User Manual

Horus E2 Series

Multi-Biometric Access Control Terminal

Date: December 2024

Doc Version: 1.0

English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.

For further details, please visit our Company's website www.zkteco.com.

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If there is any issue related to the product, please contact us.

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About the Company

ZKTeco is one of the world's largest manufacturer of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader Door Locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the operations of **Horus E2 Series Multi-Biometric Access Control Terminal**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Features and parameters with ★ are not available in all devices.

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Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	**Description**
Bold font	Used to identify software interface names **OK**, **Confirm**, **Cancel.**
>	Multi-level menus are separated by these brackets. For example, File > Create > Folder.
For Device	
Convention	**Description**
< >	Button or key names for devices. For example, press <OK>.
[ ]	Window names, menu items, data table, and field names are inside square brackets. For example, pop up the [New User] window.
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/ Folder].

Symbols

Convention	Description
	This represents a note that needs to pay more attention to.
	The general information which helps in performing the operations faster.
	The information which is significant.
	Care taken to avoid danger or mistakes.
	The statement or event that warns of something or that serves as a cautionary example.

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1 Overview

The Horus E2 from ZKTeco is an Android-based multi-biometrics terminal designed to streamline both time attendance and access control. Leveraging ZKTeco's cutting-edge technology, the Horus E2 supports a variety of authentication methods, including facial recognition, fingerprint scanning, multi-tech card verification, and QR code scanning. These features meet the diverse needs of users across various environments. The device ensures reliable connectivity through dual-frequency Wi-Fi and LTE, facilitating seamless network integration. The Horus E2 is compatible with Android 10 operating system, which simplifies the integration with third-party applications. Additionally, it includes an optional removable backup battery, enhancing its reliability and making it an ideal solution for mobile time attendance and temporary site management.

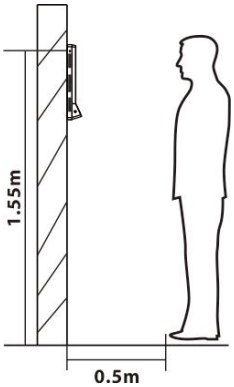
The Horus E2 comes standard with a B133 card module that supports identification ID and IC cards. The Horus E2 also perfectly supports Elatec card modules and can support 125 kHz/134.2 kHz/13.56 MHz RFID cards without replacing the card module.

If the above-mentioned function cannot meet customers' needs, we can provide an EDK embedded development kit and adjustment tools. Based on our robust and stable platform, the client's R&D team can quickly develop, integrate, and debug the entire embedded system for better scalability.

2 Instructions for Use

2.1 Standing Position, Facial Expression and Standing Posture

Recommended Distance



The distance between the device and the user (whose height is within 1.55m to 1.85m) is recommended to be 1.5m. Users may slightly move forward and backward to improve the quality of the captured facial images.

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Recommended Facial Expressions

Recommended Standing Postures

Note: During enrolment and verification, please remain natural facial expression and standing posture.

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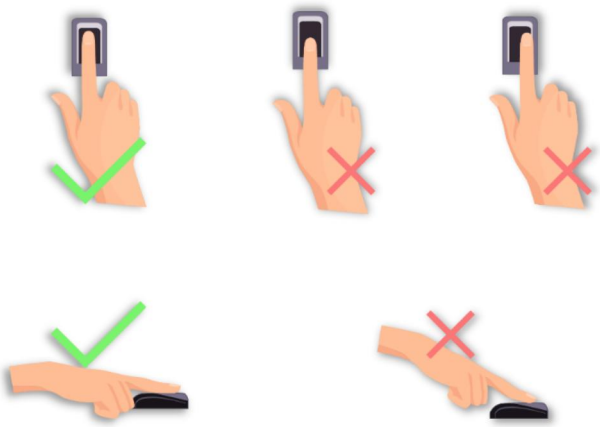
2.2Finger Placement★

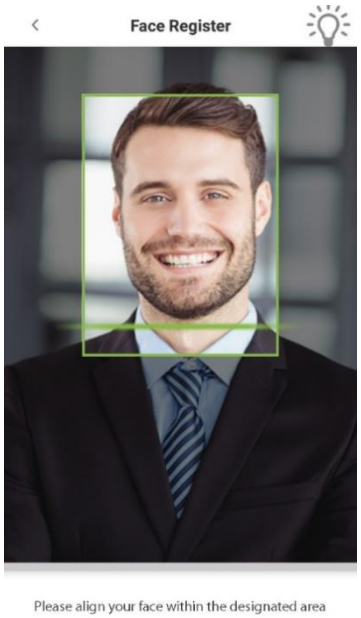
- **Recommended fingers:** Index, middle, or ring fingers.
- Avoid using the thumb or pinky, as they are difficult to accurately tap onto the fingerprint reader.



Note: Please use the correct method when pressing your fingers onto the fingerprint reader for registration and identification.

2.3Face Template Enrollment

During enrollment, try to adjust your face in the center of the device screen. Please face the camera and stay still. The device screen is shown below:



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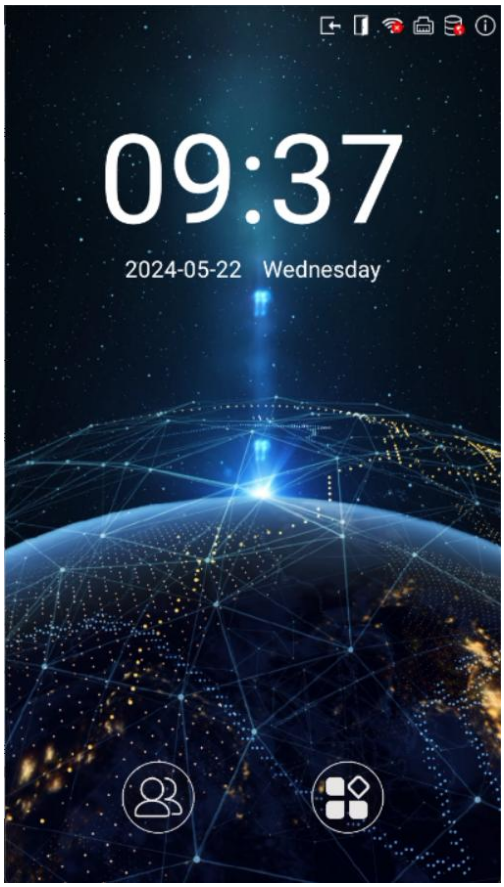
2.4Standby Interface

After connecting the power supply, the Device displays the following standby interface.



Notes:

1. Tap on the button to enter the personnel ID Input screen.
2. Tap on the button to enter the main menu.
3. If a super administrator has already been registered for this device, you will need the permission of the super administrator to enter the main menu.

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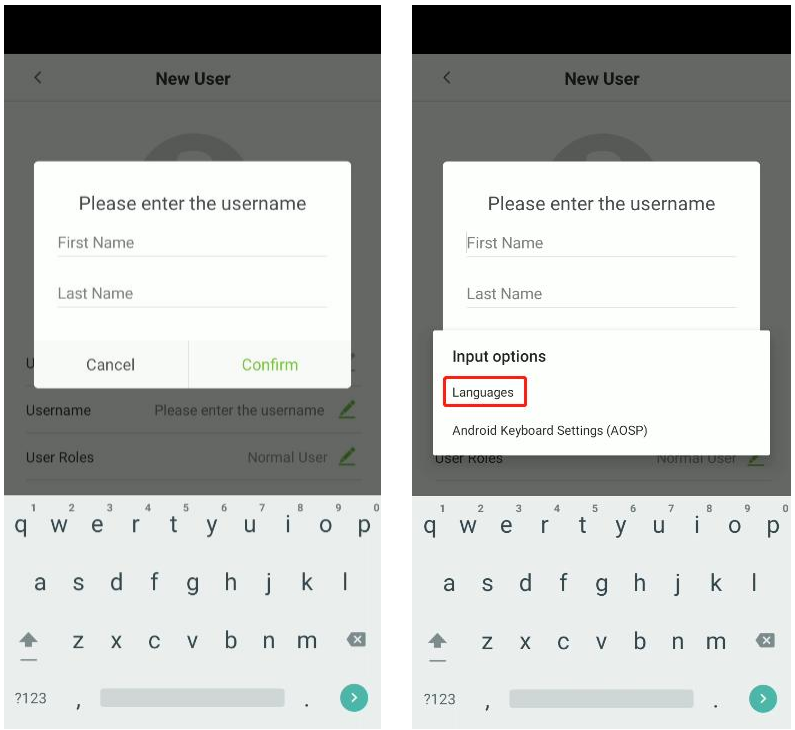
2.5Virtual Keyboard



Note: The kinds of keyboards of device will accord to the system language.

- Long press the "," button, to set the language of keyboards.

2.6Verification Mode

The Biometric matching process can be categorized as, One-to-many or "Identification" (1: N), and one-to-one or "Verification" (1:1). Below is a description of each matching type and how its features are described.

1: N Identification Process

A one-to-many (1: N) biometric identification process instantly compares the person's captured biometric template against all stored biometric templates in the system.

1:1 Verification Process

1:1 biometric verification process authenticates a person's identity by comparing the captured biometric template with a biometric template of that person pre-stored in the database.

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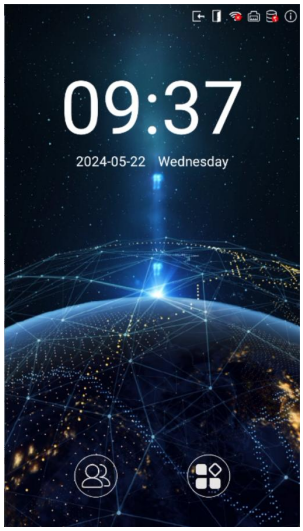
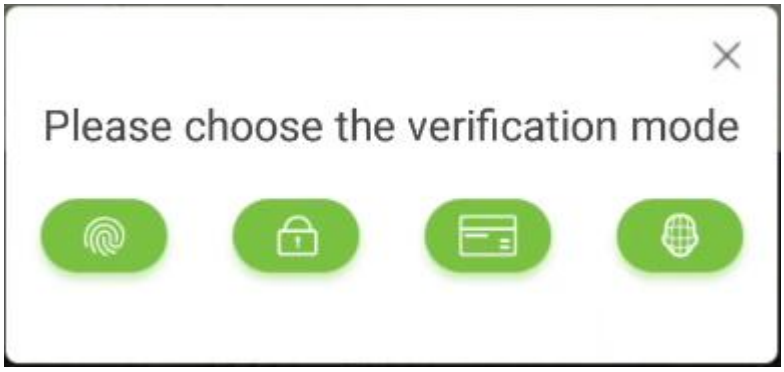
2.6.1 Password Verification

When a user inputs his/her user ID and password into the device, the data will be compared to the user ID and password of that user pre-stored in the system. This process is recommended for administrator users.

- On the **Main** screen, tap on the button to enter the 1:1 password verification mode.
- On the **Input** screen, enter the User ID and tap **[OK].**



- If a user has registered a face, a fingerprint and card in addition to his/her password and the verification method is set to fingerprint/ password/ card/ face verification, the below screen will appear.



- Tap on the password button to enter the password verification mode. Enter the password and tap **[OK]**.

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- Below are the sample for successful and unsuccessful verification

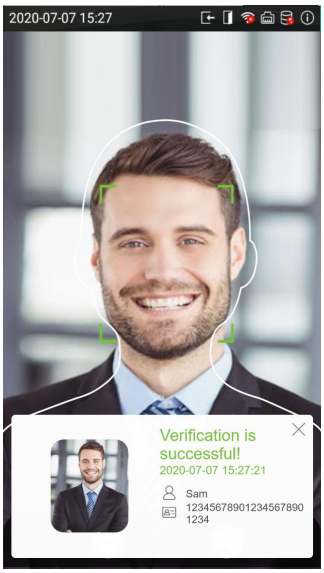
Successful Verification

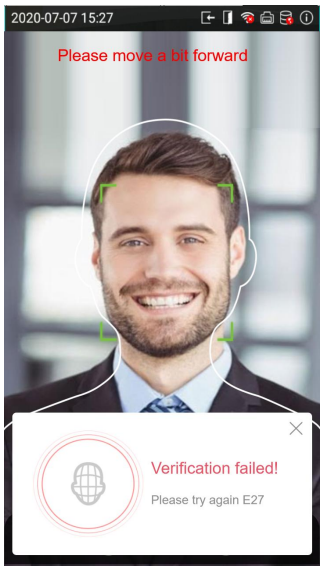
Failed Verification

2.6.2 Facial Verification

1: N Face Template Identification

- This method identifies the acquired facial image of the user with all the facial templates that are stored in the device.
- Below are the sample for successful and unsuccessful identification.





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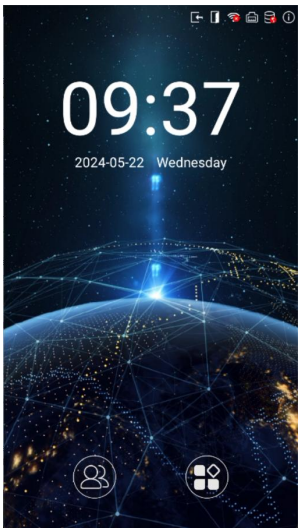
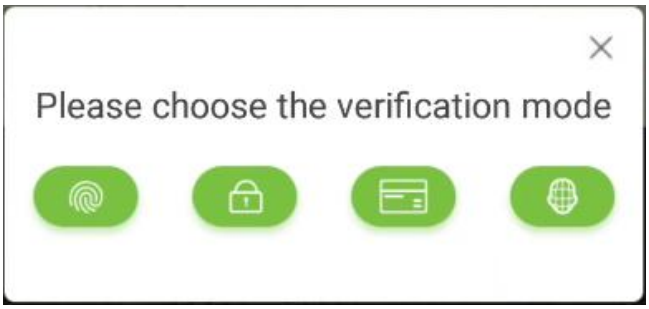
1:1 Face Template Verification

- This method verifies the face of the user captured by the camera with the facial template related to that User ID provided by the user.
- Tap on the **Main** interface to enter the 1:1 facial verification mode Input the User ID, tap [**OK**].



- If a user has registered a fingerprint, a password and card in addition to his/her face and the verification method is set to fingerprint/ password/ card/ face verification, the following screen will appear.
- Tap on the face button to enter the facial verification mode.



- After the prompt "Please verify your face ", adjust your face in the center of the device screen for face verification.

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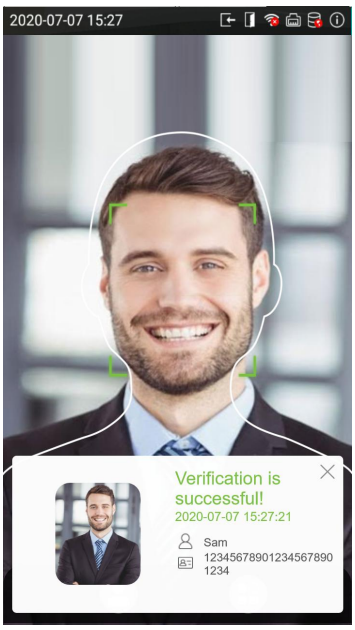
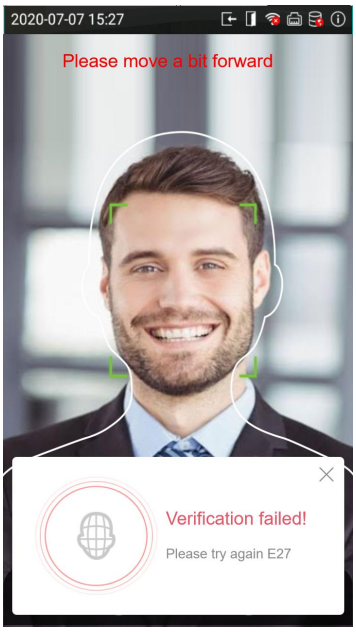
- Below are the sample for successful and unsuccessful verification.



Successful Verification



Failed Verification

2.6.3 Fingerprint Verification ★

1: N Fingerprint Identification

- This method compares the fingerprint of the user that is being pressed onto the fingerprint reader with all the fingerprint data that is pre-stored in the device.
- To enter fingerprint identification mode, simply tap your finger on the fingerprint reader.
- Below are the sample for successful and unsuccessful identification.

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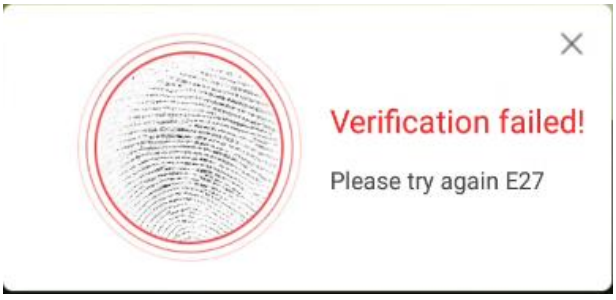
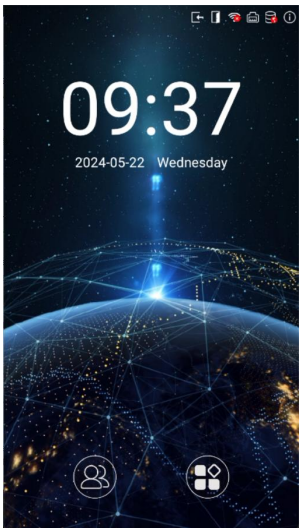


Successful Verification **Failed Verification**

1:1 Fingerprint Verification

- This method compares the fingerprint of the user that is being pressed onto the fingerprint reader with the fingerprint templates that are linked to that User ID which has been entered via the virtual keyboard.
- Tap the button on the main screen to enter 1:1 fingerprint verification mode:
- Enter the User ID and Tap **[OK]**.



- If a user has registered a face, a password and card in addition to his/her fingerprint and the verification method is set to fingerprint/ password/ card/ face, the following screen will appear.
- Select the fingerprint button to enter fingerprint verification mode.

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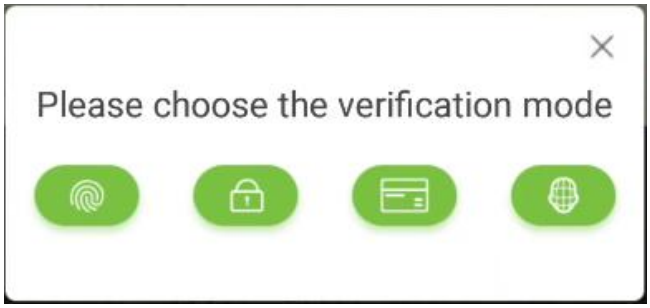
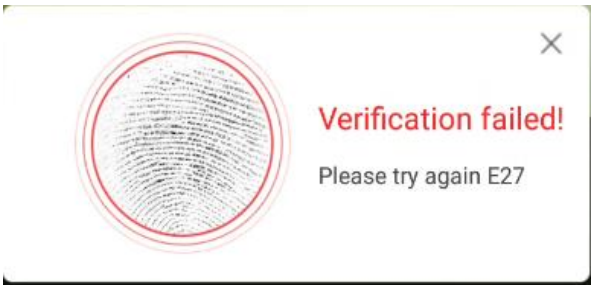


- Tap the finger on the fingerprint reader to proceed with verification.

- Below are the sample for successful and unsuccessful verification.

Successful Verification



Failed Verification

2.6.4 Card Verification

1: N Card Identification

- To enter 1: N card identification mode, please place the registered card on the card reader.
- Below are the sample for successful and unsuccessful identification.

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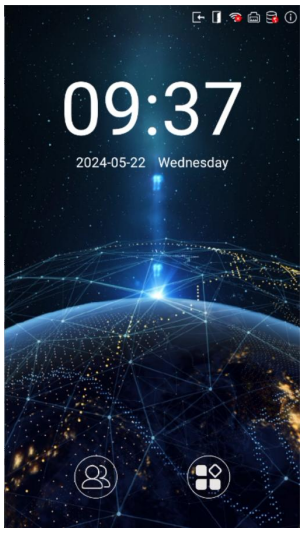
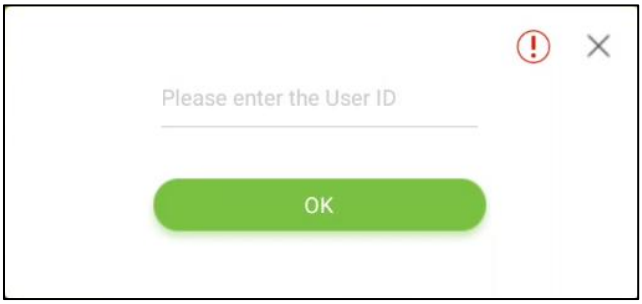
Successful Verification

Failed Verification

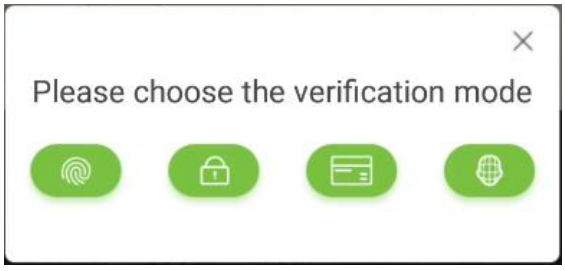
1:1 Card Verification

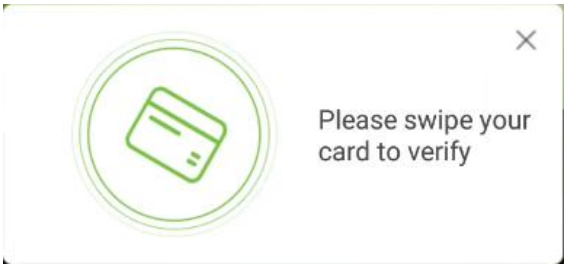
- To enter 1:1 card verification mode**,** tap the button on the main screen to enter 1:1 card verification mode.
- After that, enter the User ID and tap **[OK].**





- If a user has registered a face, a password and fingerprint in addition to his/her card and the verification method is set to fingerprint/ password/ card/ face verification, the below screen will appear.
- Tap on the card button to enter card verification mode. After that, swipe the card to verify.





