select the user(s). Touch the 'Start single verification' button to complete the setting.

Deselecting the personnel(s) and tap the button will deactivate this mode.

Settings

Navigation

Time Setting

Current Time: 2025-04-27 09:04

Year: 2045

Month: 4

Day: 27

Hour: 9

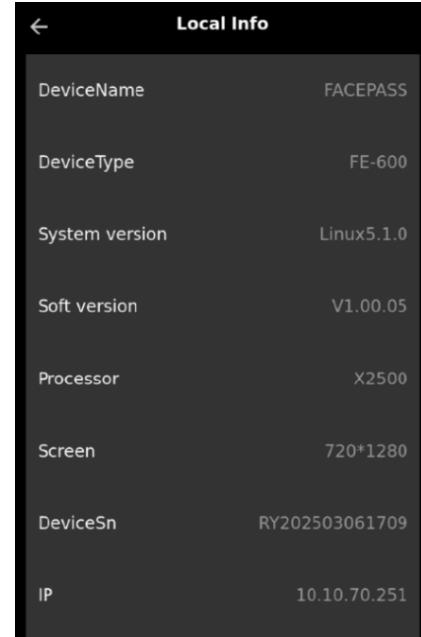
Minute: 4

Save

Time Attendance Settings

Proceed with the time settings and then tap the 'Save' button.

Navigation

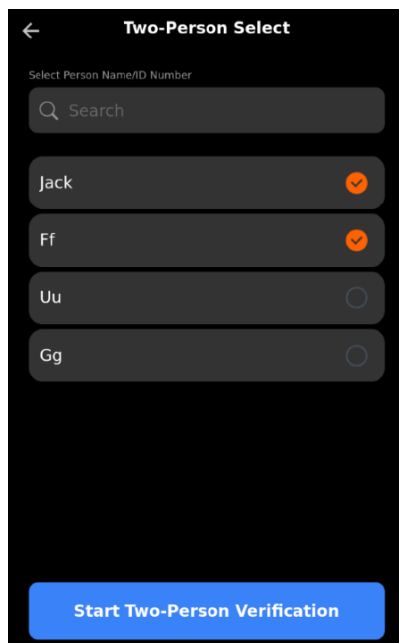
Local Info

DeviceName	FACEPASS
DeviceType	FE-600
System version	Linux5.1.0
Soft version	V1.00.05
Processor	X2500
Screen	720*1280
DeviceSn	RY202503061709
IP	10.10.70.251

Local Information

You can check the basic information of the device.

Navigation

Two-Person Select

Select Person Name/ID Number

Search

Jack	☒
Ff	☒
Uu	☐
Gg	☐

Start Two-Person Verification

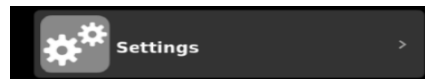
Two-Person Verification

This feature requires **two users to complete vein authentication simultaneously for the door to open**. It's ideal for locations needing dual administrator approval, such as banks, national critical facilities, and hospitals.

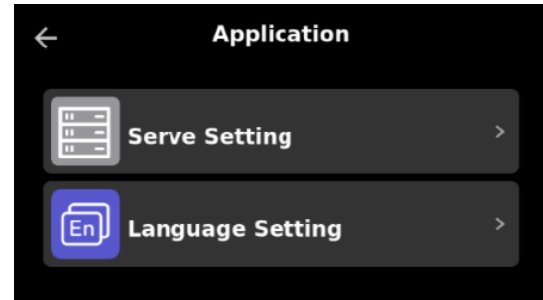
Setup: Select two users from the menu, then tap "Start Two-Person Verification".

Settings

Navigation



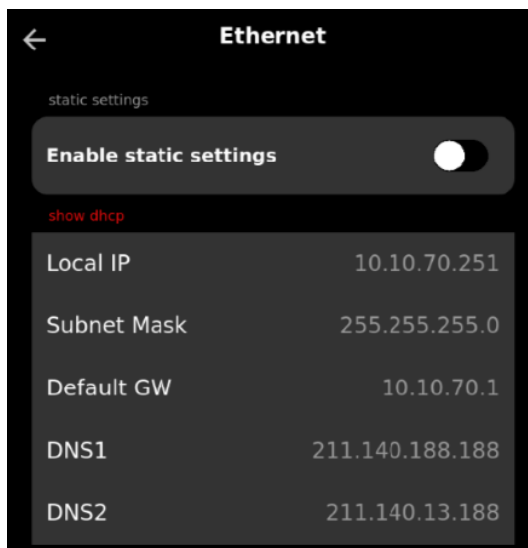
Settings This menu allows you to change the overall settings of the device.



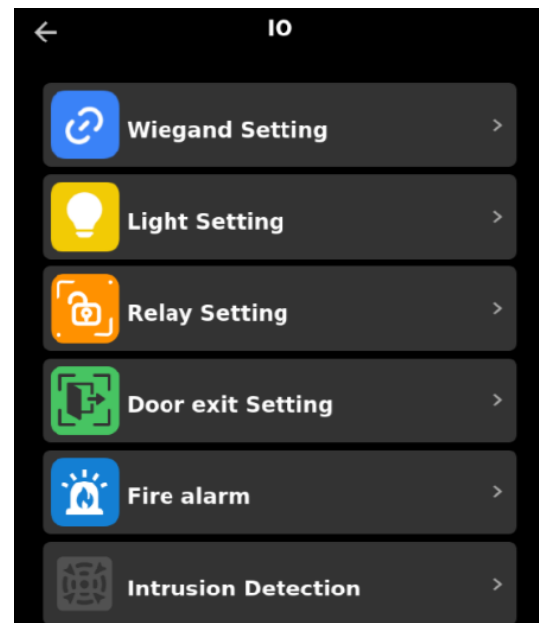
Application

Server Setting: This function is for server communication and is not used by the end users.