- Below are the sample for successful and unsuccessful identification.

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Successful Verification

Failed Verification

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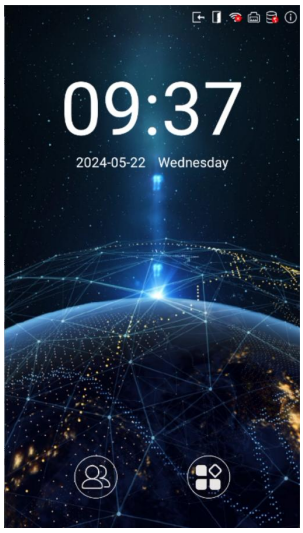
3 Main Menu

On the **Standby interface**, tap on to enter the **Main Menu**.



Menu Operations

Menu	Function
User Management	To Add, Edit, View, and Delete the basic information about a User.
Access Control	To set the parameters of the lock and the relevant access control device Access control options, time rules, holiday settings and anti-passback setup.
Access control records	Query the specified access record, check access photos.
Data Management	To delete all the relevant data from the device.
Alarm Management	Once an alarm has been set, the device will automatically play preselected alarm tone when the specific time is reached. It will stop alarm after the alarm time elapsed.
System Settings	Set the network, date and time, access control settings, cloud service, Wiegand, display and sound, biometric parameters, auto testing, advance settings, Serial port, and security setting of the device.

Note:

- If the device does not have a super administrator, any user can enter the menu by tapping the key.
- After a super administrator has been set on the device, verification will be required to enter the menu. Once verification is successful, users can enter the menu.
- To ensure the security of the device, we recommend registering an administrator the first time you use this device. For detailed operating instructions, please see section **Add User**.

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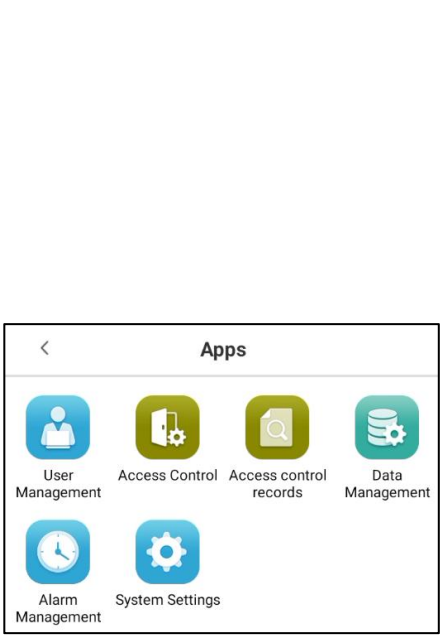
4 User Management

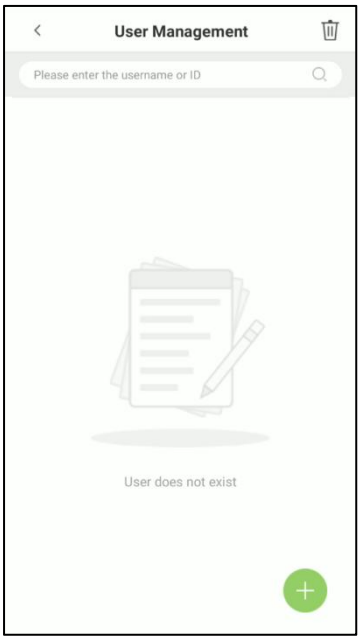
4.1 Add User

There are two methods to add users: Add user via Software or Add via Device.

4.1.1 Add Users via Device

- Tap on button on the **[User Management]** interface to enter the User creation interface.





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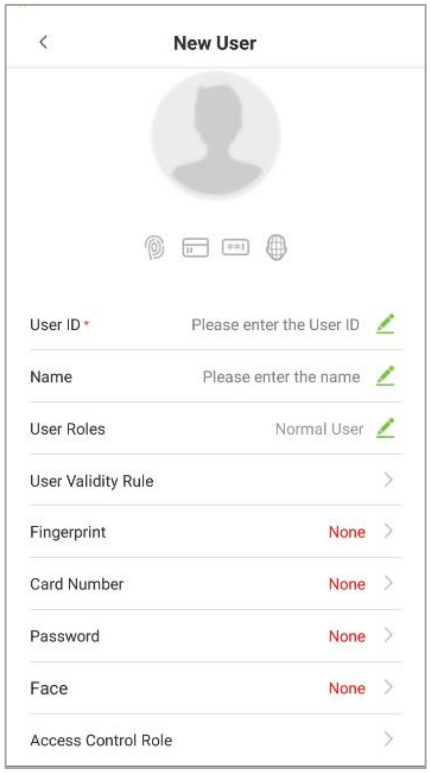
Register Basic User Information

- On the **New User** interface, tap **User ID** and enter the unique identification number, and then tap **Name** and enter the username.



Note:

- Name: The maximum length of characters is 64（32 each for first and last name）.
- User ID: The user's ID can contain 1-14 digits by default.
- User ID can be modified before first login, but cannot be modified once logged in.
- The message **"This User ID already exists!"** indicates that the ID number entered is already being used. In that case, it is recommended to enter another ID number.

Register User Photo

- On the **New User** interface, tap on the button to enter the camera interface.
- It is recommended to face the lens and then adjust the position.
- On the **User Photo** interface, tap on the camera button to capture a photo.

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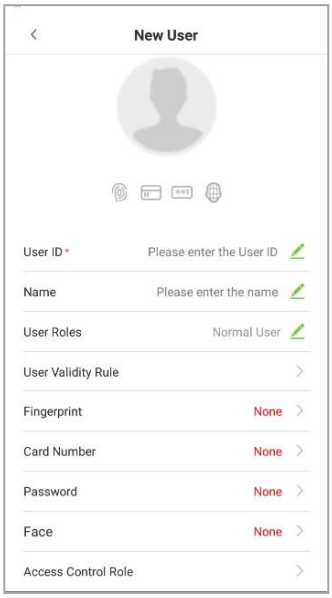
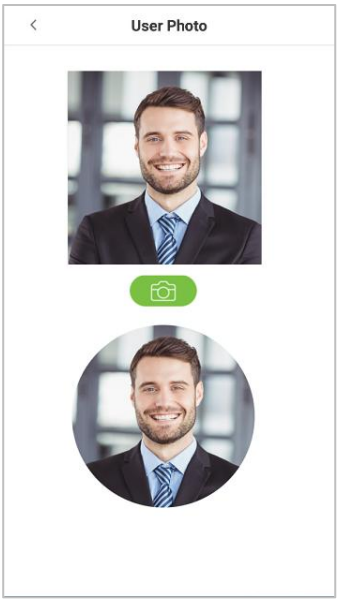
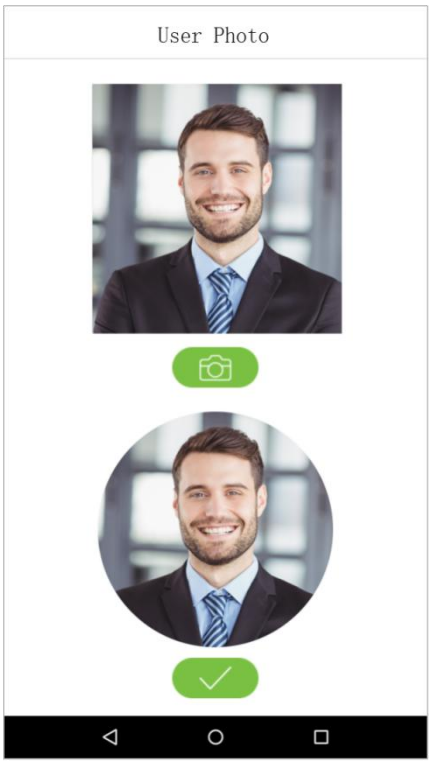




- Tap on the button on the bottom to successfully add the captured photo.



User Role

This device has two types of user privileges that is Normal User and Super Administrator. If a Super Administrator exists on the device, Normal Users can only verification their accounts using different verification modes that have already set for the user. But a Super Administrator will have more privileges like access to the main menu and will also have the same access as the Normal user.

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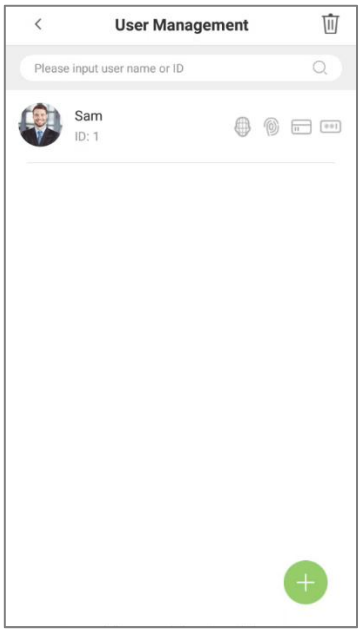
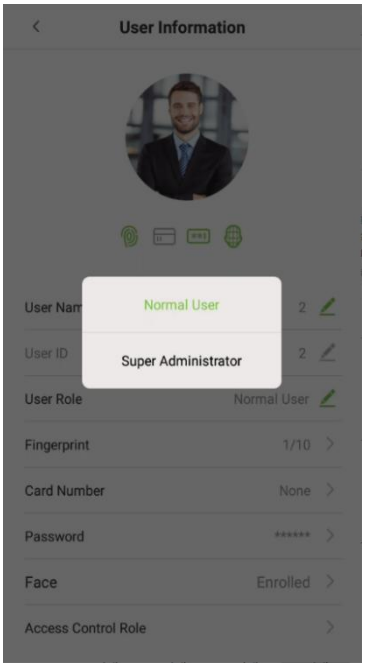
- On the **User Management** interface, tap on the required username from the user list to set the User privilege.



- On the **"User Information"** interface, tap **[User Role],** and then tap **[Normal User]** or **[Super Administrator]** to set the required privilege.



Note: When a user is given super administrator privileges, entering the main menu will require verification. The verification process depends on the verification method that was used during user registration. See the description in section **"Verification Mode"**.

Register Verification Modes

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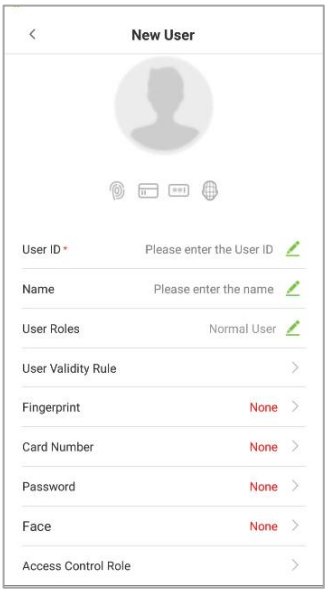
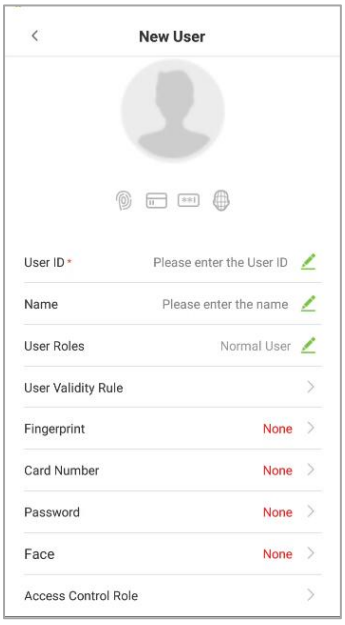
- The different verification modes are used to verify user login.
- The verification mode includes registration of face, a password, fingerprints ★, or card number of a user.
- On the **New User** interface, tap on the required verification mode (Fingerprint, Card Number, Password, Face) to register for verification.



Register Fingerprint ★

- On the **New User** interface, tap **[Fingerprint]** to enter the fingerprint registration interface.
- Tap on the required button (left or right) situated on the left and right side of the screen and then tap on the required finger to register.



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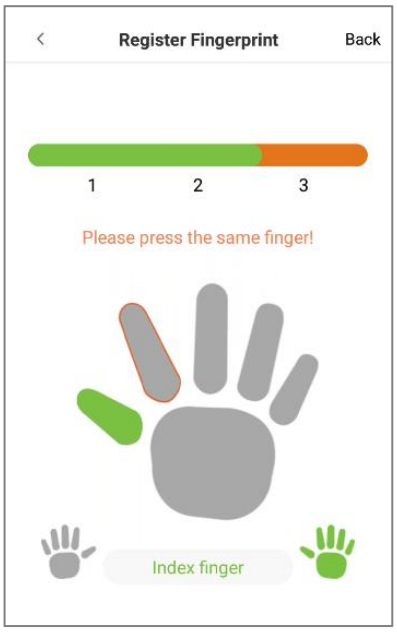
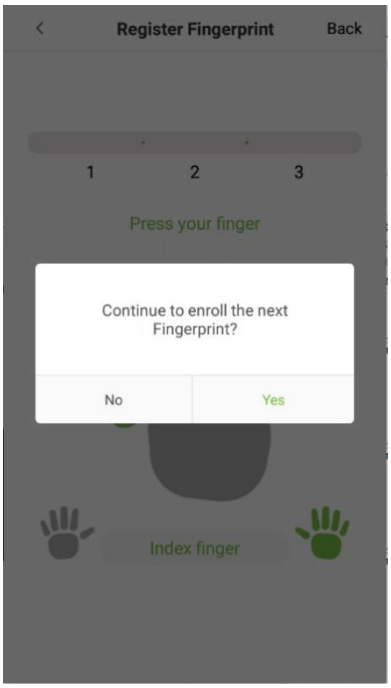
- After the selecting the required finger, press the same finger on the fingerprint reader three times.
- Green indicates that the fingerprint is enrolled successfully.

Note: If you tap different fingers onto the fingerprint scanner during the 2nd and 3rd time, the user will be prompted to "**Please use the same finger**" as shown in the below image.



- If the fingerprint is successfully registered, **"Continue to enroll the next Fingerprint?"** dialog box will appear.
- Tap **Yes** to record the next fingerprint, or **No** to return to the fingerprint registration interface.



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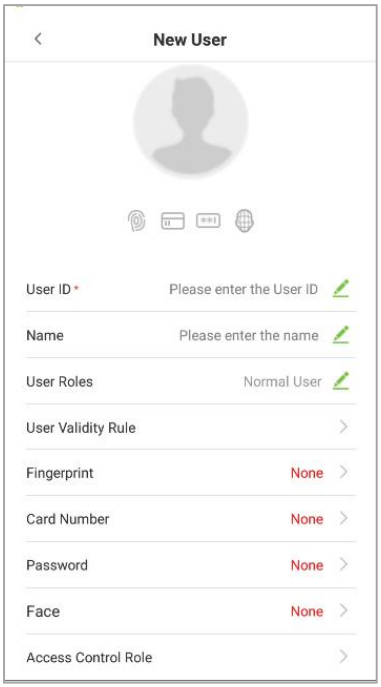
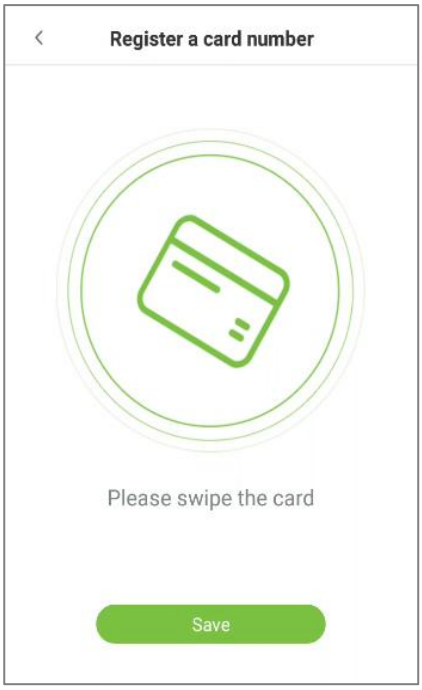
Register Card Number

- On the **New User** interface, tap **Card Number** to enter the card number registration page.
- On the **Register a card number** interface, swipe the card to register.
- If the card number is read successfully, will display the card number, tap **Save** to update the card details.





Register Password

- On the **New User** interface, tap **Password** to register password.
- On the **Enter the password** field enter the password, then on the **Confirm password** field re-enter the same password.
- Tap **Confirm**.

Note: The user password must be 6-8 digit number.

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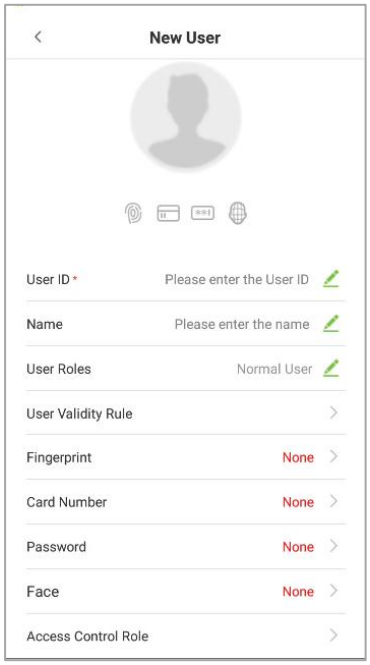
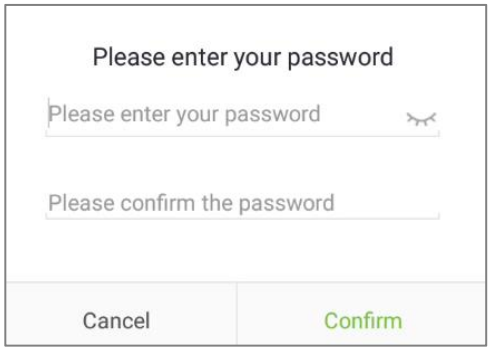
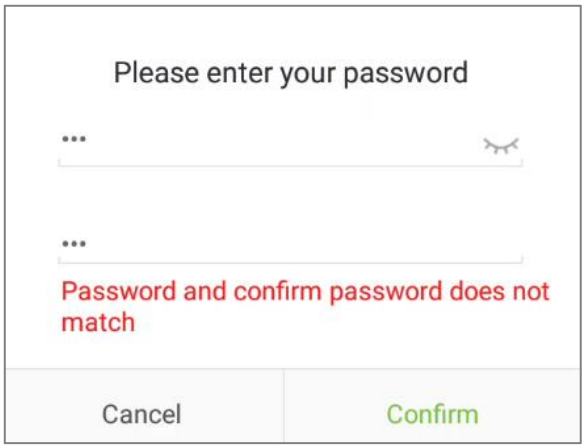




Function	Description
	Tap on this button to hide the password.
	Tap on this button to make the password visible.

- If the password, entered in both fields does not match, then re-enter the correct password.



- The password which has been registered can be deleted or modified.

Delete/Overwrite Registered Password

- On the **User management** interface, tap on the required username from the user list to delete or modify the password.

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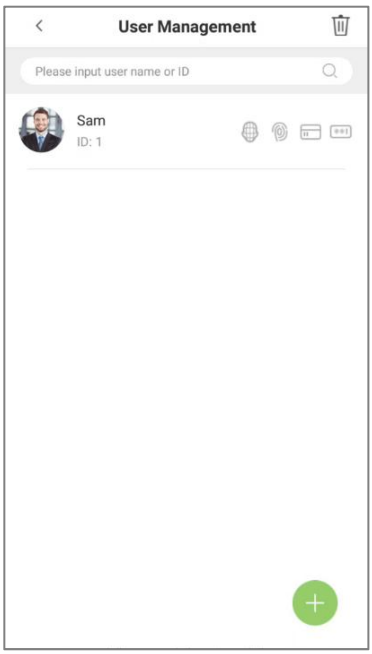
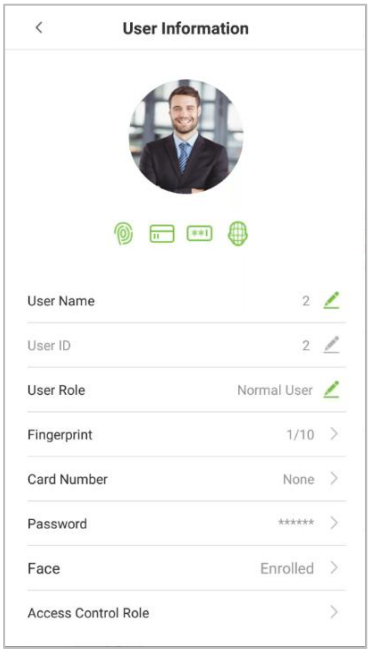
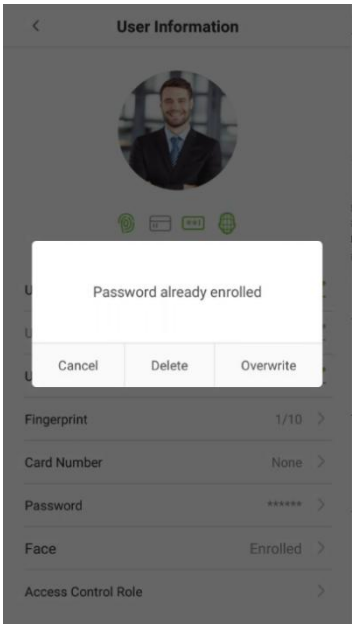
- On the **User information** interface, tap **[Password]** to delete or modify.





- On the pop window, tap **Delete/ Overwrite** to delete or modify the password.



Register Face

- On the **New User** interface, tap **Face** to enter the face registration page.
- On the **Face Register** interface, move and adjust your face on the registration area.

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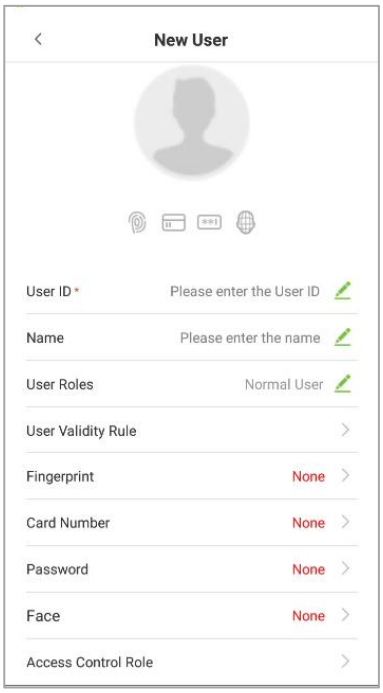

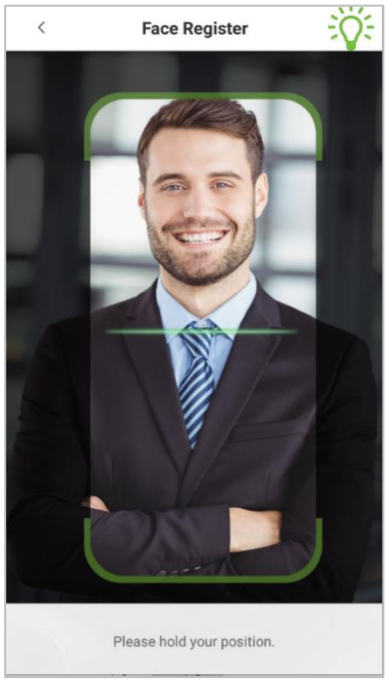

Period of Validity Settings

This function sets the validity period for an employee's verification process for attendance. So once this validity period has set, the Employee will be able to verify attendance only during this set time. And if the Employee authenticates attendance before or after the defined time, the attendance will be invalid.

The attendance verification is valid between the defined starting and ending time-period of the set number of days; this offers precision up to specific days. The validity period of a day is from 00:00 to 23:59; once this validity period expires, the employee's verification for attendance will be invalid.

- On the **''User Information''** interface, tap **[User Validity Rule]** to set the validity period.

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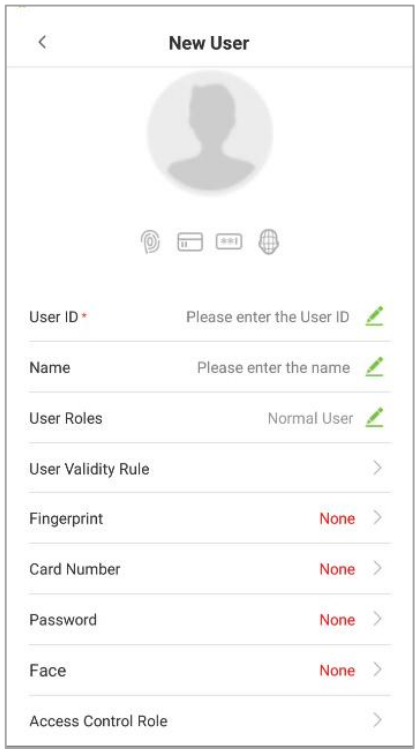

Note:

If the function **User Validity Rule** is not displayed on the **New User** interface, then on the **Main** menu, tap **System Settings** > **Access Control Record Settings**, and enable **User Validity Settings**, and then the function **"User Validity Rule"** will appear in the **User** interface.

- On the **User Validity** Rule, set the user validity rule by configuring the required date and time.

Access level

- The Access Control Role sets the door access privilege for each user.
- This includes the access group, fingerprint privilege and also facilitates to set the group access time-period.
- On the **New User** interface, tap **User Access Control Role** to set the access level.

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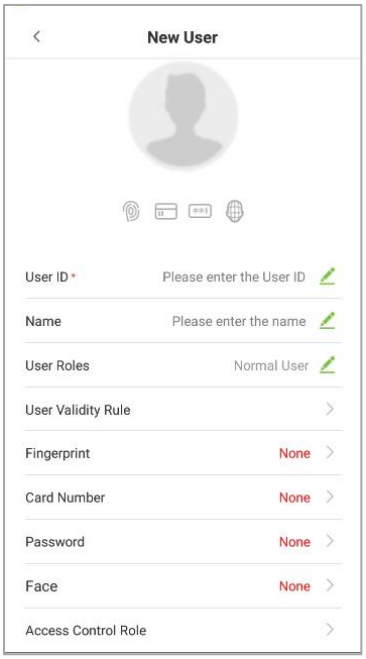
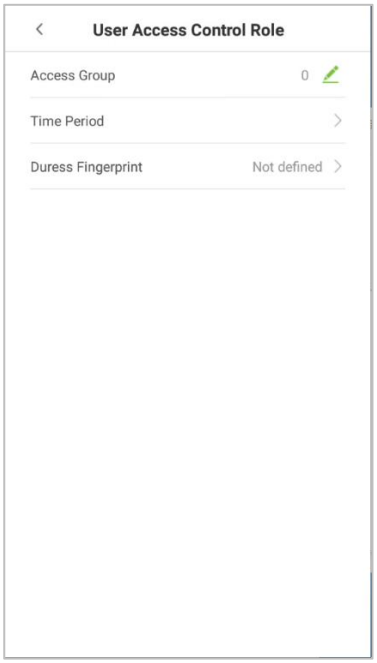
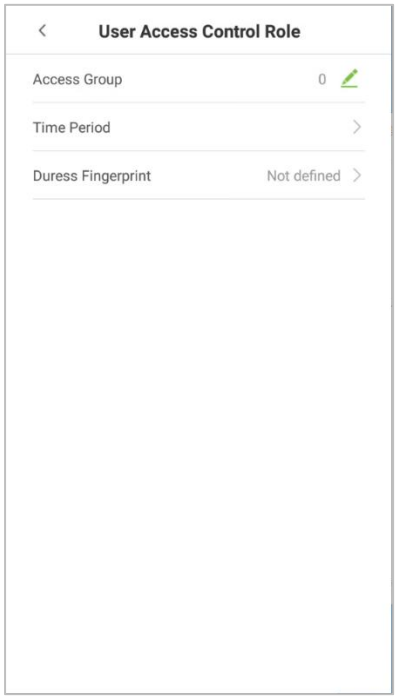
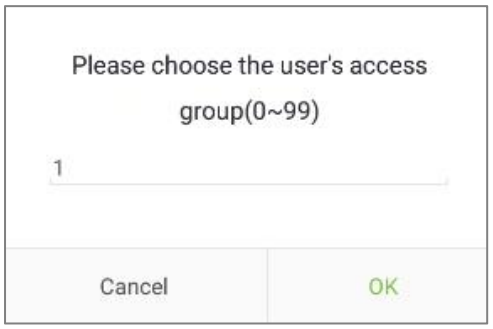




Set the Access group

- On the **User Access Control Role,** tap on **Access Group** to assign the registered users to different groups for better management.





- New users will be added to Group 0 by default, which can be reassigned to other required groups.
- The device supports up to 99 access control groups.

Set the Time period

- Tap **Time Period** to set the time of access for the user.

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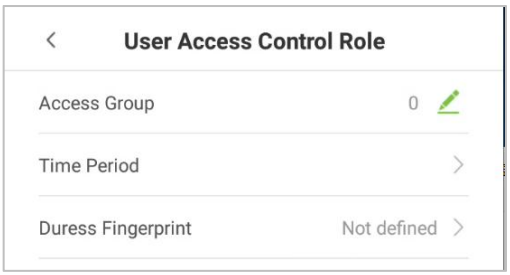
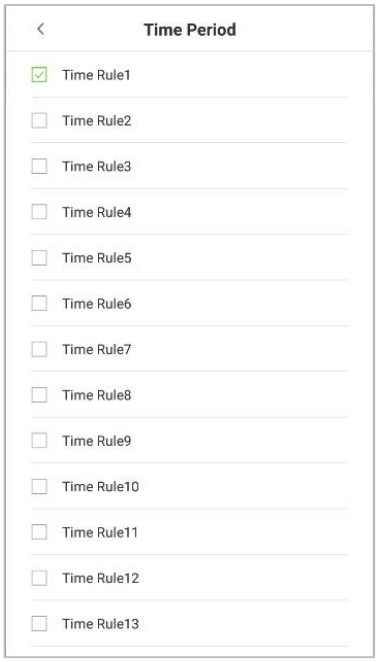
- By default, users follow the defined settings of their groups.
- If the time-period is not applied, the access time of the specific user should be set.
- Such configuration will not affect the time settings of other group members.



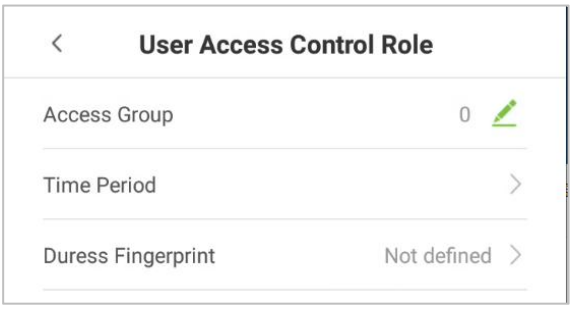


Note: A total of 50 time-rules can be set, default Time Rule 1.

Duress fingerprint★

The user may specify one or more fingerprints to register as duress fingerprint(s). Hence, once the user presses the corresponding finger on the sensor, and if the verification is successful, then the system will immediately generate the alarm.

- On the **User Access Control Role**, tap **Duress Fingerprint** to set the duress access.



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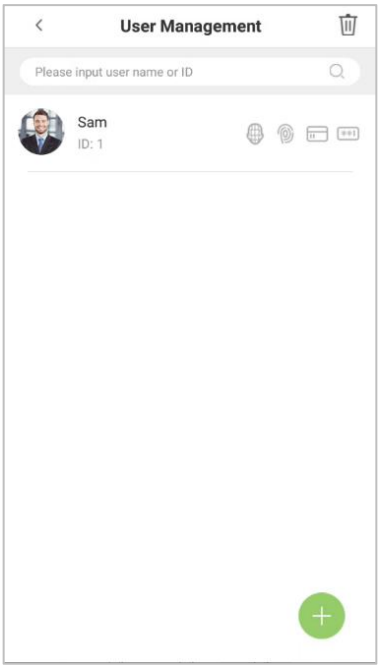
4.2 Search User

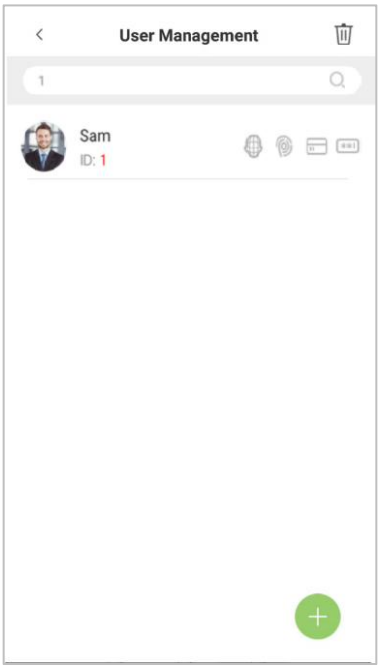
Search User function facilitates to search for the required user from the list.

- Tap on the search bar located on the [**User Management**] interface and search for the required username.

Note: The required users can be searched based on their IDs, username, surname, or full name.



- Tap on the **Search** bar to search for the users with the relevant user ID/name and the system will automatically find the users with information that is relevant to the search query.



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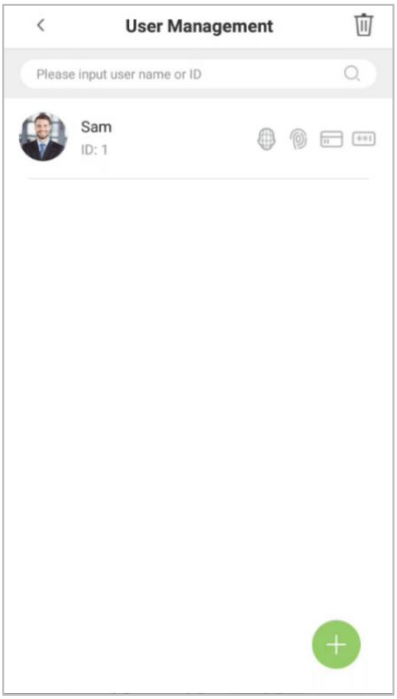
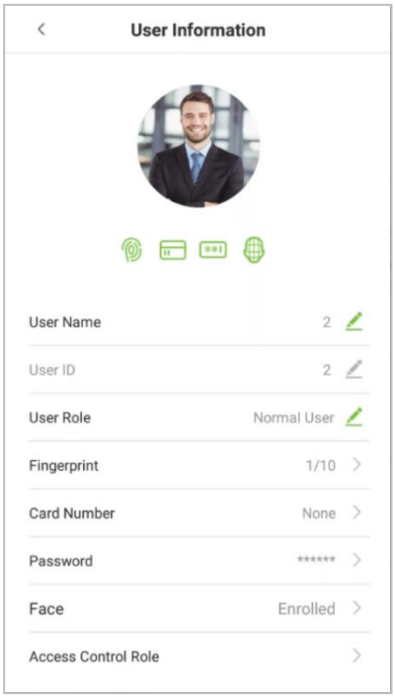
4.3Edit User

- On the **User Management** interface, tap on the required user from the list to edit.
- On the **User Information** interface, tap on the corresponding **Edit** button to edit the required user information.





Note: Please notice that the user ID cannot be modified, and other operations are similar to adding a new user. For further information, please see section "**Add User**".

4.4Delete User

- On the "**User Management**" interface, select the required user to delete and tap on the **Delete** button to delete.
- On the **pop-up** window, tap **OK** to confirm the deletion.

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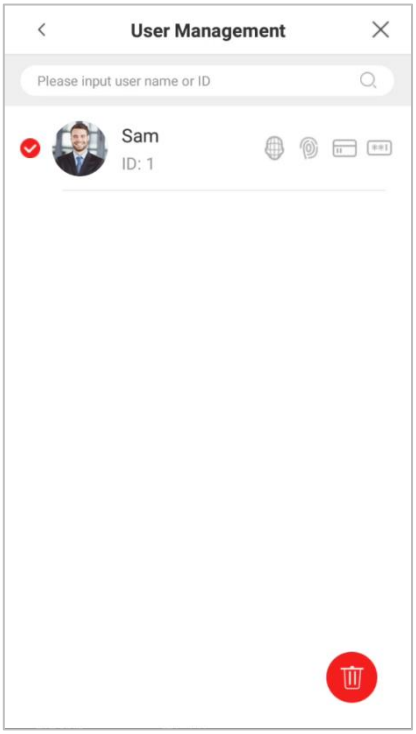

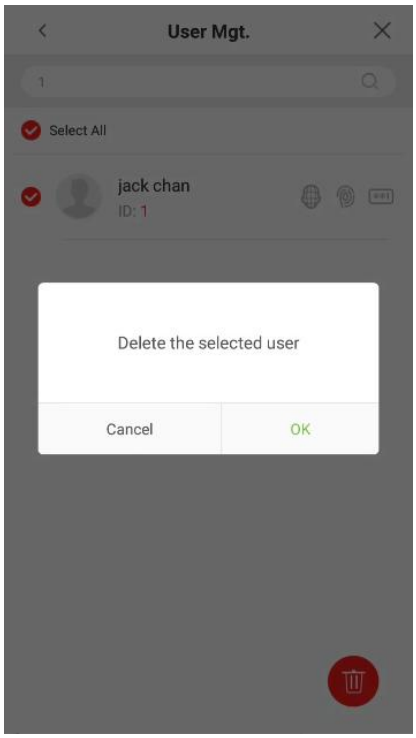

Note: If you are deleting the selected user, all user's related information will be cleared.

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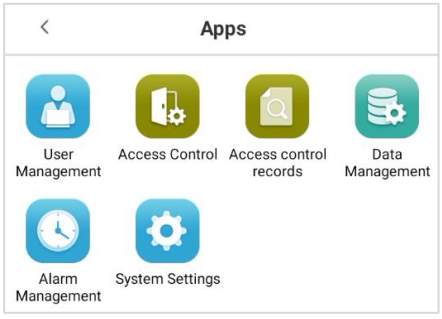
5 Access Settings

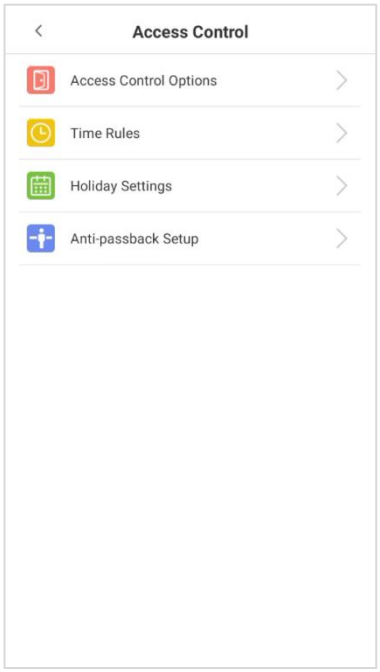
The **Access Settings** facilitates to set the access parameters.

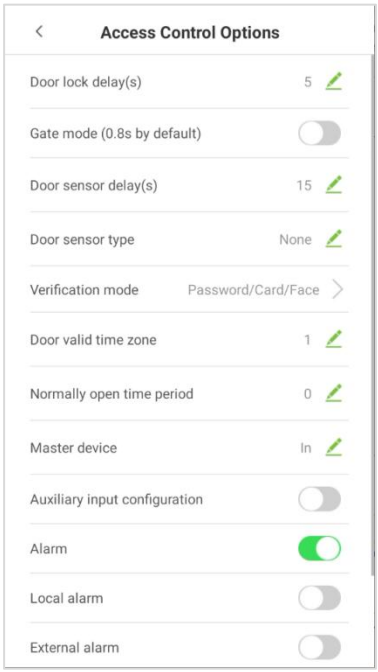
5.1 Access Control Options

Access Control Options are used for setting the access parameters.

- On the **Main** menu, tap **[Access Control].**







- The **Access control** options includes the following functions.

Menu Options	Function Description
Door Lock Delay	The length of time that the device controls the electric lock to be in unlock state. Valid value: 1~254 seconds.
Gate Mode	Toggle between ON or OFF switch to get into gate mode or not. When set to ON, on this interface will disable Door lock delay.
Door Sensor Delay	If the alarm is enabled and the status of the door status sensor is not restored within the specified time, the alarm is triggered. Valid value: 1~500 seconds.

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Door Sensor Type	There are three Sensor types: Close, Normally Open and Normally Closed. Close: It means door sensor is not in use. Normally Open: It means the door is always left opened when electric power is on. Normally Closed: It means the door is always left closed when electric power is on.
Verification Mode	The supported verification mode includes: fingerprint/password/face/card, fingerprint, user ID , password, face ,card, fingerprint/password, fingerprint/card, password/card, user ID+fingerprint, fingerprint+password, fingerprint+card, fingerprint+password+card, password + card, fingerprint + user ID + password, face + fingerprint, face+password, face + card, face + fingerprint + card, and face+fingerprint + password. The default is fingerprint/password/face/card. NOTE: Fingerprint authentication is optional function.
Door Valid Time Zone	To set time period for door, so that the door is available only during that period.
Normally Open Time Period	Scheduled time period for "Normally Open" mode, so that the door is always left open during this period.
Master Device	When setting up the master and slave, the status of the master can be set to exit or enter. Exit: The record verified on the host is the exit record. Enter: The record verified on the host is the entry record.
Auxiliary Input Configuration	Sets the door unlock time period and auxiliary output type of the auxiliary terminal device. Auxiliary output types include None, Trigger door open, Trigger Alarm, Trigger door open and Alarm.
Alarm	Turn on the alarm to set Local alarm and External alarm. Turn off the alarm to disable both.
Local Alarm	When the alarm is triggered, the device will emit an alarm sound.
External Alarm	Need connect external alarm device, when the alarm is triggered, the external alarm device will alarm.
Reset Access Settings	The access control reset parameters include door lock delay, door sensor delay, door sensor type, verification mode, door valid time zone, normally open time zone, master device, and alarm. However, erased access control data in Data Mgt. is excluded.
Multi-User Verify Time	Time required for multi-user verification.