Language Setting: You can select the device language.



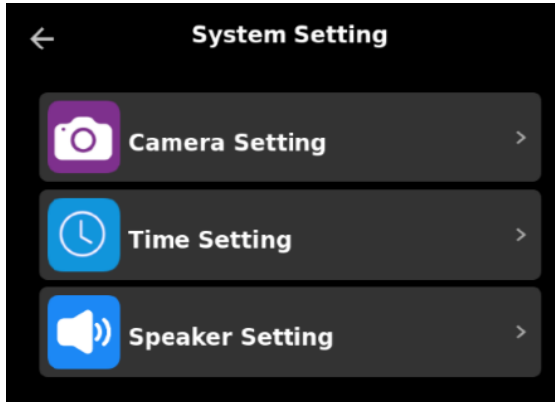
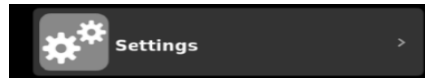
Network You can tap and modify network-related items such as the IP address.



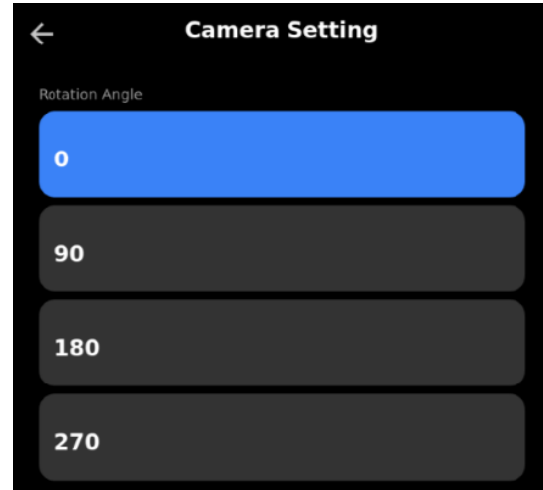
I/O You can configure input/output settings, such as Wiegand output settings and lighting settings.

Settings

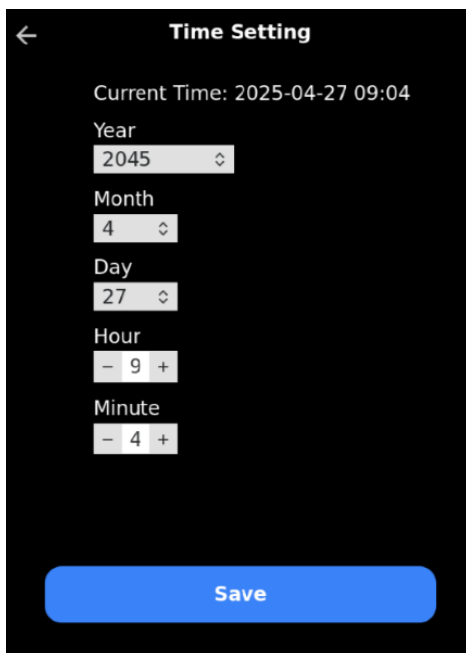
Navigation



System settings

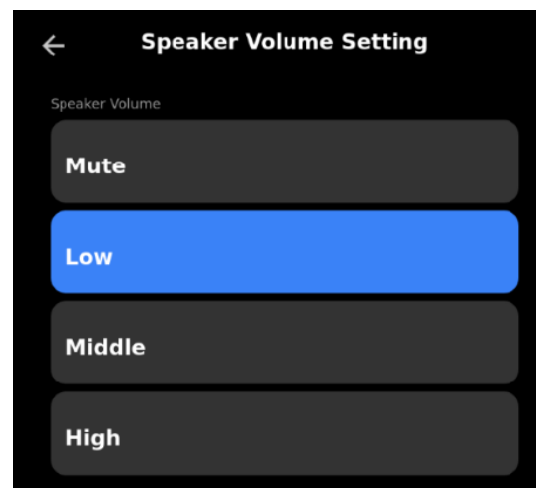


Camera Setting Set 'Rotation Angle' to 0 .
(0 is front angle)

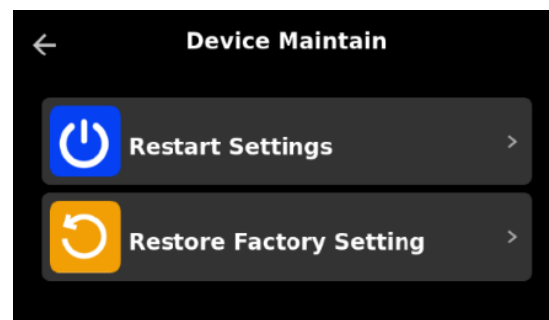


Time Setting Screen : This screen allows you to adjust the device's current time.

Instructions: Verify the Current Time displayed at the top, and use the Year, Month, and Day drop-down menus to set the date. And adjust the Hour and Minute using the + and - buttons. Once all settings are correct, tap the Save button at the bottom.



Speaker Volume Setting This function adjusts the speaker volume.



Device Maintain Provides functions to reboot the device and a factory reset menu.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

a. Rule Part 15.19(a)(3): 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.

b. Rule Part 15.21: The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital

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

The contents of this manual are subject to change with product updates.

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