5.2Time Rules Settings

- On the **Access Control** interface, need to connect software, issue **Time Rules**.
- The entire system can define up to **50** Time Rules (the default Time is Rule1, Time Rule1 cannot be modified).

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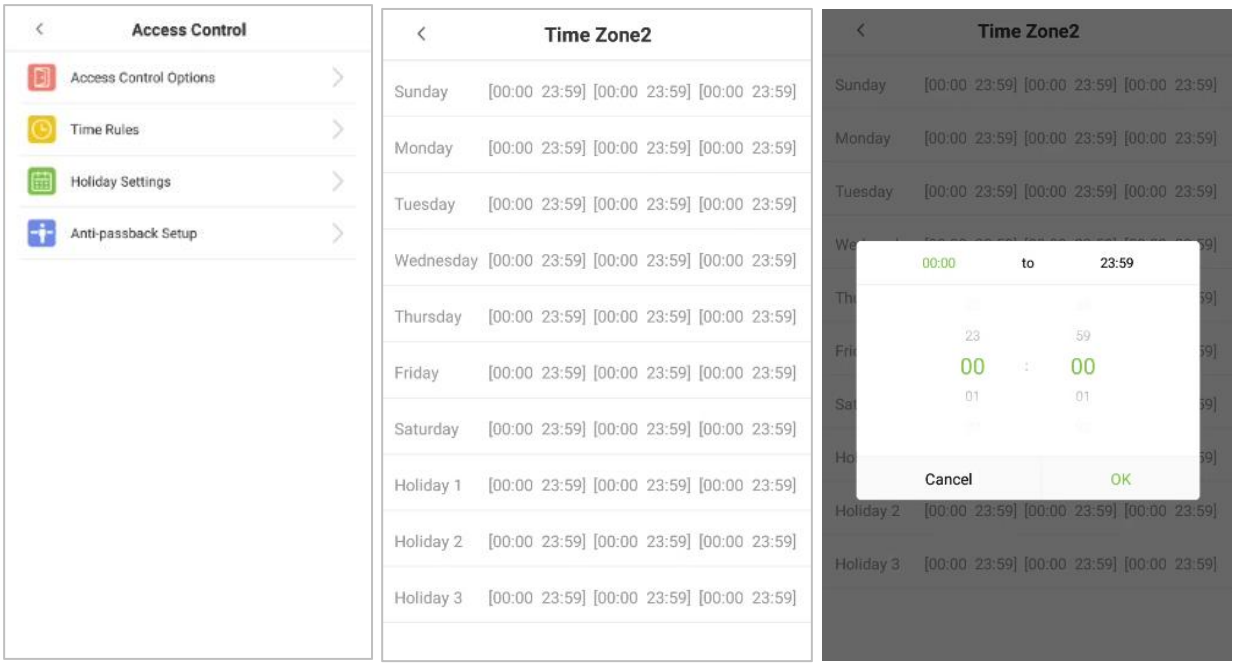
- Each Time Rule represents **7** Time Zones, i.e. **1** week and 3 holidays, and each Time Zone is a standard 24-hour period per day and the user can only verify within the valid time period.
- For each Time Zone you can set a maximum of **3** Time Periods. The relationship among these Time Periods is "or".
- When the Verification Time falls in any one of these Time Periods, the verification will be successful and valid.
- Time Zone format for each Time Period: HH MM-HH MM, accurate to minutes by 24-hour clock.
- Tap on the grey box to search for the required **Time Rule**. Enter the required Time Rule id (that is, search as 2-50).
- On the **Time Zone** interface, tap on the day (that is Sunday, Monday …) in which the Time Period needs to be set.
- On the **Time Period 1** interface, set the Start and End time, and then tap **OK**.



Note:

- When the End Time is later than the Start Time, (such as 00:00~23:59), it indicates that the interval is valid.
- The effective Time Period to keep the Door unlock or open all day is (00:00~23:59) and also when the End Time is later than the Start Time, (such as 08:00~23:59).
- The default Time Zone 1 indicates that door is open all day long and it cannot be edited.

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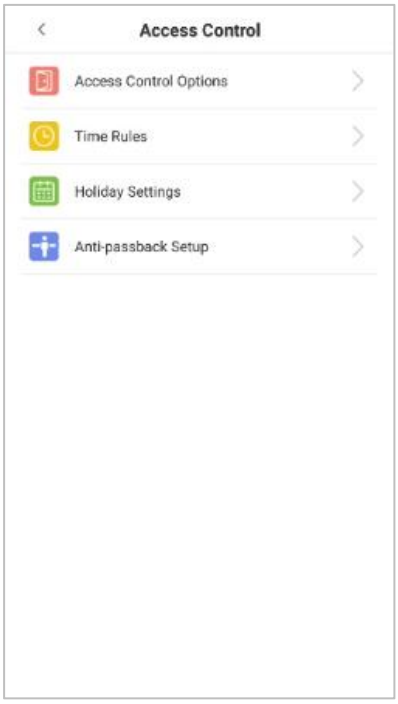
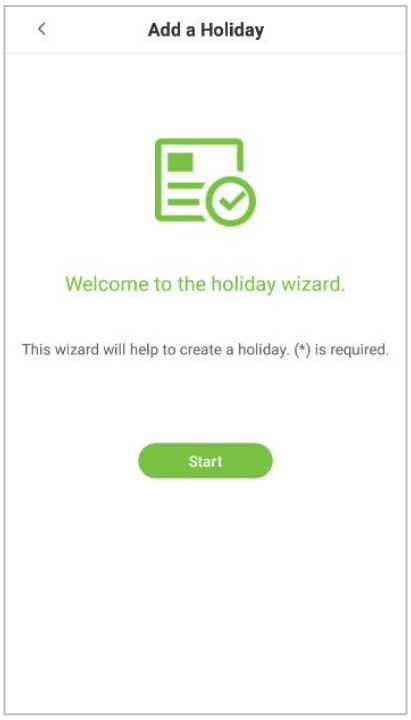
5.3 Holiday Settings

Whenever there is a holiday, you may need a special access time; but changing everyone's access time one by one is extremely cumbersome, so you can set a holiday access time which is applicable to all users, and the user will be able to open the door during the holidays. The time set here is taken as the standard.

- Tap **[Holiday setting]** and then tap on the button to create a new holiday.





- On the **[Holiday setting]** interface, select a date and type of the holiday. Enable [Repeat] to repeat the holiday yearly and then tap [**Next].**
- On this interface, tap either **Finish** to successfully add the newly created holiday, or tap **Continue** to create another holiday.

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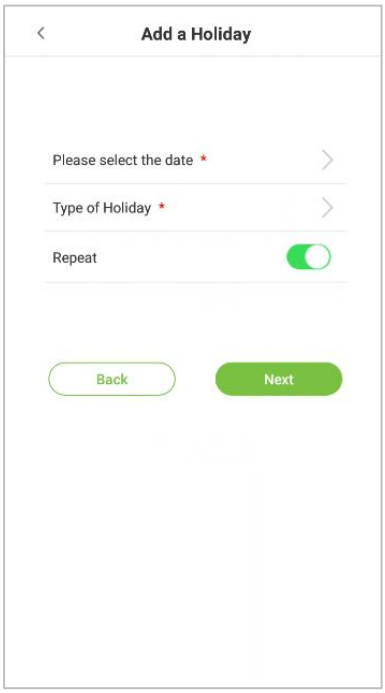

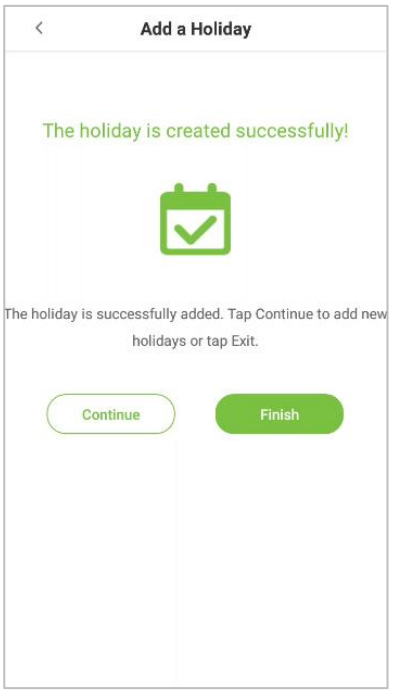

Edit Holiday

- On the "**Holiday period**" interface, tap on the required holiday to modify.

Delete a Holiday

- On the "**Holiday period"** interface, tap on the button to delete the holiday.

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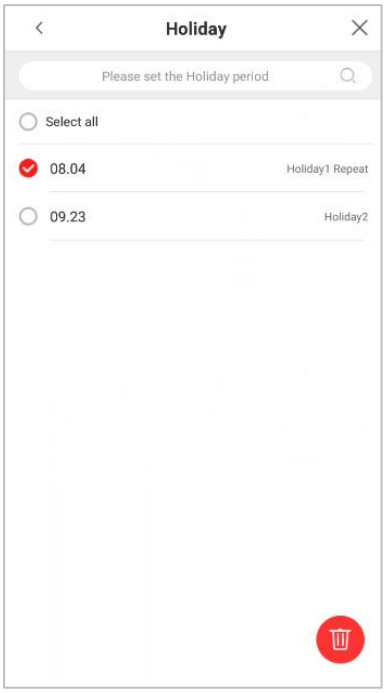
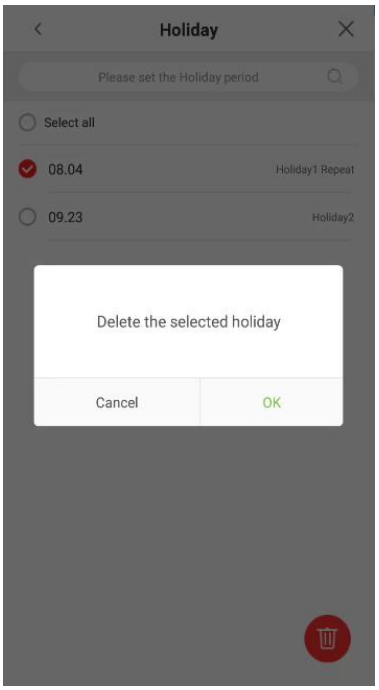
- Select the holiday which you would like to delete, tap on the button in the lower right corner.
- On the pop-up window, tap **OK** to confirm deletion.





5.4 Anti-passback Setup

Anti-passback is a directional-control method used to control the misuse of an access control system. This feature involves a specific sequence where the access control devices must be mounted both inside and outside the door for access.

So, if any personnel enter an access-controlled area following another person without authenticating on the biometric device, then the next time during his out-time, the door does not open when that person attempts to leave the area. This function uses to detect whether the user's access is legal by determining the user's last access record and the local control direction, which can effectively prevent tailgating.

The Anti-passback setup can be divided into four types:

- **No Anti-passback:**If the primary and secondary devices do not need to be configured, you can select No Anti-passback.
- **Anti-passback Out:** After a user checks out, only if the last record is a check-in record, the user can check-out again; otherwise, the alarm will be triggered. However, the user can check-in freely.

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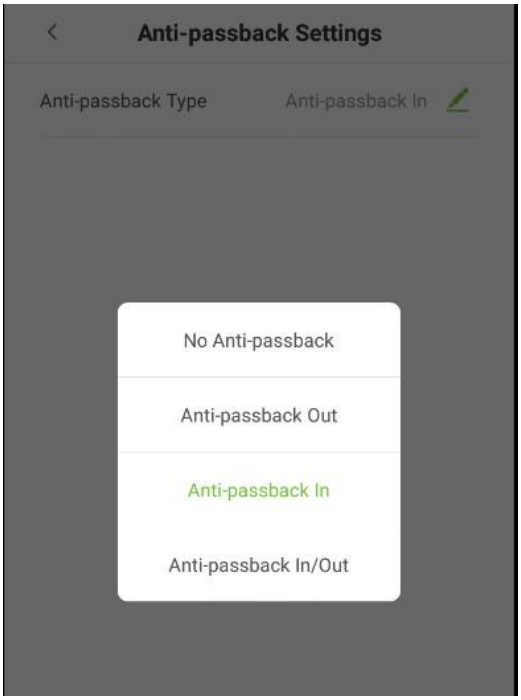
- **Anti-passback In:** After a user check in, only if the last record is a check-out record, the user can check-in again; otherwise, the alarm will be triggered. However, the user can check-out freely.
- **Anti-passback In/Out:** After a user checks in/out, only if the last record is a check-out record, the user can check-in again; or if it is a check-in record, the user can check-out again; otherwise, the alarm will be triggered.

Note: When the user has no record during the first verification, the anti-passback approval is passed directly. This access direction depends on the selection of the control direction of the device, corresponding to the state of the device.

- The interface is shown below:



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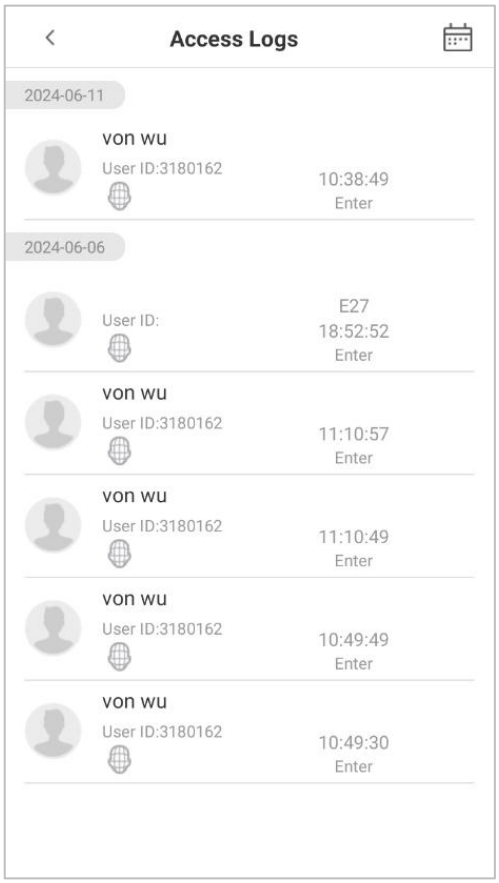
6 Access Control Records

- User access records will be saved in the device, making it easier to find the required attendance records of the users.



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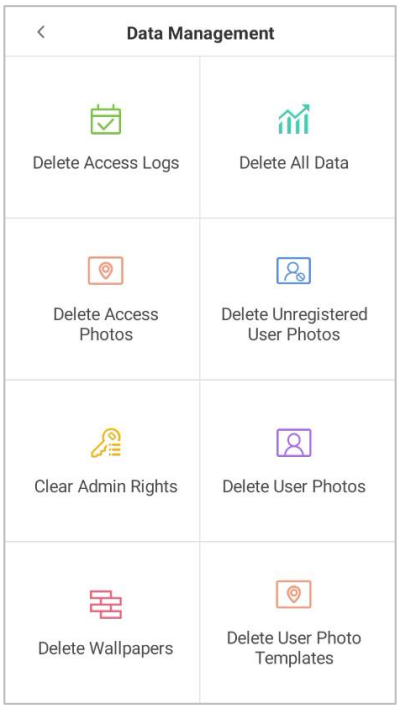
7 Data Management

The Data Management Settings allows the users to manage the device data, including Delete Access Logs, Delete All Data, Delete Access Photos, Delete Unregistered User Photos, Clear Admin Rights, Delete User Photos, Delete Wallpapers and Delete User Photo Templates.

- On the **Main** menu, tap on **Data Management** to manage the data**.**



Function Description

Function Name	Function Description
Delete Access Logs	1. Deletes all the logs. 2. Deletes the access logs within a specified time range.
Delete All Data	Deletes the business data stored in the device, including access logs, password/ facial biometric data, privileges of the super admin, user photos, user data, and access control data.
Delete Access Photos	1. Deletes all the logs 2. Deletes invalid user accounts 3. Deletes the access photos within a specified time range.
Delete Unregistered User Photos	1. Deletes all (including access records and the photos of the user in blocklist) 2. Deletes the unregistered user photo within specified time range.

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Clear Admin Rights	Changes the super administrator into a normal user.
Delete User Photos	Deletes all the user photos.
Delete Wallpapers	Deletes all the wallpapers stored in the device.
Delete User Photo Templates	Delete all users' template photos.

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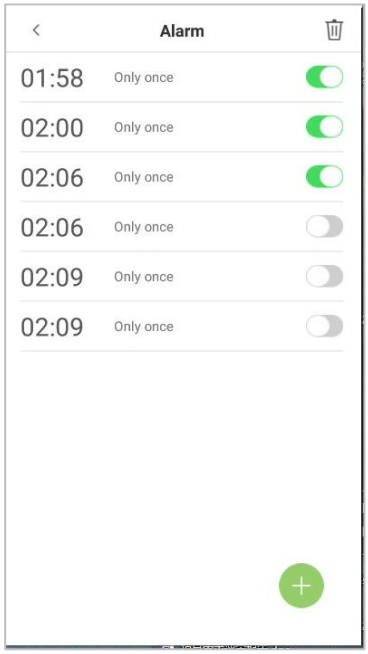
8 Alarm Management

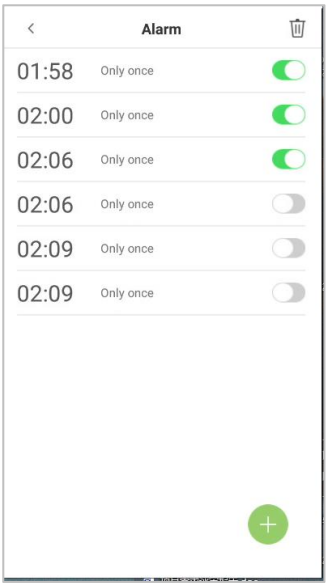
Once an alarm has been set, the device will automatically play the preselected alarm tone when the set alarm time is reached. It will stop ringing once the set time is elapsed.

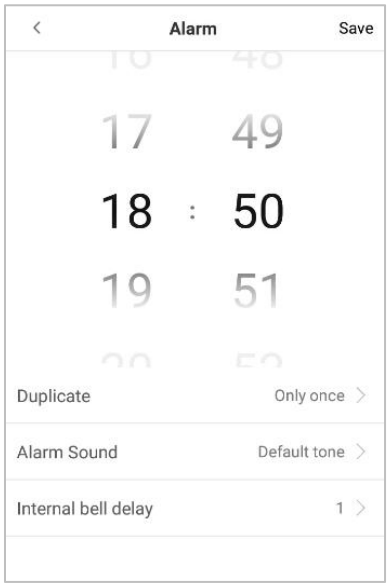
- On the **Main** menu, tap **Alarm Management** to configure the alarm settings.



8.1 Add Alarm

- On the **Alarm** interface, tap on the button to set the alarm, and then tap **"Save"** to save and update**.**





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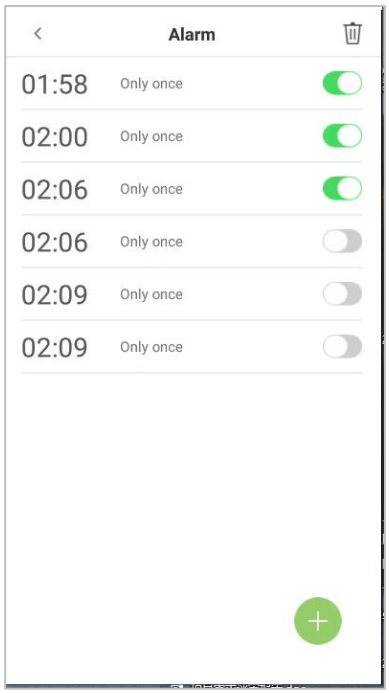
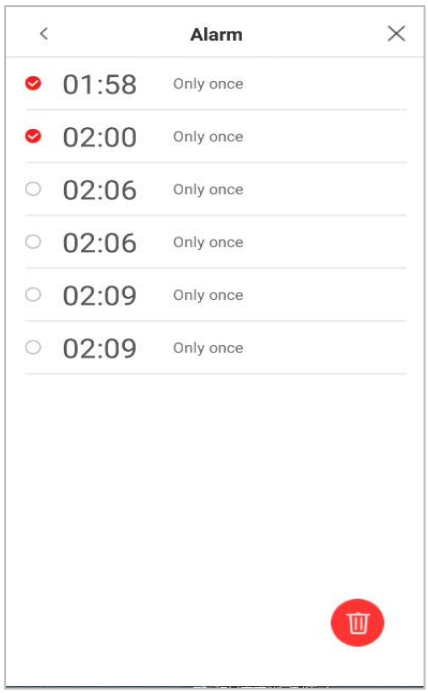
Menu Options	Function Description
Duplicate	Set the required number of counts to repeat the scheduled bell.
Alarm Sound	Select a ring tone.
Internal bell delay(s)	Set the replay time of the internal bell. Valid values range from 1 to 999 seconds.

8.2 Delete Alarm

- On the **"Alarm"** interface, tap on the delete button, then select the required alarm clock to delete.
- And then click the button that is displaying in the lower-right corner of the screen.





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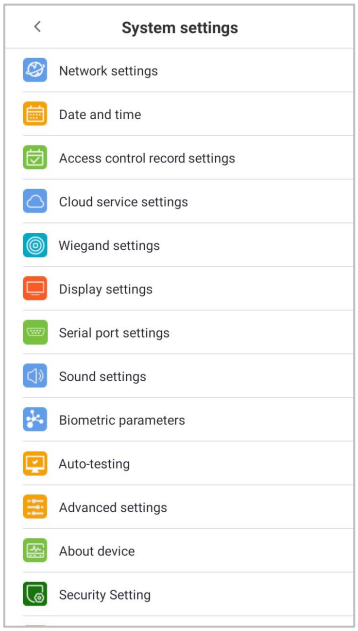
9 System Settings

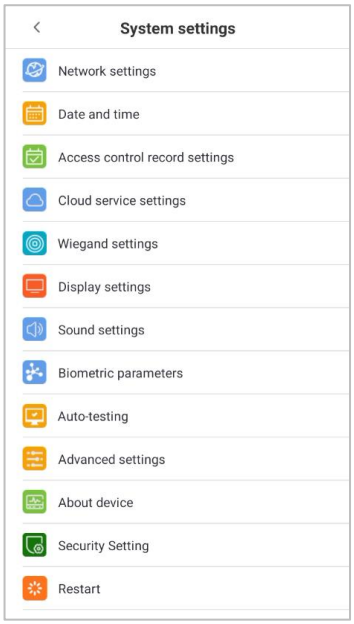
System Settings are used for setting system parameters to maximize the device's ability as per the user requirements. In this interface, user can edit network settings, access control record settings, Cloud service settings, Wiegand settings etc.

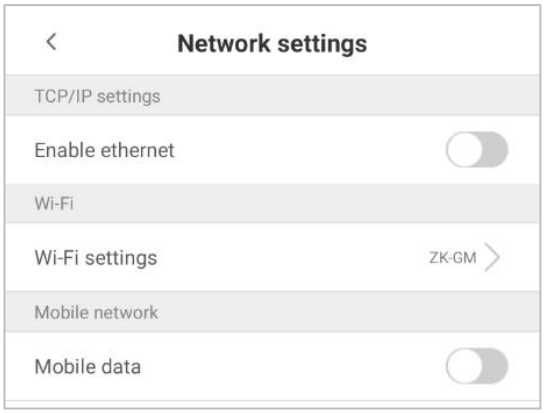
- On the **Main** menu, tap **[System Settings]** to configure the device settings.



9.1 Network Settings

- On the **System Settings** interface, tap **[Network Settings]** to configure the settings





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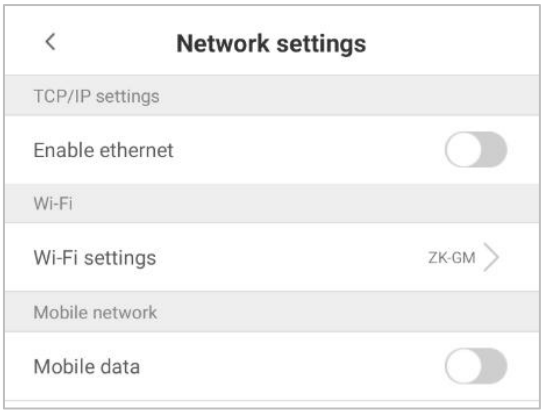
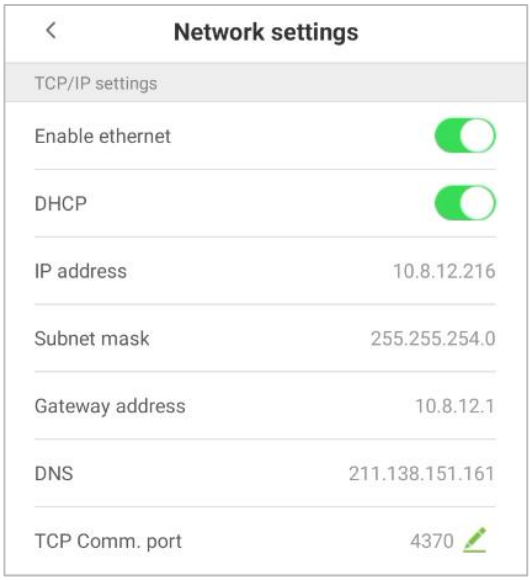
9.1.1 Ethernet Settings

When the device communicates with a PC via Ethernet, the network must be set up to make the device and the computer in the same network segment. When the device is not connected to the network, tap **[Enable ethernet]** on the "**Network Settings"** interface. The following screen will display:





Function Descriptions

Menu Options	Function Description
Enable Ethernet	Enable to modify the Ethernet network address parameters. If this is not enabled, users cannot modify the Ethernet network address parameters.
DHCP	Enable DHCP to assign an IP address to the internal network or network service provider. If DHCP is on, you cannot manually set the IP of the device.
IP Address	The default IP is 0.0.0.0 (can be changed).
Subnet Mask	The default IP is 0.0.0.0 (can be changed).
Gateway Address	The default IP is 0.0.0.0 (can be changed).
DNS	The default IP is 0.0.0.0 (can be changed).
TCP Comm. Port	The default TCP port is 4370 (can be changed).
Note: When the device is not connected to the network, the parameters such as IP address and subnet mask are 0.0.0.0; when the device is connected to the network, the parameters such as IP address and subnet mask are automatically displayed as set values.	

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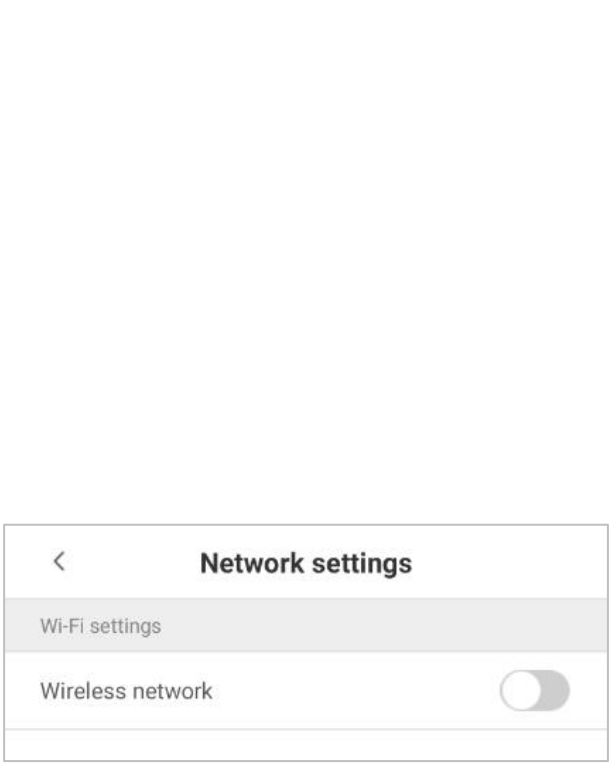
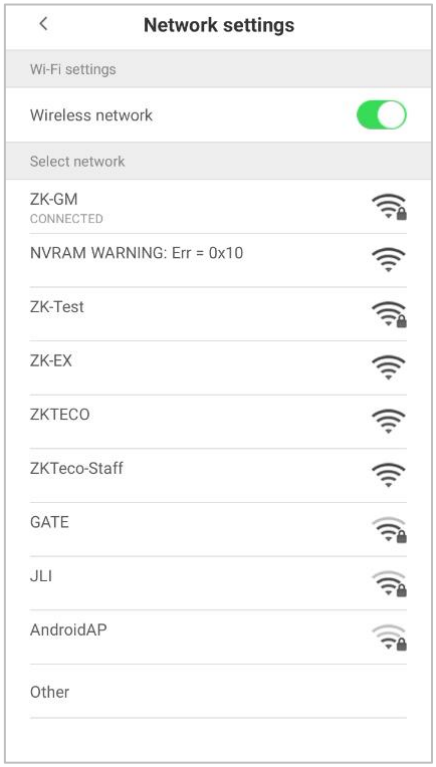
9.1.2 Wi-Fi Settings

When the device communicates with a PC via Wi-Fi, the network must be set up to make the device and the computer in the same network segment. When the device is not connected to the network, tap [**Wi-Fi settings**] on the "**Network Settings**" interface. The following screen will display:





9.1.3 Mobile Network

You can access the network through Mobile data. When the device is not connected to the network, tap [**Mobile Data**] on the "**Network Settings**" interface. The following screen will display:

9.2 Date and Time

9.2.1 Date and Time Settings

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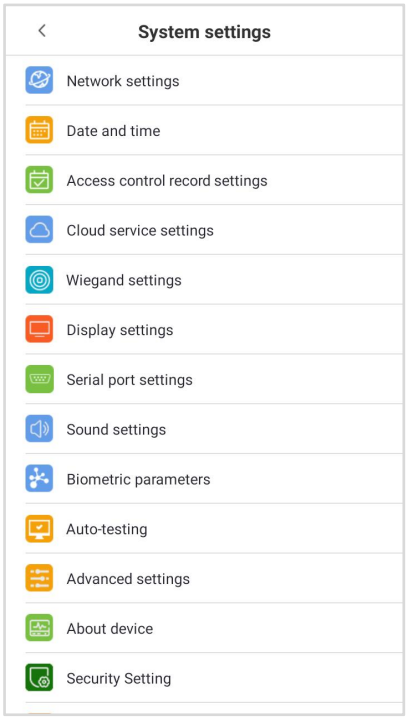
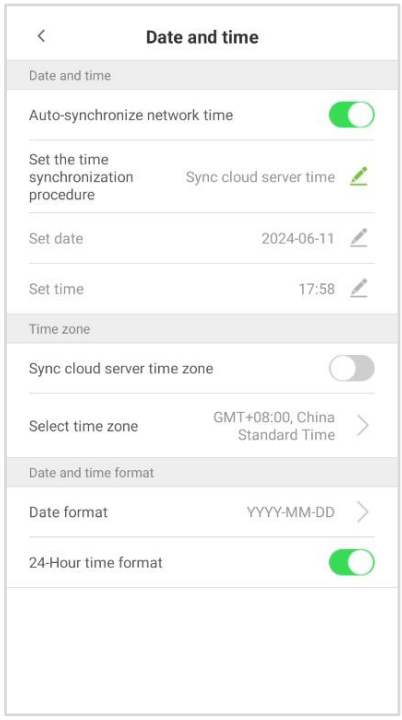
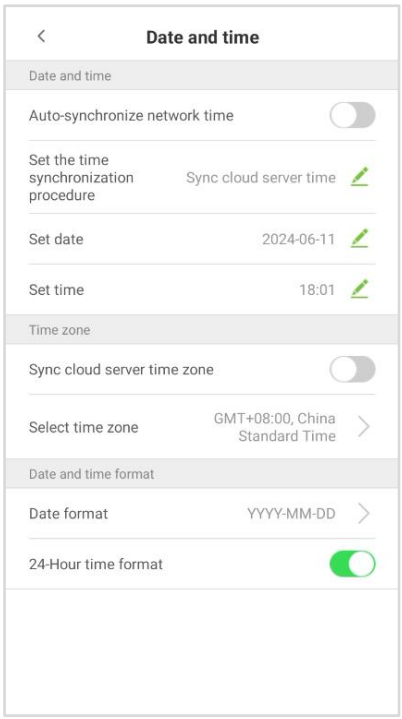
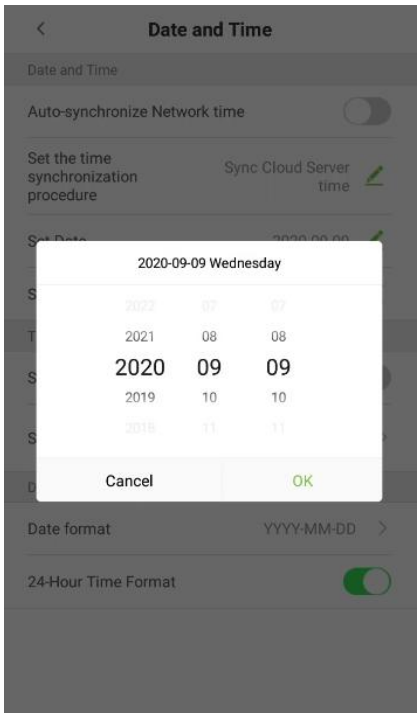
- On the **System Settings** interface, tap [**Date and Time**] to enter the **Date and Time** Settings interface.





- Tap [**Set Date**] and swipe up and down to set the year, month, and day.
- After setting required Date, tap [**OK**]**.**





- Tap [**Set Time**] and swipe up and down to set the hour and minute.

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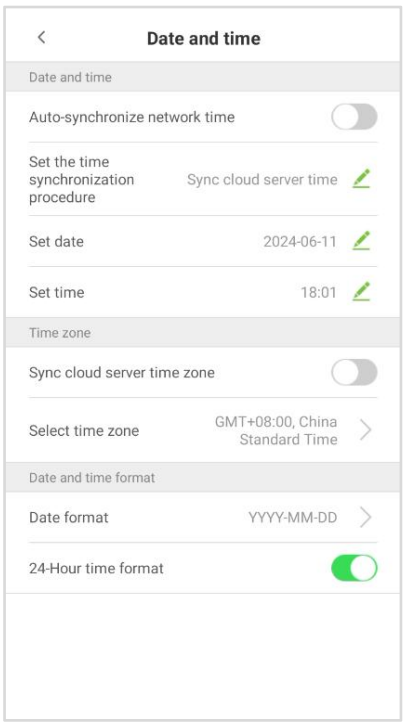
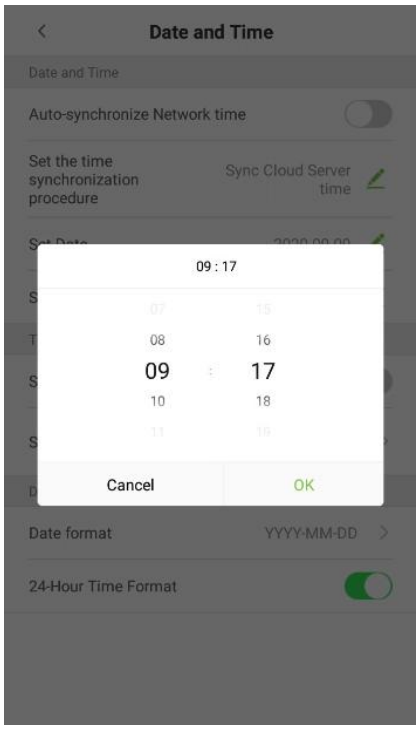
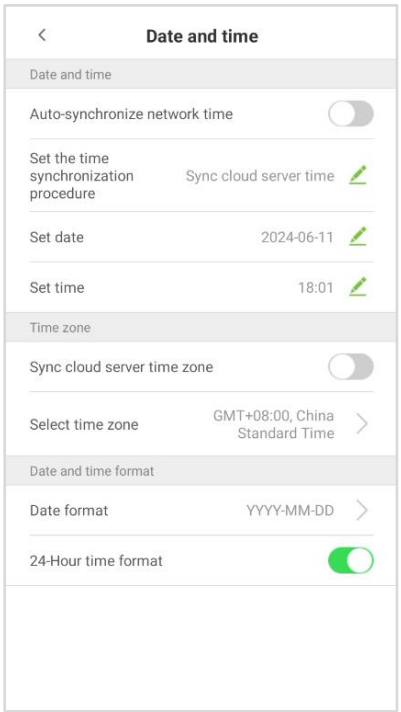
- After setting time, tap [**OK**].

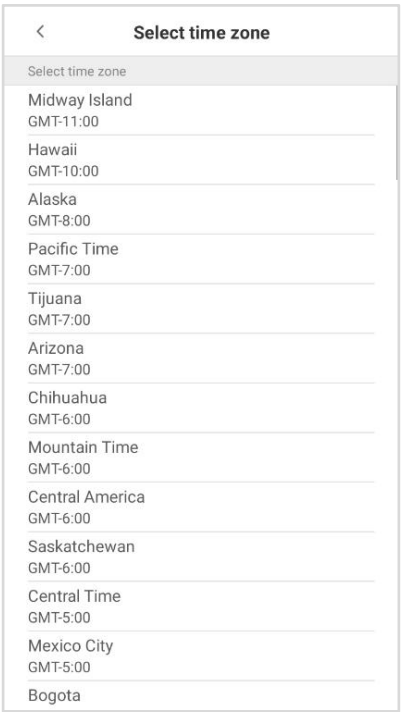




9.2.2 Time Zone Settings

- Tap [**Select time zone**] and swipe up and select a time zone.
- After the selection is complete, tap [**OK**].





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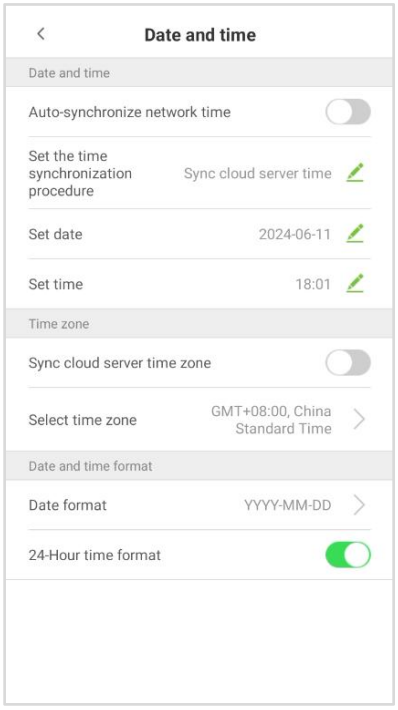
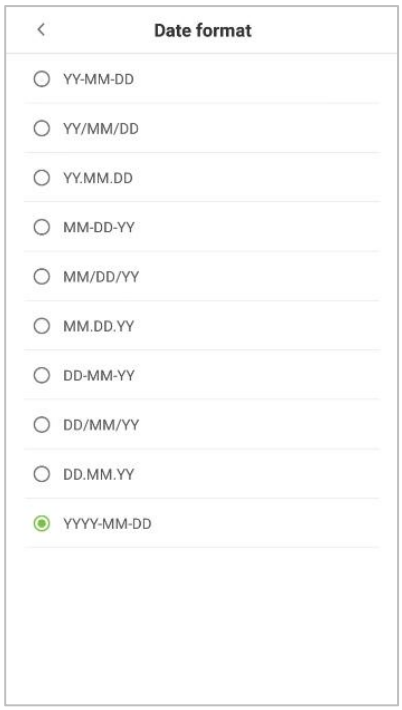
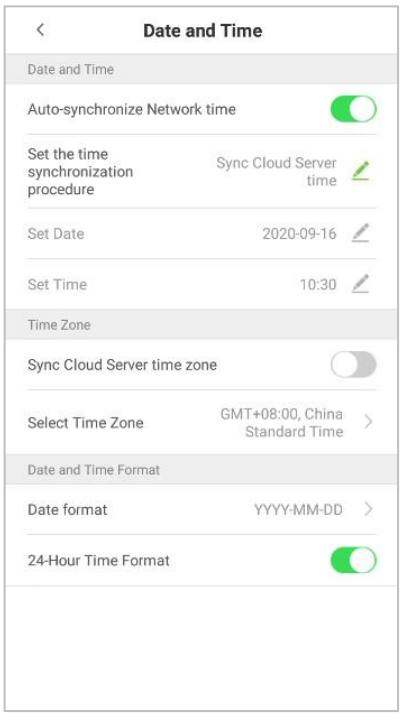
9.2.3 Date and Time Format Settings

- On **Date and Time** interface, tap [**Date format**].
- On **Date Format** interface, select a required date format.





- On Date and Time interface, tap [**24-Hour Time Format**] option to enable this function.



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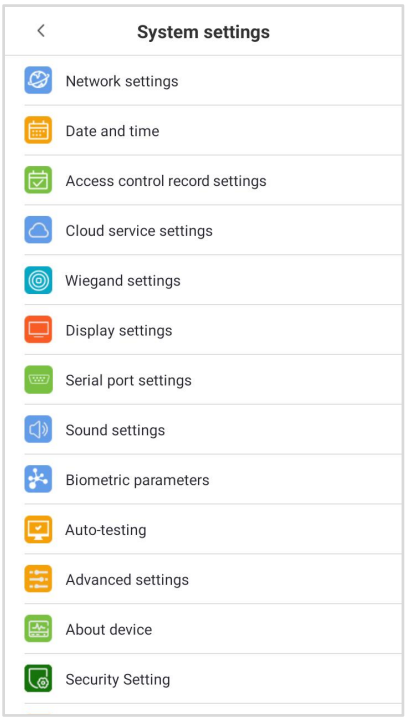
Function Descriptions

Menu Options	Description
Auto-Synchronize Network Time	It is enabled by default. Users can modify the time synchronization source. After disable, users can modify the time synchronization procedure, and set the date and time.
Sync Cloud Server Time	It is used for synchronizing the time between the software and server to which the device is connected.
Sync Network Time	It is used for synchronizing the actual time of the internet.
Sync Cloud Server Time Zone	This option is enabled by default and used for synchronizing the time zone issued by the software.
Select Time Zone	The default time zone is GMT + 8: 00, China Standard Time. Users can select time zone as per their requirements.
Date Format	Change the format of the date display
24-Hour Time Format	After this function is enabled, the switchover time is 24 hours

9.3 Access Control Record Settings

- On the **System Settings** interface, tap on [**Access Control Record Settings**] to enter the access record settings interface.



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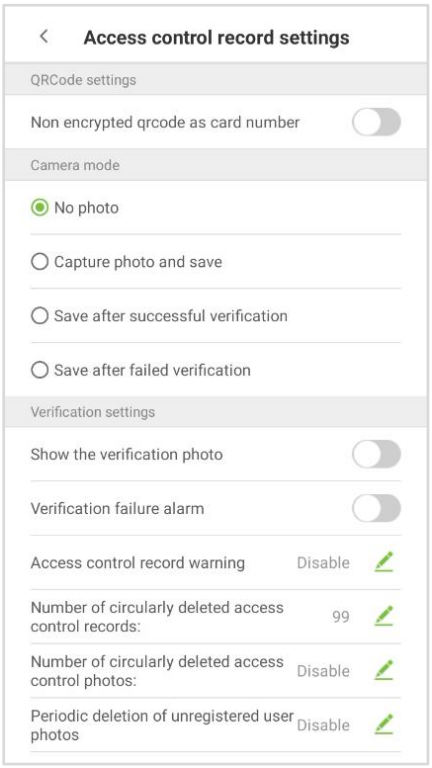
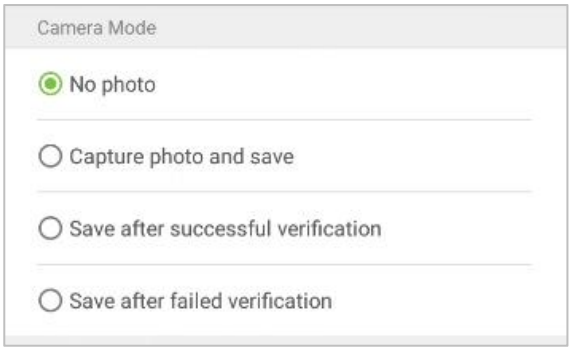
9.3.1 Camera Mode

This function facilitates to set the conditions like whether it is required to save the photos and the attendance records after once the device captures the photo of the personnel.

- Tap on the required **Camera Mode** that you would like to configure:





- On the **Camera Mode** interface, the users can set whether to take photos and save photos during user access verification. The settings are applicable to all users.

Function Descriptions

Function	Description
No photo	If this mode is selected, the device does not take photos during authentication.
Capture photo and save	If this mode is selected, the device takes users' photos and save photos during authentication.
Save after successful verification	If this mode is selected, then when the user passes the verification, the photo is taken, and then photo is saved.
Save after failed verification	If this mode is selected, the device takes a photo when the user fails verification and save it.

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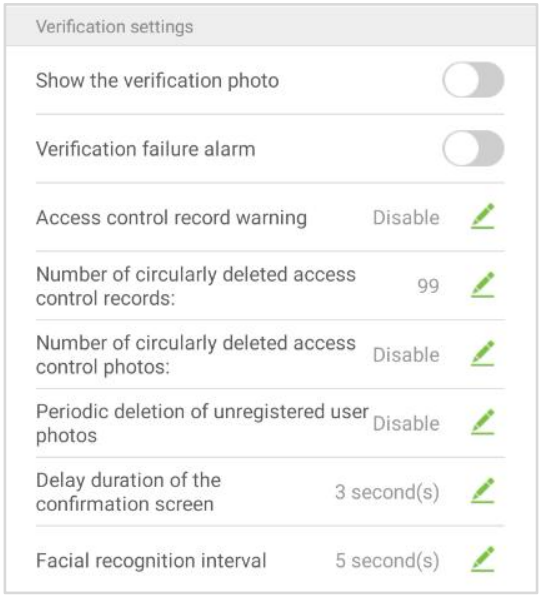
9.3.2 Verification Settings

Verification Settings facilitates configuring the settings for access verification parameters.



Function Descriptions

Menu Options	Function Description
Show the Verification Photo	If it is enabled, the user photo will be displayed; if not, the user photo will not be displayed.
Verification Failure Alarm	The alarm will ring when the verification fails. Verification failure alarm times can be set as 3-100 times and verification failure interval can be set as 8-60s.
Access Control Record Warning	When the remaining access control record space reaches a set value, the device will automatically display a remaining record memory warning. When the value is set as 0, the function is disabled.
Number of Circularly Deleted Access Control Records	When the access record memory has reached full capacity, the device will automatically delete a set value of old access records. When the value is set as 0, the function is disabled.
Number of Circularly Deleted Access Control Photos	When the space storing the access control photos have reached full capacity, the device will automatically delete a set value of old access control photos. When the value is set as 0, the function is disabled.
Periodic Deletion of Unregistered User Photos	When the space storing block listed photos have reached full capacity, the device will automatically delete a set value of old block listed photos. When the value is set as 0, the function is disabled.
Delay Duration of the Confirmation Screen	This is the length of time that a user's information will display on the system's screen after successful verification, can set as 1 to 9 seconds.
Facial Recognition interval	This is the facial template matching time interval that users, can set as 0 to 9 seconds.

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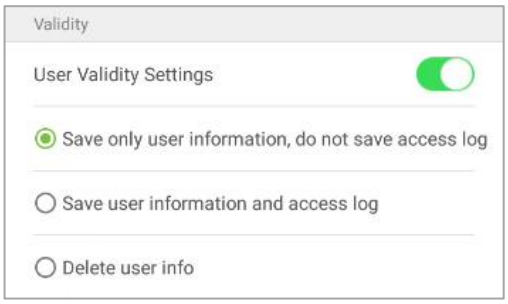
9.3.3 Validity Period of User Information

This is used to determine if user validity periods are enabled or disabled when registering users.

- Tap [**User Validity Settings**] to enable.
- When User Validity Settings is enabled, the following interface will display. Select the setting you would like to configure.



Function Descriptions

Menu Options	Function Description
Save only user information, do not save access log	If the user fails to be verified again after the validity period has expired, the user information is retained, and the attendance record is not saved.
Save user information and access log	If the user the validity period has expired, will save the user information and save the attendance record.
Delete user info	If the user fails to be verified again after the validity period has expired, the user information and the attendance record is all deleted.

Note: This function will not be triggered immediately when the validity period expires. It will be triggered only when the system is verified again and a failure message is displayed.

9.4 Cloud Service Settings

On **System Settings** interface, tap **[Cloud Service Settings]** to enter the **Cloud Service Settings** interface.

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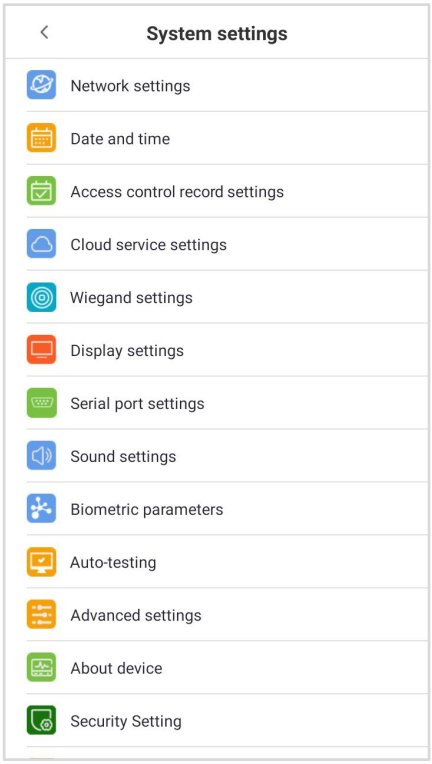

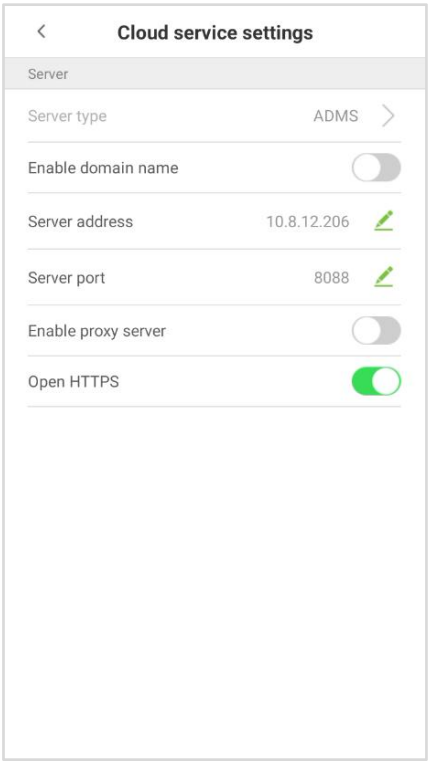

Function Descriptions

Item		Descriptions
Enable Domain Name	Server Address	When this function is enabled, the domain name mode "http://..." will be used, such as http://www.XYZ.com, while "XYZ" denotes the domain name when this mode is turned ON.
Disable Domain Name	Server Address	IP address of the ADMS server.
	Server Port	Port used by the ADMS server.
Enable Proxy Server		When you choose to enable the proxy, you need to set the IP address and port number of the proxy server.
Open HTTPS		If it is enabled, it needs to restart to take effect, and the data is uploaded to the push terminal. The address is changed from HTTP to HTTPS.

9.5 Wiegand Settings

On **System Settings** interface, tap [**Wiegand Settings**] to access the interface as shown below.

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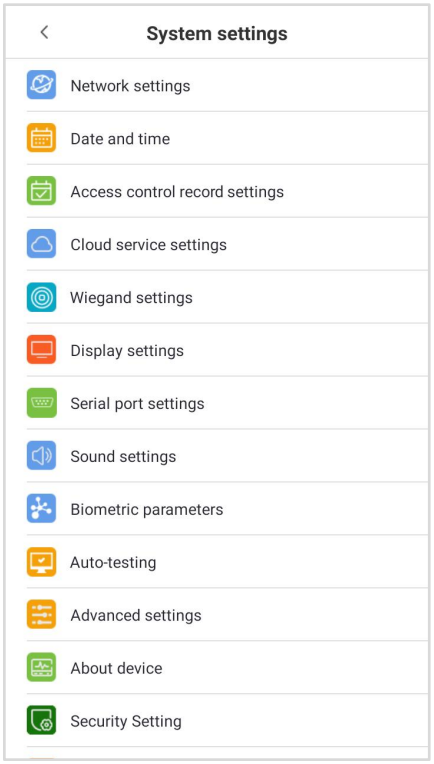

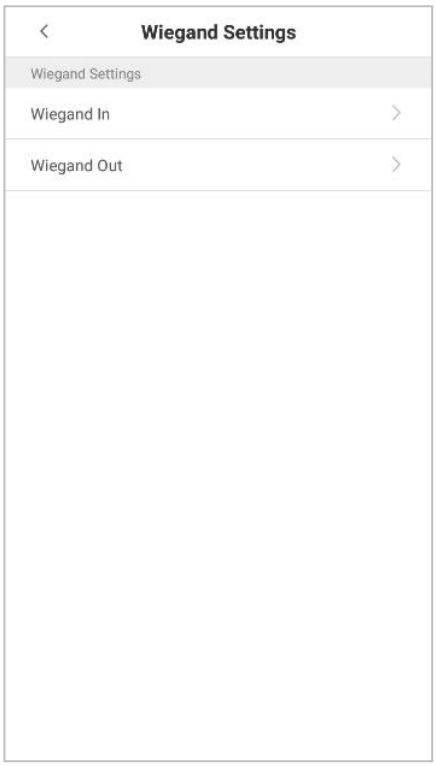

9.5.1 Wiegand In

On **Wiegand Settings** interface, tap [**Wiegand In**] to open the settings.

Function Descriptions

Menu Options	Function Description
Wiegand Format	The Wiegand value could be 26bits, 34bits, 36bits, 37bits, or 50bits.
Wiegand in bits	It displays the number of bits of Wiegand data. After choosing **Wiegand input bits**, the device will use the set number of bits to find the suitable Wiegand format in **Wiegand Format.**
ID Type	The user can input **User ID** or **Card number**.

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Various common Wiegand format definitions:

Wiegand Format	Description
Wiegand26	ECCCCCCCCCCCCCCCCCCCCCCCCO Consists of 26 bits binary code. The 1st bit is the even parity bit of the 2nd to 13th bits, while the 26th bit is the odd parity bit of the 14th to 25th bits. 2nd to 25th bits are the card numbers.
Wiegand26a	ESSSSSSSSCCCCCCCCCCCCCCCCO Consists of 26 bits of binary code. The 1st bit is the even parity bit of the 2nd to 13th bits, while the 26th bit is the odd parity bit of the 14th to 25th bits. 2nd to 9th bits are the site codes, while the 10th to 25th bits are the card numbers.
Wiegand34	ECCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCO Consists of 34 bits of binary code. The 1st bit is the even parity bit of the 2nd to 17th bits, while the 34th bit is the odd parity bit of the 18th to 33rd bits. 2nd to 25th bits are the card numbers.
Wiegand34a	ESSSSSSSSCCCCCCCCCCCCCCCCCCCCCCCCO Consists of 34 bits of binary code. The 1st bit is the even parity bit of the 2nd to 17th bits, while the 34th bit is the odd parity bit of the 18th to 33rd bits. 2nd to 9th bits are the site codes, while the 10th to 25th bits are the card numbers.
Wiegand36	OFFFFFFFFFFFFFFFCCCCCCCCCCCCCCCCMME Consists of 36 bits of binary code. The 1st bit is the odd parity bit of the 2nd to 18th bits, while the 36th bit is the even parity bit of the 19th to 35th bits. 2nd to 17th bits are the device codes. The 18th to 33rd bits are the card numbers, and the 34th to 35th bits are the manufacturer codes.
Wiegand36a	EFFFFFFFFFFFFFFFFFCCCCCCCCCCCCCCCCO Consists of 36 bits of binary code. The 1st bit is the even parity bit of the 2nd to 18th bits, while the 36th bit is the odd parity bit of the 19th to 35th bits. 2nd to 19th bits are the device codes, and the 20th to 35th bits are the card numbers.
Wiegand37	OMMMMSSSSSSSSSSSCCCCCCCCCCCCCCCCCCCE Consists of 37 bits of binary code. The 1st bit is the odd parity bit of the 2nd to 18th bits, while the 37th bit is the even parity bit of the 19th to 36th bits. 2nd to 4th bits are the manufacturer codes. 5th to 16th bits are the site codes, and the 21st to 36th bits are the card numbers.
Wiegand37a	EMMMFFFFFFFFFSSSSSSCCCCCCCCCCCCCCCCO Consists of 37 bits of binary code. The 1st bit is the even parity bit of the 2nd to 18th bits, while the 37th bit is the odd parity bit of the 19th to 36th bits. 2nd to 4th bits are the manufacturer codes. 5th to 14th bits are the device codes, and15th to 20th bits are the site codes, and the 21st to 36th bits are the card numbers.
Wiegand50	ESSSSSSSSSSSSSSSCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCO Consists of 50 bits of binary code. The 1st bit is the even parity bit of the 2nd to 25th bits, while the 50th bit is the odd parity bit of the 26th to 49th bits. 2nd to 17th bits are the site codes, and the 18th to 49th bits are the card numbers.
"C "denotes the card number; "**E"** denotes the even parity bit; "**O"** denotes the odd parity bit; **"F**" denotes the facility code; "**M"** denotes the manufacturer code; "**P"** denotes the parity bit; and "**S"** denotes the site code.	

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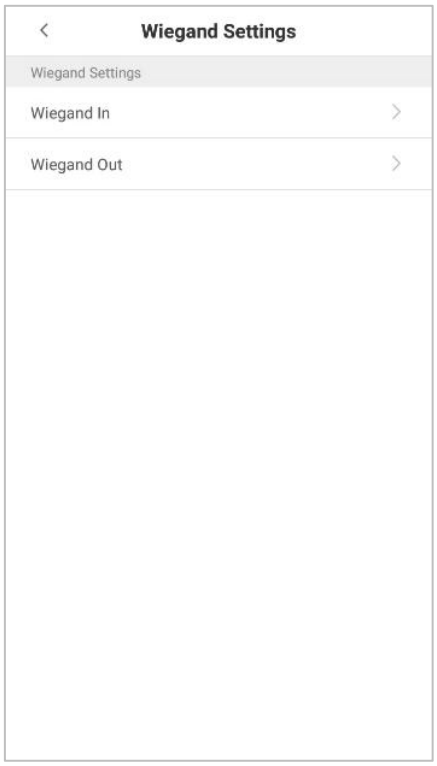
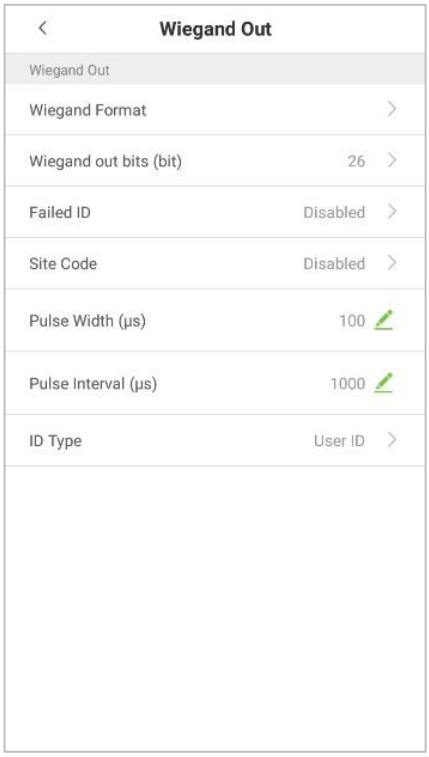
9.5.2 Wiegand Out

On **Wiegand Settings** interface, tap **[Wiegand Out]** to open the Wiegand Out interface.





Function Description

Menu Options	Function Description
Wiegand Format	The Wiegand format value could be 26bits, 34bits, 36bits, 37bits, 50bits.
Wiegand out bits	After choosing the Wiegand format, you can select one of the corresponding output digits in the Wiegand format.
Failed ID	If the verification is failed, the system will send the failed ID to the device and replace the card number or personnel ID with the new ones.
Site Code	It is similar to device ID except that it can be set manually and repeatable with different devices. The default value ranges from 0 to 256.
Pulse Width(us)	The time width represents the changes of the quantity of electric charge with high-frequency capacitance regularly within a specified time.
Pulse Interval(us)	The time interval between pulses.
ID Type	Select the ID type as User ID or Card number.

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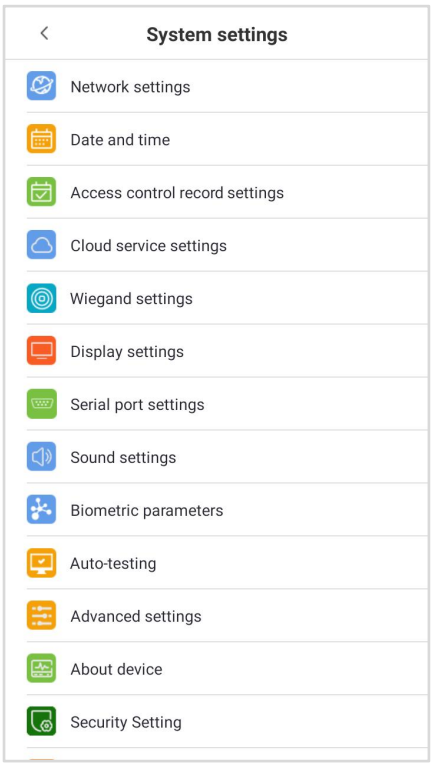
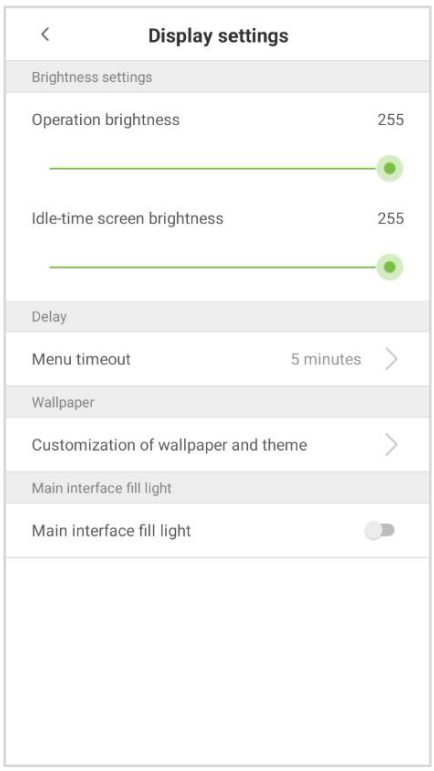
9.6Display Settings

- On the **System Settings** interface, tap [**Display Settings**] to enter the Display Settings interface.





Function Descriptions

Menu Options		Function Description
Brightness Settings	Operation Brightness	Set the device working brightness, such as when setting parameter or face recognition.
	Idle-Time Screen Brightness	Screen brightness when the device is on the standby mode.
Delay	Menu TimeOut	Menu time out occurs when no operations are performed for a certain amount of time after a user has entered the menu, and the menu enters into standby screen. Parameter options include: 1 minute, 2 minutes, 5 minutes, 10 minutes.
Wallpaper	Customization of Wallpaper and Theme	Choose your favourite wallpaper from the theme wallpaper interface.

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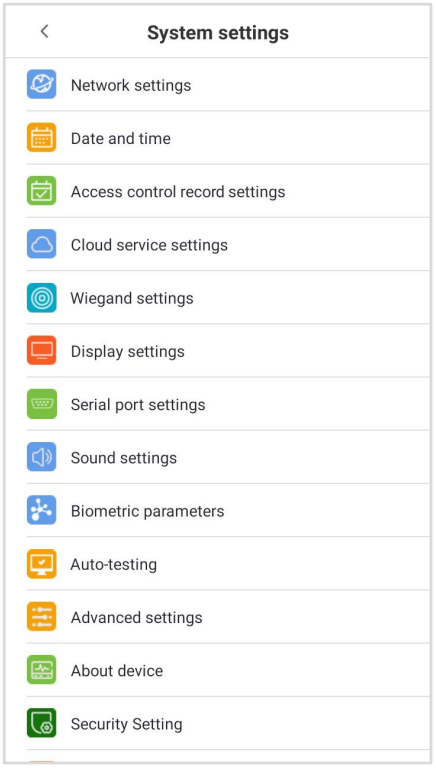
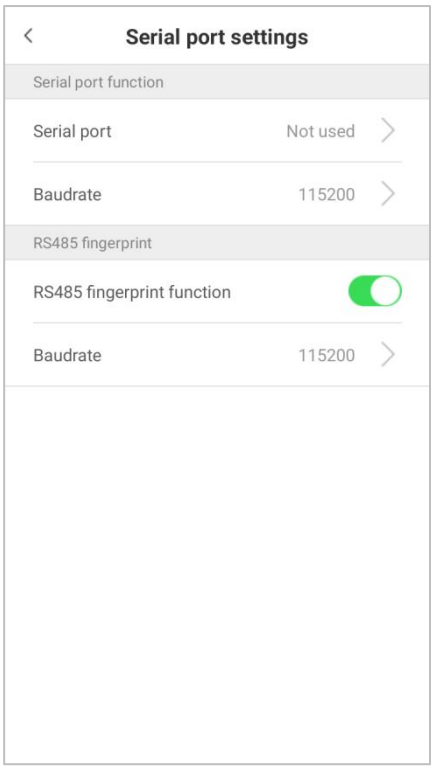
Main interface fill light	Main interface fill light	When the environment brightness is detected to be lower than the set brightness value, the home screen will have a page fill light.

9.7 Serial port settings

- On the System Settings interface, tap [**Serial port settings**] to enter sound settings interface.





Function Descriptions

Menu Options	Function Description
Serial Port	**Not used:** Do not communicate with the device through the serial port.
Baudrate	The rate at which the data is communicated with PC, there are 4 options of baud rate: 115200 (default), 57600, 38400, and 19200. The higher is the baud rate, the faster is the communication speed, but also the less reliable. Hence, a higher baud rate can be used when the communication distance is short; when the communication distance is long, choosing a lower baud rate would be more reliable.
RS485 fingerprint function	Communicates with the RS485 fingerprint through RS485 serial port.

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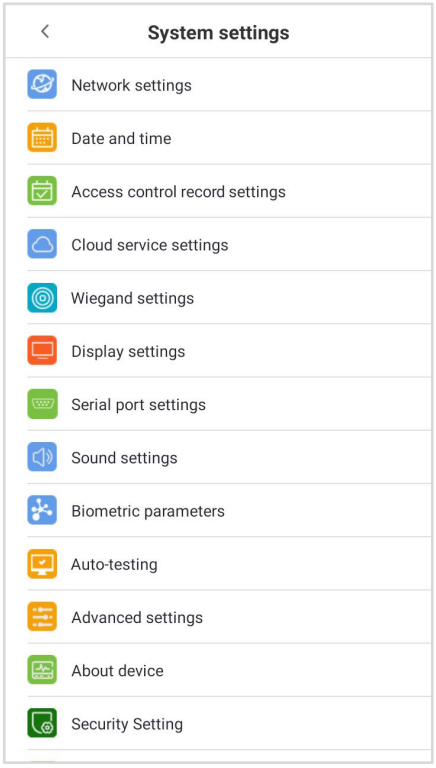
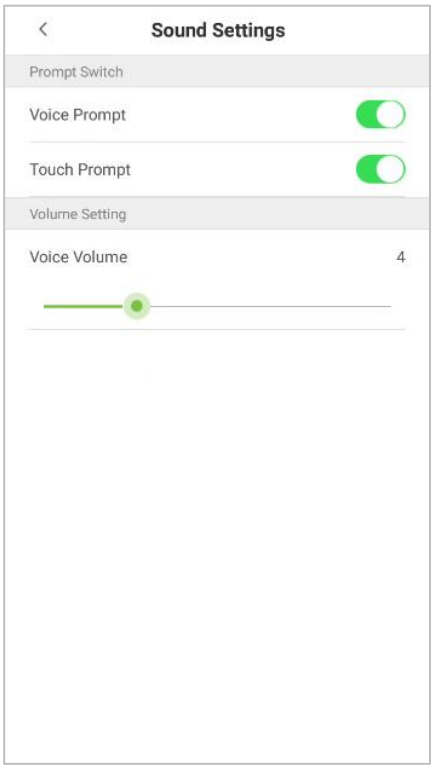
9.8Sound Settings

- On the **System Settings** interface, tap [**Sound Settings**] to enter sound settings interface.





Function Descriptions

Menu Options	Function Description
Voice Prompt	When voice prompts are enabled, users will receive voice prompts. Voice prompts will not be received when this setting is disabled. When voice prompts are disabled and then re-enabled, the volume level will be automatically set to 1.
Touch Prompt	This switch enables/disables touchscreen prompt. When touch prompt is enabled, users will receive touchscreen prompts. When touch prompt is disabled, no touchscreen prompts will be received.
Voice Volume	It is used for adjusting volume. This can only be used if audio prompts are enabled. It can be set from 0-15.

9.9Biometric Parameters

- On the **System Settings** interface, tap [**Biometric Parameters**] to enter the Biometric parameters interface.

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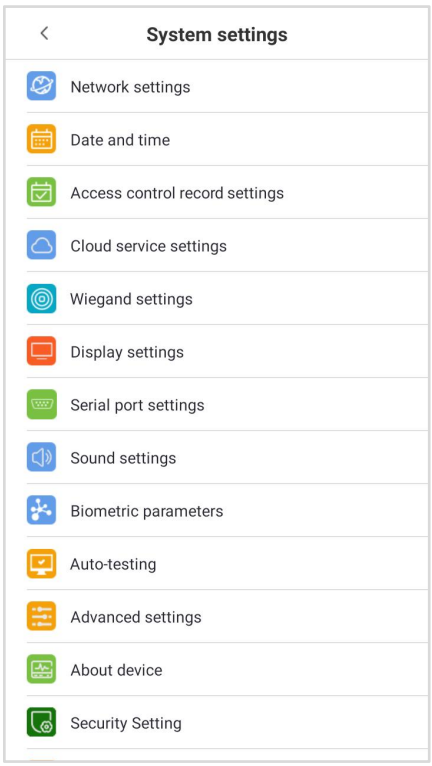

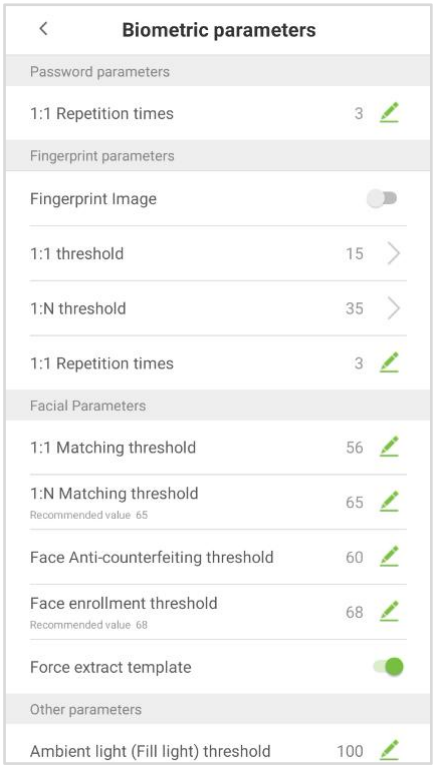

Function Descriptions

Menu		Function Description
Password Parameters	1:1 Repetition Times	Upper limit on the number of password 1:1 verification failures. When the number of password verification failures reaches a specified value, user verification fails and can be verified again if necessary.
Fingerprint Parameters ★	Fingerprint Image	When turned on, the fingerprint image will be displayed for verification
	1:1 Threshold	When conducting 1:1 fingerprint verification, fingerprint data is collected and instantly compared with fingerprint data using a 1:1 algorithm. This is converted into a value that is then compared to a set value. If the value of the scanned fingerprint exceeds that of the set value, the verification passes. If it does not, the verification fails. The higher the threshold, the more accurate the matching; the lower the threshold, the higher the matching success rate.

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	1: N Threshold	When conducting 1: N verification, fingerprint data is collected and instantly compared with all fingerprint templates on the system using a 1: N algorithm. This is converted into a value that is compared to a set value. If the value of the scanned fingerprint exceeds that of the set value, the verification has passes. If it does not, the verification fails. The higher the threshold, the more accurate the matching; the lower the threshold, the higher the matching success rate.
	1:1 Repetition Times	Upper limit on the number of fingerprint 1:1 verification failures. When the number of password verification failures reaches a specified value, user verification fails and can be verified again if necessary.
Facial Parameters	1:1 Matching Threshold	When conducting 1:1 face verification, face data is collected and instantly compared with face data using a 1:1 algorithm. This is converted into a value that is then compared to a set value. If the value of the scanned face exceeds that of the set value, the verification passes. If it does not, the verification fails. The higher the threshold, the more accurate the matching; the lower the threshold, the higher the matching success rate.
	1: N Matching Threshold	When conducting 1: N verification, face data is collected and instantly compared with all face templates on the system using a 1: N algorithm. This is converted into a value that is compared to a set value. If the value of the scanned face exceeds that of the set value, the verification has passes. If it does not, the verification fails. The higher the threshold, the more accurate the matching; the lower the threshold, the higher the matching success rate.
	Face Anti-counterfeiting threshold	Set parameter N. The recognition is successful only when the recognition accuracy exceeds N. Face recognition threshold is the threshold of similarity obtained when recognizing faces. (Can be used with infrared anti-counterfeiting, will be more rigorous)
	Face enrollment Threshold	In face recognition, the higher the threshold is set, the higher the accuracy of face recognition will be, which may lead to unrecognizable. On the contrary, if the threshold is too low, the accuracy of face recognition will be lower, which may lead to misjudgement and other phenomena. The default value is 76.

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	Force extract template	For some poor quality photos, you can force the template in advance after opening, but it may be misjudged
Other Parameters	Ambient light (Fill Light) threshold	It is used for detecting ambient light brightness. When the brightness of the surrounding environment is less than the threshold, the complementary light is turned on; when the brightness is greater than the threshold, the complementary light is not turned on. The default value is 100.
	Motion detection threshold	It is used for detecting whether there is a moving person in front of the device to determine whether the face recognition function is enabled. The default value is 500.
	Facial recognition angle	To limit the face angle at face recognition, the recommended threshold is 20.
	Face size for detection	The size of the face when face recognition. The smaller the value, the farther the detectable distance is otherwise, the closer it is.
	Antiband effect	Anti-camera water ripple, when the video signal of the camera is affected by static electricity, electromagnetic and other interference, resulting in water ripples in the image, and even distortion of the picture.
	Prevent Simultaneous Facial Recognition from Multiple Entrances	When multiple devices are installed on the side-by-side entrance, please enable this function to prevent multiple devices from simultaneously recognizing the face. Set the threshold to three types: high, medium, and low. The higher the threshold, the narrower the distance between the guidelines and the smaller the face recognition range on the screen. When setting the threshold, it is recommended to open auxiliary line correction function.

9.10 Auto-testing

- On the **System Settings** interface, tap on [**Auto-Testing**] to enter the auto testing interface.

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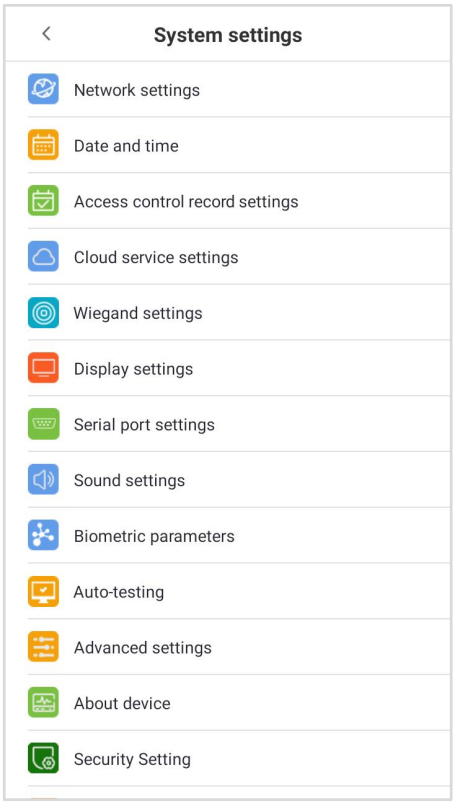

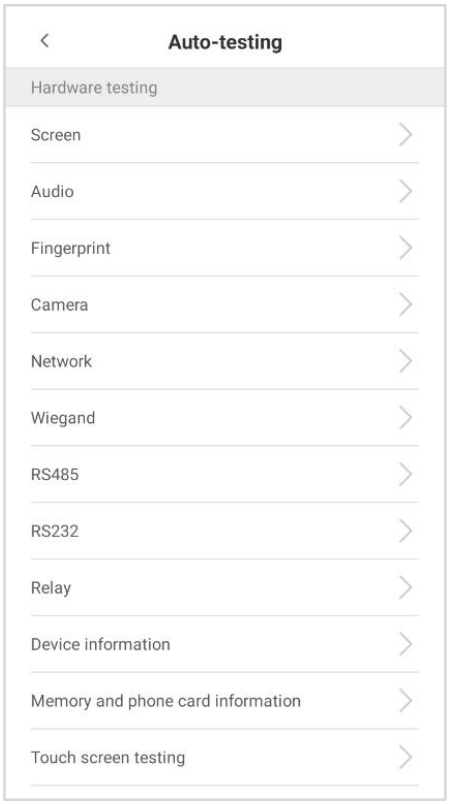

Function Descriptions

Menu Options	Function Description
Screen	It is used for testing the screen's display. The screen will display red, green, blue, white, and black tests. Check if the screen color is uniformly correct across each area of the screen. Tap on anywhere on the screen during testing to continue testing.
Audio	The device automatically tests audio prompts by playing back audio files that are stored in the device. Voice testing mainly test if the device's audio files are complete and if the audio effects are in good working order. Tap on the back key to exit testing.
Fingerprint	It is used for testing if the fingerprint scanner is functioning properly. Check whether fingerprint image is clear and usable.
Camera	It is used for testing if the camera is functioning properly. Check captured image to see if the image quality is clear and usable.
Network	Enter the IP address and tap ping to check whether the network can be pinged successfully.
Wiegand	Test Wiegand in and Wiegand out to check if it works.
RS485	Used to test whether the RS485 read head can transmit data normally.
Relay	Used to test open/close locker and open/close alarm is normal.

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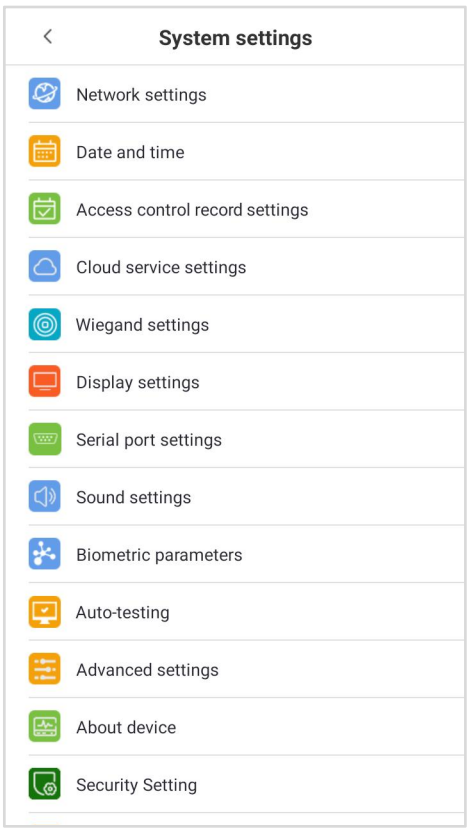
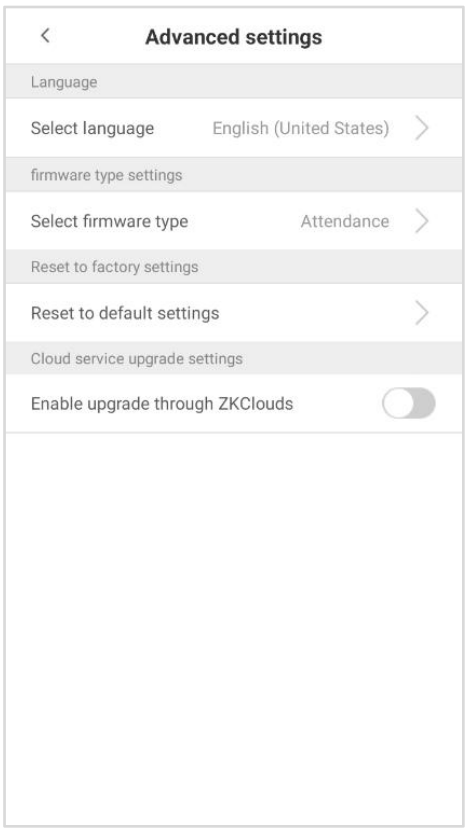
9.11 Advanced Settings

- On the **System Settings** list, tap on [**Advanced settings**] to enter the Advanced settings interface.





Function Descriptions

Menu Options	Function Description
Select Language	Support Traditional Chinese (Taiwan), Traditional Chinese (Hong Kong), Simplified Chinese, Japanese, English, Spanish, Spanish (Latin America), French, Indonesian, Portuguese (Brazil), Vietnamese, Turkish, Russian, Persian, Arabic, Thai, Korean.
Select firmware type	It is used to switch between the attendance firmware and access firmware. After the switch, all data will deleted
Reset to default settings	Restore the firmware Settings to the default values, and can choose whether to clear the data.
ADB Network Debug	The ADB tool is Android debug bridge tool. It is a command line window, which is used to interact with the simulator or real device through the computer.
Enable upgrade through ZKClouds	It can use the software to deliver the firmware upgrade file for online upgrade.

Note: If you need an upgrade file, please contact out technical staff. Firmware upgrade is not recommended under normal circumstances.

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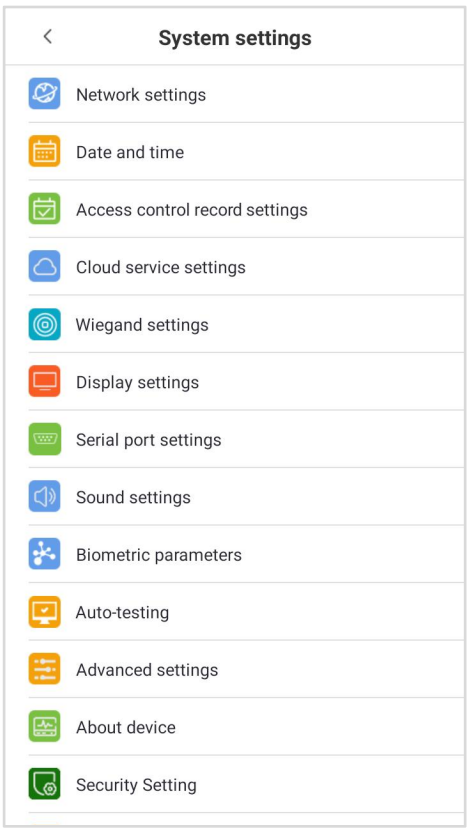
9.12 About the Device

- On the **System Settings** interface, tap [**About the Device**] to open the About the Device interface.



Function Description

Menu Options	Function Description
Capacity Information	It displays the current device's capacity of user, fingerprint ★ and facial template, administrators, access control records, access control photos, unregistered user photos, and user photos.
Device Information	It displays basic device information, algorithm version information, and firmware version information.
Version	It displays all the versions of all the system's apps, such as the system settings, data management, and other installed apps.

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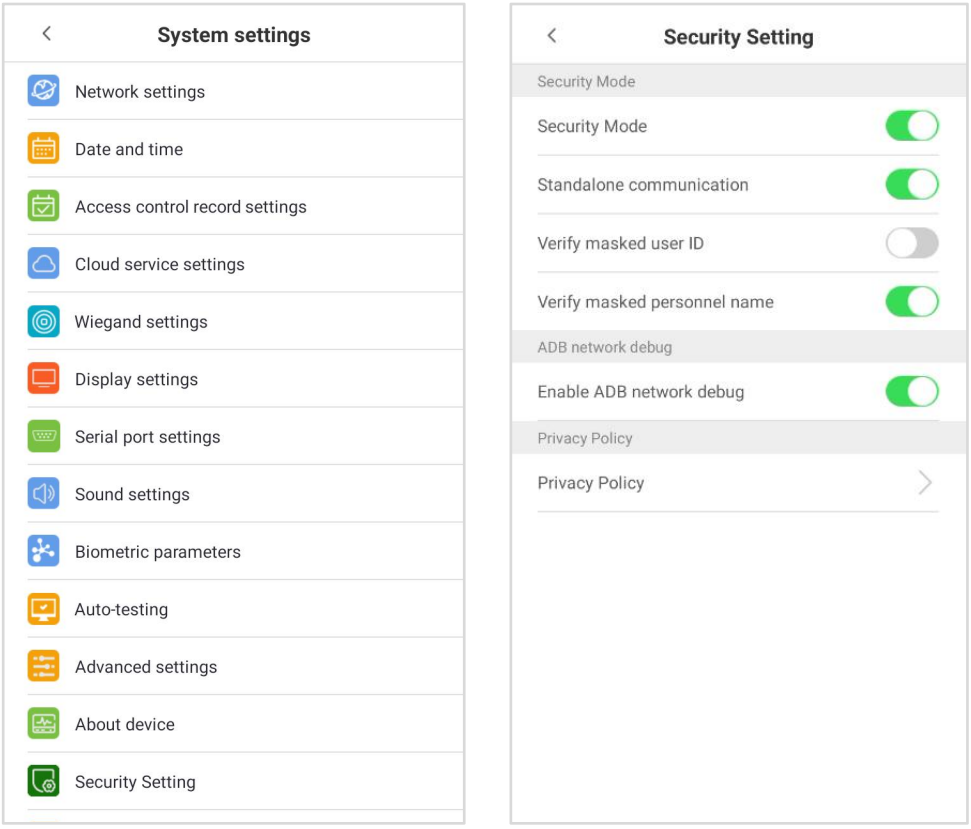
9.13 Security Setting

- On the **System Settings** interface, tap [**Security Setting**] to open the Security Setting interface.



Function Description

Menu Options	Function Description
Security Mode	User photos will be encrypted in the device and when communicating with the software.
Standalone communication	Start Standalone communication.
Verity masked user ID	After it is enabled, the employee ID of the user is not displayed during the attendance verification.
Verity masked personnel name	After this function is enabled, the user's name will not be displayed during attendance verification.
Enable ADB network debug	Start ADB network debugging.
Privacy Policy	Access Privacy Agreement.

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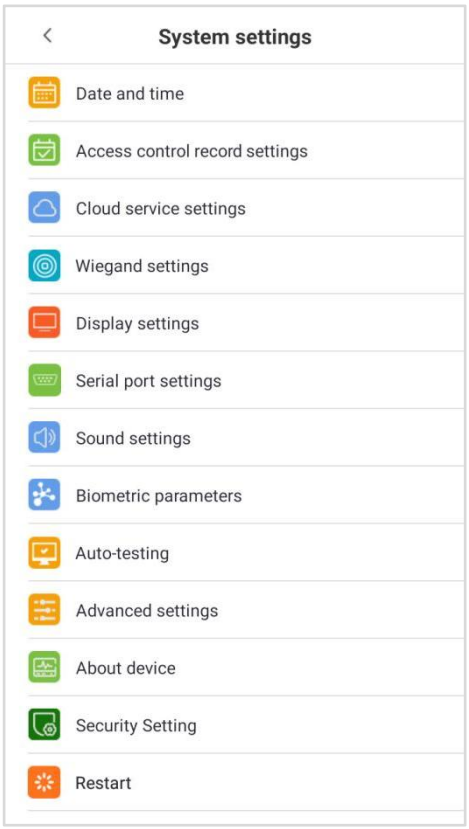
9.14 Restart

- On the **System Settings** interface, tap [**Restart**] to restart the device.



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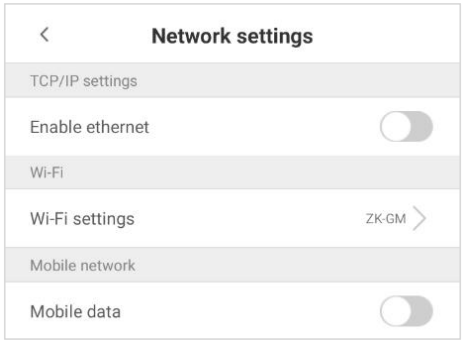
10 Connect to ZKBio CVAccess Software

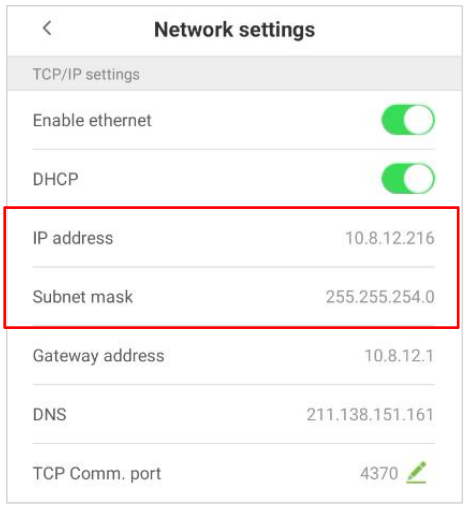
10.1 Set the Communication Address

Device Side

1. Tap [**Enable ethernet**] on the "**Network Settings**" interface to set the IP address and gateway of the device.

   Note: *Please ensure that the IP address is in the same network segment as the server address and can communicate with the ZKBio CVAccess server.*

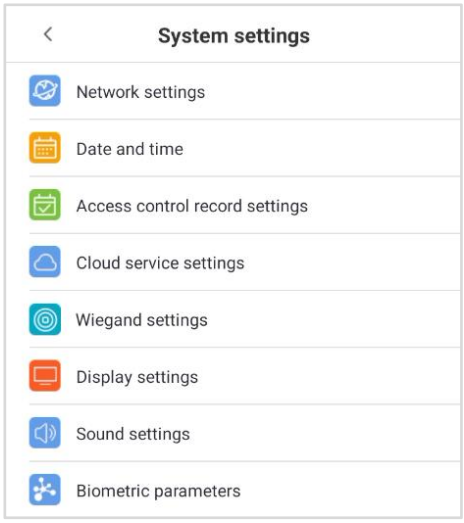


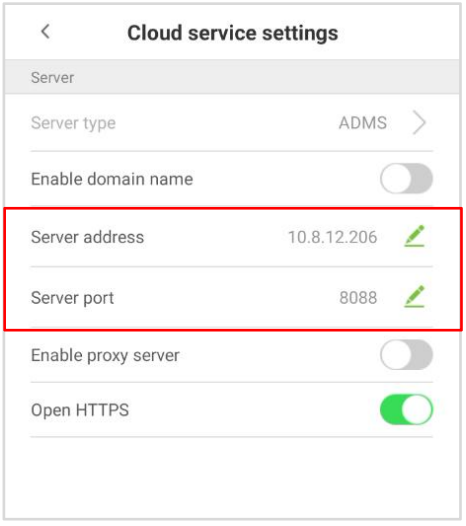


2. On System Settings interface, tap [**Cloud Service Settings**] to enter the Cloud Service Settings interface. To set the server address and server port.

   Server address: Set the IP address as of ZKBio CVAccess server.

   Server port: Set the server port as of ZKBio CVAccess.





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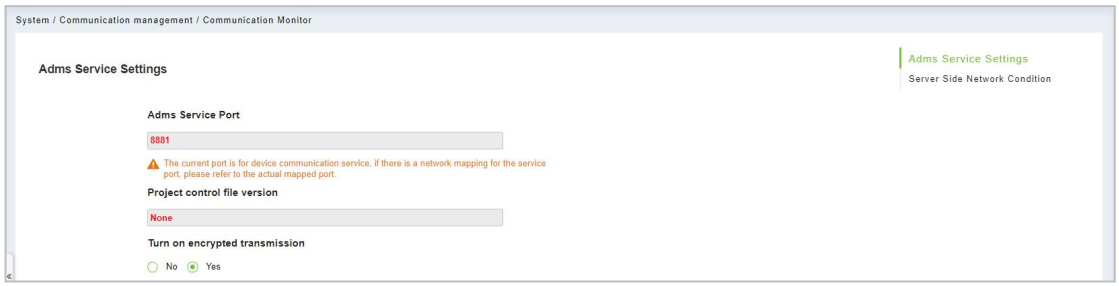
Software Side

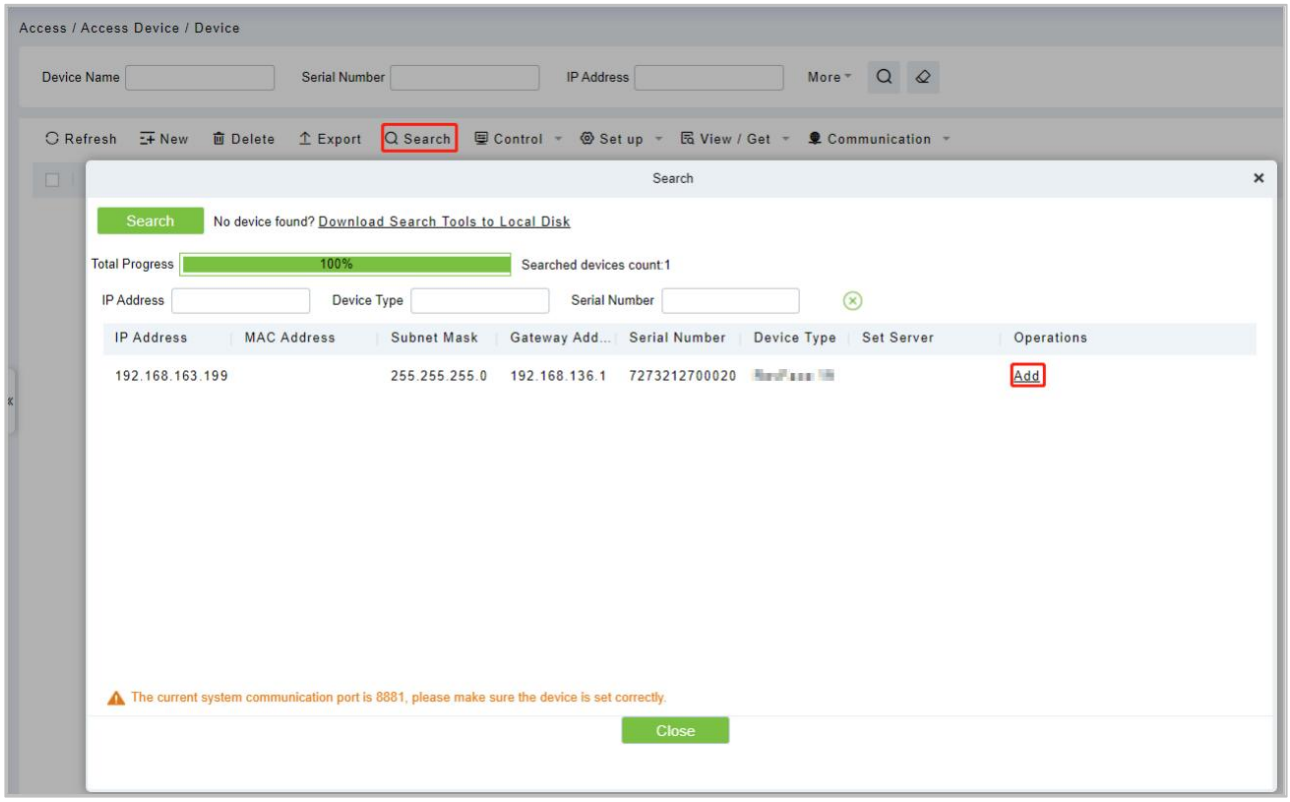
Login to ZKBio CVAccess software, click [**System**] > [**Communication**] > [**Communication Monitor**] to set the ADMS service port, as shown in the figure below:



10.2 Add Device on the Software

Add the device by searching. The process is as follows:

1. Click [**Access**] > [**Device**] > [**Search Device**], to open the Search interface in the software.
2. Click [**Search**], and it will prompt **Searching**…….
3. After searching, the list and total number of access controllers will be displayed.



Click [**Add**] in operation column, a new window will pop-up. Select Icon type, Area, and Add to Level from each dropdown and click [**OK**] to add the device.

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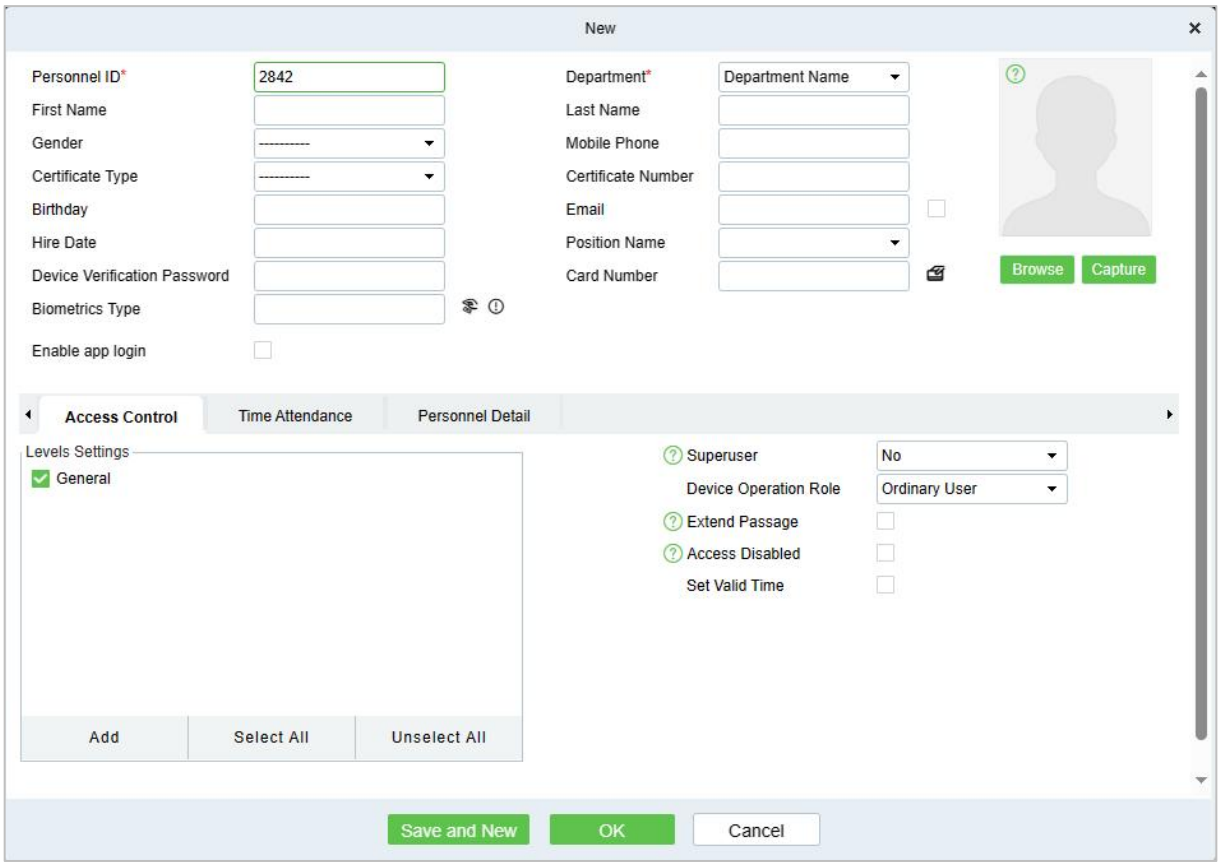
10.3 Add Personnel on the Software

1. Click [**Personnel**] > [**Person**] > [**New**]:



2. Fill in all the required fields and click [**OK**] to register a new user.

3. Click [**Access**] > [**Device**] > [**Control**] > [**Synchronize All Data to Devices**] to synchronize all the data to the device including the new users.

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Privacy Policy

Notice:

To help you better use the products and services of ZKTeco and its affiliates, hereinafter referred as "we", "our", or "us", the smart service provider, we consistently collect your personal information. Since we understand the importance of your personal information, we took your privacy sincerely and we have formulated this privacy policy to protect your personal information. We have listed the privacy policies below to precisely understand the data and privacy protection measures related to our smart products and services.

Before using our products and services, please read carefully and understand all the rules and provisions of this Privacy Policy. If you do not agree to the relevant agreement or any of its terms, you must stop using our products and services.

I. Collected Information

To ensure the normal product operation and help the service improvement, we will collect the information voluntarily provided by you or provided as authorized by you during registration and use or generated as a result of your use of services.

1. **User Registration Information: At your first registration, the feature template (Fingerprint template/Face template/Palm template**) will be saved on the device according to the device type you have selected to verify the unique similarity between you and the User ID you have registered. You can optionally enter your Name and Code. The above information is necessary for you to use our products. If you do not provide such information, you cannot use some features of the product regularly.

2. **Product information:** According to the product model and your granted permission when you install and use our services, the related information of the product on which our services are used will be collected when the product is connected to the software, including the Product Model, Firmware Version Number, Product Serial Number, and Product Capacity Information. **When you connect your product to the software, please carefully read the privacy policy for the specific software.**

II. Product Security and Management

1. When you use our products for the first time, you shall set the Administrator privilege before performing specific operations. Otherwise, you will be frequently reminded to set the Administrator privilege when you enter the main menu interface. **If you still do not set the Administrator privilege after receiving the system prompt, you should be aware of the possible security risk (for example, the data may be manually modified).**

2. All the functions of displaying the biometric information are disabled in our products by default. You can choose Menu > System Settings to set whether to display the biometric information. If

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you enable these functions, we assume that you are aware of the personal privacy security risks specified in the privacy policy.

3. Only your user ID is displayed by default. You can set whether to display other user verification information (such as Name, Department, Photo, etc.) under the Administrator privilege. **If you choose to display such information, we assume that you are aware of the potential security risks (for example, your photo will be displayed on the device interface).**

4. The camera function is disabled in our products by default. If you want to enable this function to take pictures of yourself for attendance recording or take pictures of strangers for access control, the product will enable the prompt tone of the camera. **Once you enable this function, we assume that you are aware of the potential security risks.**

5. All the data collected by our products is encrypted using the AES 256 algorithm. All the data uploaded by the Administrator to our products are automatically encrypted using the AES 256 algorithm and stored securely. If the Administrator downloads data from our products, we assume that you need to process the data and you have known the potential security risk. In such a case, you shall take the responsibility for storing the data. You shall know that some data cannot be downloaded for sake of data security.

6. All the personal information in our products can be queried, modified, or deleted. If you no longer use our products, please clear your personal data.

III. How we handle personal information of minors

Our products, website and services are mainly designed for adults. Without consent of parents or guardians, minors shall not create their own account. If you are a minor, it is recommended that you ask your parents or guardian to read this Policy carefully, and only use our services or information provided by us with consent of your parents or guardian.

We will only use or disclose personal information of minors collected with their parents' or guardians' consent if and to the extent that such use or disclosure is permitted by law or we have obtained their parents' or guardians' explicit consent, and such use or disclosure is for the purpose of protecting minors.

Upon noticing that we have collected personal information of minors without the prior consent from verifiable parents, we will delete such information as soon as possible.

IV. Others

You can visit https://www.zkteco.com/cn/index/Index/privacy_protection.html to learn more about how we collect, use, and securely store your personal information. To keep pace with the rapid development of technology, adjustment of business operations, and to cope with customer needs, we will constantly deliberate and optimize our privacy protection measures and policies. Welcome to visit our official website at any time to learn our latest privacy policy.

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Eco-friendly Operation

The product's "eco-friendly operational period" refers to the time during which this product will not discharge any toxic or hazardous substances when used in accordance with the prerequisites in this manual.

The eco-friendly operational period specified for this product does not include batteries or other components that are easily worn down and must be periodically replaced. The battery's eco-friendly operational period is 5 years.

Hazardous or Toxic substances and their quantities

Component Name	Hazardous/Toxic Substance/Element					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr6+)	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Chip Resistor	×	○	○	○	○	○
Chip Capacitor	×	○	○	○	○	○
Chip Inductor	×	○	○	○	○	○
Diode	×	○	○	○	○	○
ESD component	×	○	○	○	○	○
Buzzer	×	○	○	○	○	○
Adapter	×	○	○	○	○	○
Screws	○	○	○	×	○	○

This table is prepared in accordance with the provisions of SJ/T 11364.

○ indicates that the total amount of toxic content in all the homogeneous materials is below the limit as specified in GB/T 26572.

× indicates that the total amount of toxic content in all the homogeneous materials exceeds the limit as specified in GB/T 26572.

Note: 80% of this product's components are manufactured using non-toxic and eco-friendly materials. The components which contain toxins or harmful elements are included due to the current economic or technical limitations which prevent their replacement with non-toxic materials or elements.

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